GENDER-ENVIRONMENT AND DEVELOPMENT ACTION

NEEDS ASSESSMENT REPORT ON STUNTING AMONG CHILDREN AGED 6-59 MONTHS BORN TO TEENAGE MOTHERS IN BUSONGORA NORTH

KASESE DISTRICT

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1.0 Introduction and Background

In Uganda, it's estimated that 29% of children aged 6-59 months are stunted, 4% wasted and 11% underweight with the highest burden of stunting (40.6%) among children under five years registered in the Tooro sub region(UBOS, 2016) where Kasese District is located. In addition, Kasese District is battling with a high caseload of stunting among children aged 6-59 months at 44.9% way above the Tooro sub regional and National statistics (Enos Mirembe Masereka, 2020).

Stunting affects the physical and cognitive development of children affecting school performance (UNICEF, 2023). Additionally, it compromises the child's immunity increasing their risks to infections as well as affecting the overall health and productivity of human beings (WHO, 2020)(Worldbank, 2021).

On the other hand, teenage pregnancies and marriages have been considered as a concern of public health importance globally. In 2022, it was estimated that about 14% of adolescents and young women worldwide gave birth before the age of 18 years (UNICEF, 2022). In Africa, the Eastern Africa has been highlighted to have the highest prevalence of teenage pregnancies at 21.5% (Getachew Mullu Kassa, 2019). Research has also revealed that teenage pregnancies are 4 times higher in poorest regions than in high income regions (UNFPA, 2015). And that the practice has huge consequences on maternal health and pregnancy outcomes (Misganaw Gebrie Worku, 2021).

In Kasese District, the high rates of teenage pregnancies and thus teenage babies are reported in Busongora North Constituency. In 2020, Kasese District ranked third in Uganda and first in the Rwenzori Sub Region among the Districts with the highest teenage pregnancies in the country (UNFPA, 2021). The teenage motherhood has been associated with several advance health, educational, social and economic outcomes. Similarly the vice has been attributed to limited knowledge of sexual reproductive health services, lack of basic girl child needs, limited legal barriers to accessing services, low self-esteem, and low decision making autonomy among the teenage girls among others(Yohannes Dibaba Wado, 2019) (UNICEF, 2022)

The effects of teenage motherhood also extends to the health and wellbeing of their infants with evidence of low birth weights and stunting among children born to women below 20 years (Ramadhani H. Mtongwa, 2021)(Yohannes Dibaba Wado, 2019)(Kaffle P P, 2010).

Therefore based on this background, Gender-Environment and Development Action appreciates the teenage mother's high prevalence and thus needed to assess the status of these babies born to teenage mothers (investigating the effects of stunting on Children born to teenage mothers in Busongora North-Kasese District).

The needs assessment was asking what factors are associated with stunting among children aged 6-59 months born to teenage mothers in Maliba Sub County, Kitswamba town council , Bugoye Sub County and Rugendabara Town Council in Busongora North Constituency.

1.2 Data collection Methodology

1.2.1 Structured questionnaire,

The survey employed a questionnaire approach to collect data from teenage mothers that had Children between 6-59 months. Data collection tools were uploaded on kobo collect and each of the data clerks/staff was provided with a kobo link for access to the tools. After the data collection process, the data clerks submitted the data on cloud which was automatically saved on a particular data set that could only be accessed by GEDA Uganda M&E. A total of 377 teenage mothers were reached from the sub counties of Bugoye, Maliba, Kitswamba Town Council and Rugendabara Town Council randomly and purposively sampled from the study sites.

1.2.2 Key Informant Interviews KIIs- These were meant to discuss with Local leaders and VHTs to find the exact villages with high teenage pregnancies prevalence. Following the sampling of the villages, a list of households with teenage mothers per village was documented with support of the VHTs and the local leaders from which the study participants were randomly and purposively sampled.

1.2.3 Focused Group Discussions; some teenage mothers were met is small focused group discussions to discuss and identify the real challenges faced especially with their Children and other underlying factors.

1.2.4 Anthropometric measurements;

To ascertain the stunting factor, GEDA Uganda also conducted anthropometric measurements including Age, Height and weight. The age was determined by asking the mother to recall her child's age and this was verified by cross checking with the child's health card or the available medical records if any.

The Height was measured for children two years and above while standing on a recommended standard height board. For children who were the age of two years and unable to stand, their incumbent length was measured using a length board.

The children's weight was measured using a standard electric stand-on calibrated seca weighing scale.

