Research Paper

A Rural Development Perspective on the Use of Children in Ghana's Cocoa Farms

*Enoch Kwame Tham-Agyekum[1], Nana Kwame Baah Frimpong[2], John-Eudes Andivi Bakang[2], Jafaru Zuwairatu[1], Issahaku Sumaya[2], Ebenezer Osei Jones[3], Rashid Abdul Boduwah[2]

1. Department of Agricultural Economics, Agribusiness and Extension Faculty of Agriculture College of Agriculture and Natural Resources, KNUST.
2 Department of Agricultural Economics, Agribusiness and Extension.
3 AAMUSTED, Mampong-Kumasi.

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ABSTRACT

This study takes a rural development perspective to examine the various reasons behind the use of children under 18 years in cocoa farms in Ghana. Using descriptive research, a sample size of 385 cocoa farmers was selected through the multi-stage sampling technique. The analyses included mean, standard deviation, frequency, percentage, and perception index. Although the level of usage of children on cocoa farms was relatively low (74%), majority of the children were involved in nursing of cocoa seedlings (87.8%), digging of holes for seedlings (76.3%), gathering of pods (55.7%) and heaping of pods (53.9%). Farmers involved children on cocoa farms for the following three reasons; to acquire indigenous knowledge of farming patterns (Mean=2.18), it is a way of life to learn their parents' occupation (Mean=2.18), and income source of the household (Mean=2.11). The challenge most farmers face in the use of children for farm activities is the fact that the children do not meet the required strength/energy (Mean=2.48). Policy efforts towards the complete eradication of using children under 18 years on cocoa farms must take into consideration the rural nature of the environments in which cocoa farming takes place in order not for it to backfire as is the case currently.

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Extended Abstract

1. Introduction

Globally, the attention of the world has been turned to child labor as a major crisis over the past decades. Considerable differences exist in the numerous kinds of farm activities children are involved in (Augendra, 2008). This brings to the fore, two key terms; child labor and child work. To qualify for any of these terms, the age of the child, the type of work they are engaged in, the number of hours they are engaged on the farm, and the conditions under which the work is done are key (Afenyadu, 2010). The country in which these kinds of activities occur as well as the particular

* *Corresponding Author:*
Enoch Kwame Tham-Agyekum, PhD
Address: Department of Agricultural Economics, Agribusiness and Extension Faculty of Agriculture College of Agriculture and Natural Resources, KNUST.
Tel: +233 243072673
E-mail: ektagyekum@knust.edu.gh

sectors in which these happen also contribute to the definition (Humphries, 2010; ILO, 2007).

Child labor, according to the ILO (2010), is any agricultural activity that robs children (defined as anybody under the age of 18) of their youth, potential, and dignity and is detrimental to their physical and mental development. In addition, Afenyadu (2010) indicated that children who work on farms miss out on going to school or are made to combine attendance at school with long hours of farm activities and unhealthy work environments. The nature of the skills required for farm activities, the use of unsafe tools, maturity of body and mind, and unsafe working environments means that the use of children for farm activities can be a hazard (Emerson & Souza, 2011; Jean-Marie & Robinson, 2000; Basu & Zarghamee, 2009). On the other hand, child work is when children's participation in farm activities does not affect their health and personal development or interfere with their schooling (Franziska, 2009; Ravallion & Wodon, 2000). It is perceived as mere assistance to parents or family businesses. The outcome is that the children are developed physically, mentally, and emotionally to contribute meaningfully to the welfare of their families. They also gain skills and expertise that prepare them for adult life (Bass, 2004; Watson, 2008). Light work for children is permitted at age 13 for industrialized countries and 12 for developing ones (ILO, 2007). Ghana's Children's Act, 560 (1998) allows light labor starting at age 15.

There is prevalent information about children working or assisting with work on cocoa farms established by different researchers (Bass, 2004; Tulane University, 2009; 2015). Potentially, every activity in cocoa farms may be considered hazardous to both adults and children. Therefore, it is not helpful to just tag cocoa farm activities as hazardous to only children. Child work becomes hazardous when the children who are involved are untrained, not supervised, and made to use unsuitable tools and equipment. Another case is when the work is likely to cause harm to the health, safety, and moral development of the child.

Children often help out on cocoa farms alongside their families. They are involved in pre-planting to postharvest activities. Pre-planting is the activity done before planting the cocoa seeds. Planting is the act of putting seeds, young trees, and plants into the land to grow them. Maintenance activities refer to activities on the farm that occur before crop products are harvested. Postharvest handling is the stage of crop production immediately following harvest. In cocoa, postharvest treatment largely determines the final quality. After harvest, the cocoa fruit is fermented, dried, and stored. After drying, the cocoa beans must be stored in an adequate facility that protects them from pests during high temperatures and drought and also from mycotoxins during low temperatures (MMDEY, 2005).

According to studies, 1% of youngsters working as children in the cocoa industry in Ghana and Cote d'Ivoire may be forced laborers or in danger of being such (Afenyadu, 2010). Children who work in cocoa fields may sustain a variety of wounds, including cuts from machetes, from coming into contact with the farm's sharp twigs and branches, and from harvesting equipment's sharp edges. This demonstrates the existence of child labor in the production of cocoa. For most households that engage children in farm activities, the underlying factors are economic and intellectual. Parents or farming households tend not to have money to engage in labor for cocoa operations and hence fall on the services of children (ILO, 2007). Cocoa farmers also claim they are not aware of the potential dangers when children use inappropriate tools. Most children who labor on cocoa farms do so inside their family structure, according to UNICEF (2005) as part of their socio-economic development. Often farmers' children do not have access to good schools. Children in places where cocoa is grown must deal with the reality of rural poverty, land scarcity, food insecurity, a lack of infrastructure and education, a lack of access to potable water, inadequate health care, and other issues. Children frequently work on cocoa farms daily since it is a common practice among cocoa farmers who, for a variety of reasons, wish to give their kids a good education while also using them to save labor costs on their family farms (Berlan, 2013).

Over the years, there have been many attempts to stop this practice. Although Ghana has created legislation and policies to combat the issue of child labor, the condition is still widespread. It is the view of this study that the underlying issues which are mostly sociological because of the nature of African or Ghanaian communities could be the reasons behind the continual use of children in cocoa farms. A case needs to be established whether it is child work or child labor. An understanding of these issues will give stakeholders in the cocoa industry a better appreciation of the issues at stake and find appropriate strategies to tackle them. As a complex social issue, several theories have emerged to explain its causes and consequences. The poverty theory suggests that child labor is primarily driven by economic necessi-

ty. Families living in poverty may send their children to work to contribute to the household income. The human capital theory claims that child labor is a result of the trade-off between education and work. If the potential earnings from child labor are perceived to be higher than the future earnings that could be achieved through education, families might opt to send their children to work rather than to school. Cultural and societal norms play a significant role in shaping attitudes toward child labor. In some cultures, children working alongside adults is considered normal and even necessary for skill development. The structural theory emphasizes the structural inequalities within societies that create conditions conducive to child labor. Factors like unequal distribution of resources, lack of access to education, inadequate labor laws, and limited opportunities for decent work can all contribute to child labor. Institutional factors, such as weak enforcement of child labor laws, limited access to quality education, and lack of social protection programs, can contribute to the persistence of child labor. When institutions fail to provide adequate support and protection for children, they become more vulnerable to exploitative work. It is important to note that child labor is a multidimensional issue with overlapping causes. These theories provide different perspectives on why child labor exists and persists, and often multiple factors interact to contribute to its prevalence in various societies (Fors, 2012).

In addition, various studies have examined the issue of child labor. In Brazil, Emerson and Souza (2011) found a high incidence of child labor among farmers. In Cote D'Ivoire, Bøås and Huser (2006) raised serious concerns about the phenomenon in the cocoa industry. Mull et al., (2005) studied child labor in Ghana cocoa production and focused on agricultural tasks, ergonomic exposures, and associated injuries and illnesses. Kyeremanteng (2007) assessed the level of child labor in cocoa production but it lacked empirical content. Cockburn (2000) found that parents use child labor to increase overall household earnings. Owusu and Kwarteye (2008) conducted an empirical analysis of the determinants of child labor in cocoa production in Ghana and identified the roles of children in cocoa production. Ravallion and Wodon (2000) found that children who work on cocoa farms usually have poor physical (bruises, cuts, wounds, fatigue) and emotional health (depression, impaired memory). Tackie-Otoo (2016) studied the perceptions of cocoa farmers on the factors associated with child labor used in cocoa production in the Sefwi area of the Western Region of Ghana. Asamoah et al. (2018) used a mixed method to study the use of children in cocoa production to ascertain whether it is child labor or child apprenticeship. In terms of literature, the gap that needs to be filled is the fact the activities that were listed in most of the previous studies only concentrated on 'on-farm' activities neglecting pre-planting and post-harvest activities. Previous studies also concentrated on economic concerns and analyzed perceptions based on the activities of cocoa farmers. This study seeks to assess the situation from the rural development perspective; ascertain the various cocoa farm activities children are involved in, ascertain farmers' perception on the use of children for cocoa farm activities, and assess the challenges farmers face in using children for cocoa farm activities.

2. Methodology

The study area was Atwima Nwabiagya North Municipality. The Atwima Nwabiagya North Municipality is geographically located within Latitude 6°40'0" N (6.66667) and longitude 1°49'0" West (-1.81667). In the Ashanti region, the municipal can be found in the Western part and has Barekese as its capital. The Municipal covers a large total land area of about 276.6 km² (106.8 sq mil) representing 14.38 percent of the region's total land. The choice of a proper research design is very critical for every study since it ensures that the results acquired will allow one to answer the original research question. A descriptive research design was used for the study. The study population included all cocoa farmers in the Atwima Nwabiagya North Municipality. Since the population size of the study was not known, Cochran's formula was used to calculate the sample size.