2.1 Strength and limitations of this assessment

Strength: The assessment area had many referral sources of information that assisted GEDA Uganda in accessing the necessary literature to compare with the results reached.

Limitation: The study only focused on children born to teenage mothers as this was our key target, and so lacked a comparison with the children born to older mothers which would have provided a more conclusive association between the risk of maternal age and stunting.

3.0 Discussion of Key findings

The data was organized in three major objective areas; Maternal related factors associated with stunting, household related factors associated with stunting and Child related factors associated with stunting.

3.1 Maternal related factors associated with stunting

A total of 337 teenage mothers participated in the study with 28 %(n=95) being under the age of 18 years while 72 %(n=242) aged 18 years and above.

From the research findings, majority of the teenage mothers(56.1%) reported having attended Antenatal care(ANC) more than 4 times followed by 28.5% who reported to have attended ANC for 4 times and 12%, 3% and 0.3% attended ANC, 3, 2 and none of the times respectively during their time of pregnancy.

Study results indicated that 75 %(n=253) of the mothers had a spontaneous vaginal delivery while 25% (n=84) delivered by a caesarian section. It was also noted that 53.4%, 41.2% and 5.3% of the mothers delivered their children at term, preterm and post term respectively with majority (93%) delivering from the health centers while 6.2% and 0.8% delivered from homes (communities) and clinics respectively.

In addition, 78% (n=263) and 19 %(n=64) reported to have attained primary and secondary education while 3 % (n=10) attended no formal education respectively. On the other hand, majority 91.9 %(n=310) of the mothers were unemployed, 4.2 %(n=14) formally employed while 3.9 %(n=13) were wage earners.

On bivariate logistic regression analysis, mothers who were below 18 years old COR 1.1(*CI: 0.7-1.8, P=0.725*) and those who delivered by spontaneous vaginal delivery COR 1.1 (*CI: 0.7-1.9, P=0.549)* were not associated with having stunted children. Similarly, mothers who were unemployed COR 1.2(*CI: 0.6-1.3.P=0.09*) and those who attended ANC for 3 times COR 1.2(*CI: 0.5-1.5, P=0.009*) and 4 times COR 1.2(*CI: 0.3-2.4,P=0.86)* respectively had no significant association with having stunted children.

In contrast, on bivariate analysis mothers who; had no formal education COR 1.4(CI:1.1-1.7, P<0.0001); had primary education COR 1.3(*CI: 1.1-1.4,P=0.04*);attended 2 ANC visits COR 1.4(*1.1-2.3, P=0.01*), those who earned a wage COR 1.2(*CI:1.1-1.3,P=0.04*) and those who delivered from their homes(community) COR 1.3(*CI:1.1- 1.6, P=0.04*) were more likely to have stunted children with a significant association in all cases.

On multivariate analysis, the association between child stunting and no formal education, AOR 1.3(*CI: 1.2-1.6, P=0.003*) and primary education, AOR 1.2(*CI: 1.1-1.3,P=0.02)* remained

significant while the association between child stunting and a mother who had 2 antenatal visits, AOR 1.3(*CI: 0.8-2.1, P=0.08*) did not remain statistically significant after controlling for potential confounders.

Table 1: Bivariate and multivariate logistic regression analysis of maternal related factors associated with stunting (n=337)

Variable	Stunting		P value		P value
	Yes ,n (%) 190 (56.4)	No,n (%) 147 (43.6)	COR(95%CI)	AOR (95%CI)	
Below 18 years old					
Yes	55(57.9)	40(42.1)	1.1(0.7-1.8)	0.725	1.2(0.7-2.1)	0.47
No	135(53.8)	107(44.2)	Reference	Reference	
Mode of delivery					
Spontaneous vaginal delivery	145(57.3)	108 (42.7)	1.1(0.7-1.9)	0.549	1.2(0.7-2.0)	0.67
Caesarian section	45(53.6)	39 (46.4)	Reference	Reference	
Education					
No formal education	8(80)	2(20)	1.4(1.1–1.7)*	<0.0001	1.3(1.2-1.6)*	0.003
Primary	155(58.9)	108(41.1)	1.3 (1.1-1.4)*	0.004	1.2(1.1-1.3)*	0.02
Secondary	27(42.2)	37(57.8)	Reference	Reference	
Employment					
Formal	7(50)	7(50)	Reference	Reference	
Wage earner	8(61.5)	5 (38.5)	1.2(1.1-1.3)*	0.04	1.1(0.6-1.2)	0.07
Un employed	175 (56.5)	135(43.5)	1.2(0.6-1.3)	0.09	1.1(0.1-1.4)	0.92
ANC visits					
No	1(100)	0 (0)	Reference	Reference	
2	9(90)	1(10)	1.4(1.1-2.3)*	0.01	1.3(0.8-2.1)	0.08
3	20 (51.2)	21 (48.8)	1.2(0.5-1.5)	0.09	1.2(0.2-1.4)	0.10
4	60(62.5)	36(37.5)	1.2(0.3-2.4)	0.86	1.1(0.1-1.8)	0.99
>4	99 (52.4)	90(47.6)	0.3(0.2-2.7)	0.72	0.2(0.1-2.1)	0.81
Gestation					
Preterm	80(57.5)	59(42.5)	0.6 (0.2-2.3)	0.10	0.3(0.1-1.7)	0.14
Term	99(55)	81(45)	0.7(0.3-2.1)	0.09	0.5(0.2-1.6)	0.17
Post term	11(61.1)	7(38.9)	Reference	Reference	
Place of child delivery					
Home	16(76.2)	5(23.8)	1.3(1.1-1.6)*	0.04	1.1(0.1-1.4)	0.34