Cochran's formula is; $n_0 = \frac{z^2pq}{e^2}$

Where; n_0 = the sample size

Z = is the selected critical value of the desired confidence level.

p = the estimated proportion of an attribute that represents the population

q = 1 – p

e = the desired level of precision (i.e., the margin of error)

The z score for the 95% confidence level selected is 1.96

$p = 0.5$

$q = 1 - 0.5 = 0.5$

$e = 0.5$

$$n_0 = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2}$$

$n_0 = 385$

Three hundred and eighty-five (385) cocoa producers in the Municipality's chosen communities made up the study's sample size. The study used the multi-stage sampling technique. In the first stage, the study area was selected using a simple random technique because researchers had a list of cocoa-growing Districts in the Ashanti Region. Out of the total list, Atwima Nwabiagya North Municipal was selected. In the second stage, four (4) communities were selected using the purposive sampling technique. The four communities selected were Kontonmire, Hyiahu Besease, Kapro, and Paroso. This is because out of the list of cocoa farming communities, these communities had high production levels. In the third stage, cocoa farmers were randomly selected from a list of cocoa farmers in each of the four communities.

The questionnaire used for collecting data was carefully designed to capture essential information relevant to the research objectives. Its formulation underwent a thorough process to ensure its validity and reliability. Firstly, the questionnaire items were developed based on a comprehensive review of existing literature related to the subject matter. This allowed us to include relevant and meaningful questions that aligned with the research objectives. Additionally, the questionnaire was reviewed by subject matter experts and research advisors to ensure that the items accurately captured the intended constructs and concepts. This expert review process contributed to the face validity of the questionnaire. Furthermore, a pilot study was conducted with a small group of respondents (10) before the actual data collection. This pilot study allowed us to assess the clarity, comprehension, and appropriateness of the questionnaire items from the respondents' perspective. Any ambiguities or confusing items were refined based on the feedback received during the pilot study, enhancing the content validity of the questionnaire. To ensure the reliability of the questionnaire, a measure of internal consistency was employed. This was done using a statistical technique called Cronbach's alpha coefficient. The calculated Cronbach's alpha coefficient (0.86) indicated a high level of internal consistency among the items in the questionnaire, suggesting that the items were measuring the same underlying constructs reliably.

Descriptive statistics was mainly used in the analysis of the data. In the calculation of the perception index (PI), the mean scores (MS) calculated from respondents' perception (three-point Likert scale) were used. The MS was computed based on the frequency of responses (f) from a three-point Likert scale: (disagree (da) = 1, neutral (n) = 2, agree (a) = 3);

$$MS = \frac{\left[(fda \times 1) + (fn \times 2) + (fa \times 3)\right]}{x}$$

Where: fda; fn; and fa; are frequencies for disagree; neutral; and agree respectively.

x = sum of frequencies

Therefore, PI will be calculated as;

$$P.I. = \frac{\left[(MS1 + MS2 + \ldots\ldots\ldots\ldots + MSnth)\right]}{n}$$

where (MS1, MS2, and MSnth were the mean scores from 1 to the nth mean score

n = number of mean scores.

In measuring the level of usage of children for cocoa activities, the study adopted a classification used by Anaglo et al., (2014). A list of cocoa activities was generated by the researchers and cocoa farmers were asked to tick the ones they allow children to assist them. A composite number of activities children are involved in was generated for every cocoa farmer. Out of the total number of cocoa farm activities (40), those who used children in less than 40% of the farm activities were classified as low, and those who used children between 41% and 80% of the farm activities were classified as moderate while those who used children above 80% of the farm activities were classified as high.

3. Results

Demographic Characteristics of the Cocoa Farmers

According to Table 1, women made up the majority of respondents (50.8%) while males made up 49.2%. This demonstrates that farming is a profession practiced by both genders. The distinction is negligible. They both likely engage in agricultural activities because they rely on farming to meet their family's needs, including feeding their families and providing for their children's needs. The increase in obligations to both parties, ac-

cording to Scott et al. (2005), has resulted in an equal participation of men and women in production. The majority (66.9%) of the respondents were married, 16.4% were widowed, 9.4% were single, 4.7% were divorced and 2.6% were separated. With the majority of the farmers being married, cocoa cultivation is known to be labor-intensive and relies primarily on family members as some inexpensive labor to farms. So, farmers marry with the hopes of having a large family to help in their farming endeavors.

Table 1. Demographic Characteristics of the Cocoa Farmers

Discrete Variables	Frequency	Percentage
	Sex	
Male	189	49.20
Female	195	50.80
	Marital Status	
Single	36	9.40
Married	257	66.90
Divorced	18	4.70
Widowed	63	16.40
Separated	10	2.60
	Educational Background	
No formal Education	119	31.00
Basic School	172	44.80
Secondary School	80	20.80
Tertiary	2	0.50
Others	11	2.90
	Religion	
Christian	324	84.40
Muslim	55	14.30
Traditionalist	3	0.80
Others	2	0.50
	Ownership	
Own house	153	39.80
Family house	171	44.50
Rented house	60	15.60
	Ownership of Land	
Own land	70	18.20
Sharecropper	177	46.10
Leased land	21	5.50
Family land	115	29.90
Others	1	0.30
	Household head	
Yes	252	65.60
No	132	34.40
	Membership in farmer group	
Yes	340	88.5
No	44	11.5

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Table 1. Demographic Characteristics of the Cocoa Farmers

Discrete Variables	Frequency	Percentage
	Sources of information	
Extension Service	275	71.6
Mass Media	91	23.4
Farmer Group Meeting	13	3.4
Friend	5	1.3
	Min./Max	Mean/Std. Dev.
Age of farmer	22 (88)	50.22 (13.21)
Years in cocoa farming	1 (62)	16.95 (11.15)
Farm size	1 (40)	7.31 (5.32)
Years of schooling	0 (26)	9.39 (7.77)
Household size	1 (30)	7.36 (4.19)

Source: Field Data, 2022

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The majority of respondents (66.1%) had formal education, including elementary, secondary, or senior high school, as well as post-secondary education (Table 1). This appears to indicate that the majority of farmers are educated. This contradicts the studies by Dankwa (2001) and Kumi (2003), who reported that about 50-55% of cocoa farmers in the Ashanti Region and Eastern Region of Ghana respectively had no formal education. About 84.40%, 14.30%, and 0.80% of the respondents were Christians, Muslims, and traditionalists respectively (Table 1). Only a few (0.5%) of the respondents belong to other religions. This shows that the majority of the respondents were Christians. This agrees with GSS (2012) that approximately 71% of the population is Christian, 18% Muslim, 5% adheres to indigenous animalistic religious beliefs, and 6% belongs to other religious groups or has no beliefs.

The study shows that the majority of the respondents (44.5%) were staying in their family houses, 39.8% were staying in their own houses and 15.6% were staying in rented houses. From the findings, the majority of the respondents live in their family houses. The reason could be that they get help from most of the family members, thereby reducing labor costs and increasing production. The majority (46.1%) of the respondents are sharecroppers (Table 1). The percentage of people farming on family land was 29.9%, compared to 18.2% of those farming on their land. The majority of sharecroppers are migrant caretakers who do not own their fields. This claim, according to MMDEY (2005), highlights the fact that migrant farmers frequently take on the role of "caretaker" because migrants typically encounter barriers to obtaining and owning property.

The majority of the farmers (65.6%) interviewed were heads of their households as compared to 34.40% who were not heads of their households (Table 1). About 88.5% of the respondents are members of agricultural groups in their various communities while 11.5% do not belong to any agricultural group. Farmers build greater capacity when they belong to agricultural groups. This is because they get easy access to information and are made aware of the problems associated with the employment of children in cocoa farm activities. They also feel a sense of unity that aids in achieving their fundamental objectives. Agricultural members can operate independently or with the assistance or cooperation of outside agents from governmental agencies, non-governmental organizations, or developmental entities. They can accomplish their aims on their own or through an organization (Meinzen-Dick & Di Gregorio, 2004). All the respondents received information from various sources. The majority of the farmers get information from the extension service (71.6%). This was followed by mass media (23.4%), farmer group meetings (3.4%), and friends (1.3%).

The mean age of the farmers was 50.22 with the minimum and maximum ages to be 22 and 88 respectively (Table 2). The mean years cocoa farmers had engaged in cocoa farming was 16.95 with the minimum to be 1 year and maximum to be 62 years. The mean farm size used by cocoa farmers was 7.31 with the minimum and maximum farm size to be 1 acre and 40 acres. The mean years farmers had been in school was found to be 9.39. The minimum years of schooling was zero (0) while the maximum years was 26 years. Mean household size was 7.36 while the minimum household size was one (1) and the maximum was 30.