Clinic	1(33.3)	2 (66.7)	0.7(0.3-0.8)*	0.01	0.5(0.2-1.2)	0.09
Health center	173(55.3)	140(44.7)	Reference		Reference	

AOR: Adjusted Odds ratio; ANC: Antenatal care; COR: crude odds ratio; *Significant association at $p< 0.05$

3.2 Household related factors associated with stunting

A total of 337 households participated in the study. In terms of fecal disposal, 78% (n=263) had pit latrines with slab, 21 %(n=73) had VIP latrines while 0.3 %(n=01) used a pit with no slab. Additionally, 57 %(n=191) of the total households reported to use piped water, 22 %(n=74) used borehole water while 21 %(n=71) used surface water.

In regard to the number of people living in the household, 50 %(n=167) of the households had 6-10 people, 44 %(148) had 1-5 members, 5 %(n=17) had 11-15 people while 1 %(n=5) had 16 and above people.

From the study results, 51 %(n=171) of the households had poor food consumption score as compared to 49 %(n=166) who had good household food consumption. Conversely, 72 %(n=241) of the households reported to use Insect treated Mosquito nets (ITNs) while 28 %(n=96) reported having no ITNs.

The study findings also revealed that majority 77 %(n=258) of the households earn a monthly income of between 0-50,000Ugx followed by 22 %(n=23) who earn between > 50,000-200,000Ugx monthly while 1 %(n=2) earn above 200,000Ugx.

On bivariate logistic regression analysis, using a VIP latrine COR 0.8(*CI: 0.5-1.3, P=0.64)*, Pit latrine with slab COR 0.9(*CI:0.6-1.4),* number of people(1-5) in the household COR 1.1(*CI: 0.8-1.5, P=0.75*), usage of Insect Treated mosquito nets(ITNs) COR 1.4(*CI: 0.6-1.6, P=0.98),* household income between 0-50,000COR 1.1 *(CI: 0.8-1.2, P=0.45)* and incomes >50,000-200,000COR 1.2(*CI:0.7-1.3*) did not have a significant association with stunting.

On the contrary, bivariate analysis indicated that households with poor food consumption COR 1.8 (*CI: 1.4-1.9, P<0.0001*,) and those using surface water COR 2.1(*CI: 1.6-2.4, P 0.003*) were more likely to have stunted children. Thus poor food consumption and use of surface water were significantly associated with stunting.

From the multivariate analysis, the association between stunting and poor household food consumption AOR 1.6(*CI: 1.3-1.8,P=0.0002)* as well as usage of surface water AOR 1.8*(CI: 1.5-2.2, P=0.005)* remained statistically significant.

On the hand, other variables including use of VIP latrine AOR 0.9(*CI: 0.7-1.2, P =0.93*) use of pit latrine with slab AOR 0.6*(CI: 0.4-1.3),* number of people in the household (1-5) AOR 1.2*(CI: 0.9-1.3, P=0.79),* ITN use AOR 1.3 (*CI:0.4-1.4, P=0.41*), Household income(0-50,000) AOR

1.0(*CI:0.9-1.1,P=0.38*), Household income >50,000-200,000 AOR 1.1(*CI:0.8-1.2)* still remained statistically insignificant after controlling for cofounders.