Table 2. Involvement of Children in Cocoa Farm Activities

Cocoa Farm Activities	Yes / N (%)	No / N (%)
Pre-planting Activities		
Nursing of cocoa seedlings	337 (87.8)	47 (12.2)
Pegs cutting	55 (14.3)	329 (85.7)
Stumping	50 (13.0)	334 (87.0)
Land clearing	50 (13.0)	334 (87.0)
Lining and pegging	50 (13.0)	334(87.0)
Burning of debris	42 (10.9)	342 (89.1)
Tree felling and chopping	31 (8.1)	353 (91.9)
Average usage: 22.87%		
Planting Activities		
Digging of holes for seedlings	293 (76.3)	91 (23.7)
Preparation of seedlings	101 (26.3)	283 (73.7)
Carrying of seedlings	115 (29.9)	269 (70.0)
Hoeing for seedlings	91 (23.7)	293 (76.3)
Planting of seedlings	121 (31.5)	263 (68.5)
Sowing at stake	89 (23.2)	295 (76.8)
Average usage: 35.15%		
Management Activities		
Watering of transplanted seedlings	167 (43.5)	217 (56.5)
Weeding	143 (37.2)	241 (62.8)
Pruning	57 (14.8)	327 (85.2)
Manuring/ fertilizer application	53 (13.8)	331 (86.2)
Fetching of water for watering and spraying	130 (33.9)	254 (66.1)
Mixing of chemicals	33 (8.6)	350 (91.1)
Spraying of chemicals	38 (9.9)	346 (90.1)
Cleaning up of spraying equipment after use	52 (13.5)	332 (86.5)
Disposal of empty agrochemical containers	54 (14.1)	330 (85.9)
Storage of unused/leftover agrochemicals	41 (10.7)	343 (89.3)
Mistletoe control	32 (8.3)	352 (91.7)
Average usage: 18.93%		
Harvesting Activities		
Gathering of pods	214 (55.7)	170 (44.3)
Heaping of pods	207 (53.9)	177 (46.1)
Breaking of pods	166 (43.2)	218 (56.8)
Plucking of pods	154 (40.1)	230 (59.9)
Average usage: 48.23%		
Post-harvest Activities		
Scooping of beans from pods	147 (38.3)	237 (61.7)
Fermentation of beans	85 (22.1)	299 (77.9)
Carting of fermented beans to the drying area	89 (23.2)	295 (76.8)
Construction of drying patios	59 (15.4)	325 (84.6)
Drying and sorting of beans	137 (35.7)	247 (64.3)
Bagging of cocoa beans	122 (31.8)	262 (68.2)
Carting of dry beans for sale	99 (25.8)	285 (74.2)
Average usage: 27.47%		

Table 2. Involvement of Children in Cocoa Farm Activities

Cocoa Farm Activities	Yes / N (%)	No / N (%)
Other Activities		
Sharpening and preparing tools for farm	67 (17.4)	317 (82.6)
On-farm cooking for farmer	137 (35.7)	247 (64.3)
Fetching of fuel wood	170 (44.3)	214 (55.7)
Carrying foodstuff and fuel wood home	168 (43.8)	216 (56.3)
Carrying tools and equipment	115 (29.9)	269 (70.1)
Average usage: 34.22%		

Source: Field Data, 2022

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Involvement of Children in Cocoa Farm Activities

The cocoa farmers were asked about whether they use children for pre-planting activities. The majority (87.8%) of the farmers indicated that they use children for nursing cocoa seedlings (Table 2). The activity with the least usage of children in pre-planting activities was tree felling and chopping (8.1%). About 13% of the cocoa farmers used children for land clearing. The cocoa farmers were asked about whether they use children for planting activities. The main planting activity among respondents involving children was digging holes for seedlings (76.3%) while the least activity was sowing at stake (23.2%). The cocoa farmers were asked about whether they use children for farm management activities. The main farm management activity among respondents involving children was the watering of transplanted seedlings (43.5%) while the least activity was mistletoe control (8.3%). Farmers' use of children for weeding was 37.2% (Table 2). The average use of children in farm management activities was 18.93% (Table 2). The cocoa farmers were asked about whether they use children for harvesting activities. The main harvesting activity respondents involved children gathering pods (55.7%). Plucking the pods was the least activity (40.1%) children were used in probably because it requires skill, carefulness, and energy as compared to gathering pods. The average use of children in harvesting activities was 48.23% (Table 2). In terms of postharvest activities, most of the cocoa farmers involved their children in scooping beans from pods (38.3%) while the least activity they used their children in was the construction of drying patios (15.4%) (Table 2). The average use of children in post-harvesting activities was 27.47%. This shows that the use of children in harvesting activities is also relatively low. The majority of the farmers (43.8%) were found to be using their children in fetching fuel wood while the least other activities farmers use children in was sharpening and preparing tools for the farm. The average use of children in other activities was 34.22%.

Level of Usage of Children in Cocoa Farm Activities

As shown in Table 3 above, the usage of children was low. This was attested by 74% of the cocoa farmers. About 23.7% moderately used children while 2.3% were highly using children in cocoa farming activities.

Perception of Farmers on the Reasons for Use of Children in Cocoa Farm Activities

As shown in Table 4, the statement "to acquire indigenous knowledge of farming patterns" had the highest mean (Mean=2.18 and SD=0.87) and the least perception statement was "to contribute to the survival of the family" (Mean=1.74 and SD=0.82). The mean of 1.98 indicates that the respondents were neutral to the perception statements on cultural reasons.

Table 3. Level of Usage of Children for Cocoa Activities

Level of Usage	Frequency	Percent
Low (1-40%)	284	74.0
Moderate (41-80%)	91	23.7
High (81-100%)	9	2.3
Total	384	100.0

Source: Field Data, 2022

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Table 4. Reasons for use of children in cocoa farm activities

Perceptions	Disagree N (%)	Neutral N (%)	Agree N (%)	Mean	Std. Dev.
Cultural Reasons (Mean=1.98)					
To acquire indigenous knowledge of farming patterns	116 (30.2)	83 (21.6)	185 (48.2)	2.18	0.87
Way of life for learning parents' occupation	122 (31.8)	75 (19.5)	187 (48.7)	2.17	0.88
To raise children with traditional values through farming	139 (36.2)	102 (26.6)	143 (37.2)	2.01	0.86
To engage them for rotation of our communal labor	173 (45.1)	114 (29.7)	97 (25.3)	1.80	0.82
To contribute to the survival of the family	193 (50.3)	99 (25.8)	92 (24.0)	1.74	0.82
Financial Reasons (Mean=1.90)					
Income source for the household	121 (31.5)	98 (25.5)	165 (43.0)	2.11	0.86
Low income from cocoa farming	146 (38.0)	88 (22.9)	149 (38.8)	2.09	1.81
Get more money to take care of the needs of the household	132 (34.4)	120 (31.3)	132 (34.4)	2.00	0.83
Cheaper to use children	213 (55.5)	78 (20.3)	93 (24.2)	1.69	0.84
Children are the alternative since labor is scarce	221 (57.6)	80 (20.8)	83 (21.6)	1.64	0.82
Religious Reasons (Mean=1.79)					
Way of showing commitment to their religion to receive God's blessings	152 (39.6)	101 (26.3)	131 (34.1)	1.95	0.86
No negative effects on their moral development	163 (42.4)	109 (28.4)	112 (29.2)	1.87	0.84
Giving support to a religious group	167 (43.5)	115 (29.9)	102 (26.6)	1.83	0.82
Teachings in religion to allow children to help in farm activities	235 (61.2)	52 (13.5)	97 (25.3)	1.64	0.86
Children raise funds to support their religious programs	234 (60.9)	55 (14.3)	95 (24.7)	1.64	0.85
Educational Reasons (Mean=1.85)					
Their involvement supports their education	149 (38.8)	79 (20.6)	156 (40.6)	2.02	0.89
High cost of education	171 (44.5)	61 (15.9)	152 (39.6)	1.95	0.92
Acquire more skills to facilitate their education	169 (44.0)	87 (22.7)	128 (33.3)	1.89	0.87
Limited access to educational institutions	200 (52.1)	88 (22.9)	96 (25.0)	1.73	0.84
Children showing less or no interest in education	227 (59.1)	62 (16.1)	95 (24.7)	1.66	0.85
Psychological Reasons (Mean=1.85)					
Equipped with more technical ideas and skills for survival	155 (40.4)	102 (26.6)	127 (33.1)	1.93	0.86
Influences their innovativeness and enthusiasm for working	149 (38.8)	117 (30.5)	118 (30.7)	1.92	0.83
It is the future direction of children in the cocoa-growing areas	173 (45.1)	71 (18.5)	140 (36.5)	1.91	0.90
It will not interfere with their mental development	173 (45.1)	126 (32.8)	85 (22.1)	1.77	0.79
Children always want to hang around with their parents by themselves	184 (47.9)	117 (30.5)	83 (21.6)	1.74	0.79
Social Reasons (Mean=2.00)					
Introduce children to those parents who share boundaries with	121 (31.5)	118 (30.7)	145 (37.8)	2.06	0.83
Encourage household networks	124 (32.3)	126 (32.8)	134 (34.9)	2.03	0.82
Build relationships with relatives/neighbors	144 (37.5)	91 (23.7)	149 (38.8)	2.01	0.88
Getting involved in community activity	140 (36.5)	107 (27.9)	137 (35.7)	1.99	0.85
Formation of groups, organizations, or associations by farmers	163 (42.4)	98 (25.5)	123 (32.0)	1.90	0.86

Source: Field Data, 2022

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The highest perceived financial reason for using children in cocoa farms was that it is an "income source for the household" (Mean=2.11and SD=0.86). This was followed by "low income from cocoa farming" (Mean=2.09 and SD=1.81). The least perception statement was "children are the alternative since labor is scarce" (Mean=1.64 and SD=0.82). The farmers were generally undecided about their perception of financial reasons (Mean =1.90).

From Table 4, the highest perception statement was that it is a "way of showing commitment to their religion to receive God's blessings" (Mean=1.95 and SD=0.86). Farmers were undecided as to whether the use of children in their cocoa farms would bring such blessings to their children. The last statement was "Children raise funds to support their religious programs" (Mean=1.64 and SD=0.85). The overall perception index of 1.79 indicates that respondents were undecided in terms of religious reasons.

In terms of the educational reasons for the use of children in cocoa farm activities, Table 4 reveals that "their involvement supports their education" (Mean=2.02 and SD=0.89). The last statement was "children showing less or no interest in education" (Mean=1.66 and SD=0.85). The perception index of 1.85 signifies that farmers were undecided in terms of educational reasons.

For psychological reasons, the highest mean score was "equipped with more technical ideas and skills for survival" (Mean=1.93 and SD=0.86). This was followed by "influences their innovativeness and enthusiasm for working" (Mean=1.92 and SD=0.83). The lowest mean score was "children always want to hang around with parents by themselves" (Mean=1.74 and SD=0.79). The perception index of 1.85 indicates that farmers were undecided on the psychological reasons behind their use of children for cocoa activities.

The highest mean score on social reasons was "introduce children to those parents share boundaries with" (Mean=2.06 and SD=0.83) (Table 4). This was followed by "encourage household networks" (Mean=2.03 and SD=0.82). The statement with the lowest mean score was "formation of groups, organizations or associations by farmers" (Mean=1.90 and SD=0.86). The perception index of 2.00 indicates that framers were undecided on the social reasons behind their use of children for cocoa activities.

Perceived Challenges Associated with the Use of Children for Cocoa Activities

The findings from Table 5 show that the statement with the highest mean score was "they do not meet the required strength/energy" (Mean=2.48 and SD=0.76). This was followed by "careless in their doings which easily exposes them to injuries" (Mean=2.38 and 0.82). The statement with the lowest mean score was "conflicts between child's parents" (Mean=2.04 and SD=0.82). Generally, farmers were neutral to the statements on perceived challenges associated with the use of children for cocoa activities.

Table 5. Challenges involved in the use of children for cocoa activities

Challenges	Disagree N (%)	Neutral N (%)	Agree N (%)	Mean	Std. Deviation
They do not meet the required strength/energy	62 (16.1)	74 (19.3)	248 (64.6)	2.48	0.76
Careless in their doings which easily exposes them to injuries	83 (21.6)	71 (18.5)	230 (59.9)	2.38	0.82
Very slow in activities assigned to them	79 (20.6)	85 (22.1)	220 (57.3)	2.37	0.80
Low performances	87 (22.7)	98 (25.5)	199 (51.8)	2.29	0.81
Lack of work experience and skills	83 (21.6)	105 (27.3)	196 (51.0)	2.29	0.80
Loss of control over child's education	135 (35.2)	92 (24.0)	157 (40.9)	2.06	0.87
Conflicts between child's parents	122 (31.8)	123 (32.0)	139 (36.2)	2.04	0.82

Source: Field Data, 2022

4. Discussion

In the use of children for farm activities, a study conducted by MMDEY (2005) and Asamoah et al. (2018) found that most children were engaged in land clearing and land preparation activities, they assist in hoeing for seedlings and helping in the placing of plantain suckers into the dug holes during planting. It may seem that these pre-planting activities are not labor intensive and do not involve high amounts of risk and danger like tree felling and chopping which recorded very low scores. The majority of the cocoa farmers in this study did not use their children for weeding and spraying chemicals. However, Sahdu et al. (2020) and ACHD (2004) found that most children participate in weeding activities, carrying water for applying agrochemicals but not for spraying chemicals. This low use of children for spraying chemicals could probably be due to the health hazards involved and the lack of skills. The use of children for harvesting activities was relatively high. This is supported by Asamoah et al., (2018), Sadhu et al., (2020) and ACHD (2004) who reported that larger proportions of children are used in gathering, heaping pods, bean scooping, carting fermented beans, preparing the seeds for fermenting, carting the fermented cocoa beans and drying cocoa beans.

The results indicate that the cocoa farmers in the rural areas do not engage their children intensively in cocoa activities. This is because most of the cocoa activities require skills, energy, and experience. This means that if there is any involvement of children in cocoa farm activities, it could be in activities that are well with their capabilities, skills, experience, and energy (ACHD, 2004). These activities do not require maturity of mind and body and the activities do not involve the use of unsafe tools (Mull & Kirkhorn, 2005). Although this cannot be described as child labor, there is still evidence of the involvement of children in cocoa farming. The assertion that there is child labor on Ghanaian cocoa farms does not have any credence. The evidence that exists is that of child work and as attested by ITTA (2002), children and young people are major contributors to the cocoa production workforce.

Farmers were neutral on all the six key reasons for using children. In terms of culture, farmers engage their children to be able to learn the technical knowledge in cocoa farming. Bourdillon (2014) affirms that work is part of normal childhood. This means that children are expected to be trained by their parents so that in the future, they can continue the family traditions, especially when their parents are ageing and can no longer take care of their farms. In terms of education, it is believed that cocoa farm activities do not in any way compromise the education of the children (Berlan, 2013; Asamoah et al., 2018). This means that educational reasons are not the basis for engaging children to work on cocoa farms. However, Odonkor (2007) revealed that the economic and social cost of education is relatively high for parents in rural areas. As a result, a parent in such areas tends to rather send their children to the farms (Amu et al., 2014). For educational reasons, Asamoah et al., (2018) also found that some children offer themselves for cocoa farm activities as a way of getting additional income to address their educational needs. Thorsen (2012) and Thorsen and Maconachie (2021) also found that children who normally are engaged in cocoa farm activities are not academically good so they prefer to make a living on cocoa farms rather than going to school. When children are involved in cocoa farm activities, they also contribute to the well-being of their household (Yeboah, 2019). In terms of religion, it is a way parents show commitment to their religion to receive God's blessings. Religious folks believe that when children help their parents in any other activities, they receive blessings from God and may live for long. The parents do not perceive that when they use children on their farms, it helps to raise funds to support their religious activities. Financially, farmers do not consider their children to be substitutes for the scarcity of labor. However, Tackie-Otoo (2016) found that cocoa farmers use children because it is cheaper. Rural poverty is indeed a reality for families in cocoa-growing regions, and some parents are forced to put their kids to work to cut labor costs on family farms. Due to the availability of work, they have the chance to earn money (Asamoah et al., 2018; Thorsen & Maconachie, 2021; McCoy, 2018; Amu et al., 2014). For psychological reasons behind the use of children for cocoa activities, Jing et al. (2022) argued that in rural areas, most parents do not consider the use of children an offending activity. It is rather seen as a social integration strategy, a means to psychologically prepare the children to learn survival skills. In addition, Thorsen and Maconachie (2021) found that most children who engage in farm activities are self-motivated and are influenced by their peers. Most cocoa farmers usually would like their children to inherit their cocoa farms. They therefore take their children to those they share boundaries with to build a cordial relationship between themselves. Grier (2004) suggested that children must be seen as social actors in family and household structures and processes. They, therefore, participate in the social life of their parents and neighbors because they

work in groups with neighbors and relatives (Buono & Babo, 2013). Parents believe that this social context is important to impart good socio-cultural values to the younger generation. By so doing, they interact with their siblings and peers and they are introduced into the network of kin (Yeboah, 2019).

In support of the findings that children do not meet the required strength or energy, the young children perform simple tasks, such as picking and carrying pods, planting new trees, drying the beans, and delivering food and water to their parents, according to Bøås and Huser (2006). They lack the necessary power and expertise to remove pods from trees or crack open pods without destroying the cocoa beans. They can have trouble telling the difference between the weed and the young trees if they help with weeding. Since cocoa farming involves the use of long and short cutlasses, sharp cutting knives, chain saws, and pesticide backpack spray devices, it is not advisable to use children because the equipment requires skill. A little careless attitude could result in injuries (Twum-Baah, 2003).

5. Conclusion

The majority of the children were used in the nursing of cocoa seedlings, digging holes for seedlings, and gathering pods. However, the level of usage of children in cocoa farming activities was low. In analyzing the reasons behind the use of children on cocoa farms, the study concludes that it is to acquire indigenous knowledge of farming patterns (cultural reason), income source for the household (financial reason), a way of showing commitment to their religion to receive God's blessings (religious reason), their involvement supports their education (educational reason), equipped with more technical ideas and skills for survival (psychological reason) and introduce children to those parents share boundaries with (social reason).

The study has implications for various social, economic, and ethical considerations. In terms of child welfare and education, the involvement of children in farming activities might provide them with valuable skills, knowledge, and a strong work ethic. They could learn about agriculture, resource management, and responsibility. However, heavy involvement in farming could potentially hinder children's education, limiting their opportunities for future advancement. Lack of education might lead to limited career options and perpetuate a cycle of poverty. In some cases, involving children in farming might be viewed as a form of family involvement and bonding, helping children learn important life skills. Involving children in farming might help preserve traditional agricultural practices, passing down indigenous knowledge and cultural values from one generation to the next. However, it is essential to ensure that practices are balanced with children's well-being, education, and protection rights. Child involvement might contribute to the economic sustainability of households by providing additional labor, potentially increasing agricultural productivity and income. However, relying heavily on child labor could hinder the development of more sustainable and efficient farming practices. It might also limit investments in modern agricultural technologies and approaches. Involving children in farming could strengthen social bonds within the community, as children interact with neighbors and other farming families. On the other hand, if children are extensively engaged in farm work, they might miss out on social interactions with peers and educational opportunities which could lead to isolation. It is important to strike a balance between involving children in agricultural activities for their development and well-being, and ensuring that their rights to education, protection, and a healthy childhood are upheld.

Policy efforts towards the complete eradication of using children under 18 years on cocoa farms must take into consideration the rural nature of the environments in which cocoa farming takes place in order not for it to backfire as is the case currently. Education on the use of children in cocoa farm activities should address these core issues and debunk farmers' ideology that the use of children is a source of income for the household, and that children show commitment to family business by helping on the farm. With the advent of free education, farmers should be discouraged from using children on the farm because they think they cannot afford to pay school fees. Since the cocoa farmers involved the children in most of the harvesting and post-harvesting activities in cocoa production, the study recommends that CEAs of CHED of COCOBOD will facilitate innovations that farmers can employ on their farms, instead of using their children. Cocoa farmers should be trained to use such technologies to enhance their activities.

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Conflict of Interest

The authors declared no conflicts of interest

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