Table 1: Bivariate and multivariate logistic regression analysis of Household related factors associated with stunting of (n=337)

Variable	Stunting		P value		P value
	Yes ,n (%) 190 (56.4)	No,n (%) 147 (43.6)	COR(95%CI)	AOR (95%CI)	
Fecal disposal					
VIP	45(61.6)	28(38.4)	0.8(0.5–1.3)	0.64	0.9(0.7–1.2)	0.93
Pit with slab	144(54.8)	119 (45.2)	0.9 (0.6-1.4)		0.6(0.4-1.3)	
Pit with no slab	1 (100)	0(0.0)	Reference		Reference	
Water source					
Piped	110(57.6)	81(42.4)	Reference		Reference	
Borehole	32(43.2)	42 (56.8)	0.6(0.5-0.8)*	0.001	0.3(0.2-0.5)*	0.004
Surface water	47 (66.2)	24(33.8)	2.1(1.6-2.4)*	0.003	1.8(1.5-2.2)*	0.005
Number of people in HH					
1-5	82 (55.4)	66(44.6)	1.1(0.8-1.5)	0.75	1.2 (0.9-1.3)	0.79
6-10	95 (56.9)	72 (43.1)	1.2(0.7-1.6)		1.3(0.8-1.4)	
11-15	10 (58.8)	7(41.2)	1.3(0.6-1.6)		1.4(0.3-1.5)	
16-20	3 (60)	2(40)	Reference		Reference	
Poor HH food consumption					
Yes	114(66.7)	57 (33.3)	1.8 (1.4-1.9)*	<0.0001	1.6(1.3-1.8)*	0.0002
No	76 (38.8)	90 (61.2)	Reference		Reference	

ITN use						
Yes	142(58.9)	99 (41.1)	1.4 (0.6-1.6)	0.98	1.3(0.4-1.4)	0.41
No	48(50)	48 (50)	Reference		Reference	
Household income						
0-50000	145(56.2)	113 (43.8)	1.1(0.8-1.2)	0.45	1.0(0.9-1.1)	0.38
>50000-200000	44 (57.1)	33 (42.9)	1.2(0.7-1.3)		1.1(0.8-1.2)	
>200000 and above	01 (50)	01(50)	Reference		Reference	

AOR: Adjusted Odds ratio; COR: crude odds ratio; HH: Household; ITN: Insecticide treated mosquito net; CI: confidence interval; VIP: Ventilated Pit Latrine; *Significant association at p< 0.05

4.1 Recommendations

Based on the key findings of this assessment, a number of recommendations have been made as indicated below;

- There is an urgent call for action for different stakeholders to collectively invest in interventions that are tailored towards prevention of early marriages and teenage pregnancies in Kasese District.
- The Government and other stakeholders should prioritize adequate investment in boosting food and nutrition security at community and household levels.
- There is need to design programs that are geared towards empowerment of teenage mothers in income generating activities, literacy, Maternal Infant Young Child and Adolescent Health and Nutrition (MIYCAN) so as to boost their level of earnings and enhance their knowledge on key aspects of life.
- Both Nutrition specific and sensitive interventions need to be purposively integrated in all community based programs and health care services.

Appendices

Appendix 1: Data collection tool

STUNTING AMONG CHILDREN AGED 6-59 MONTHS BORN TO TEENAGE MOTHERS IN BUSONGORA NORTH IN KASESE DISTRICT	
Section A: Social Demographic data of reference mother ***Note***; *Questions in this section shall be answered by the mothers as the main respondents*	
Date of the interview:	
A1. Household Number	Indicate the household per research protocol
A2. Code of the reference mother	…….
A3. What is your Age?	Write the age of the mother in years …….
A4. What is the Sub county/Town council of residence?	**Chose from the list** Maliba Sub County Rugendabara Town Council Kitswamba Town council Bugoye Sub county
A5. What is the Parish/ward of Residence?	……
A6. What is the Village/cell of Residence?	……..
A7.What is your Marital status?	Single Married Widowed Other, specify
A8. How many members do you have in your household?	……
A9. Of the Household Members how many are Children under five?	……..

A10. Who is the Household Head?	Husband Wife Father Other specify
A11. What is the gender of the Household Head?	Male Female
A12. What is the current age of the Household Head?	Less than 20 years 20- 30 years 30-40 years 40-50 50+
A13. What is your relationship with the Household Head?	Wife Daughter Sister Aunt Mother Relative Other, specify
A14. Did you attend/accomplish any level of education?	Yes No
A15. ***If yes in question A14 above***, What was your highest level of education attained?	Attended/ Completed Primary school Attended/ Completed Secondary Level Attended/ Completed post-Secondary Level
A16. Are you currently employed?	Yes No
A17. If yes in A16 above, what is your current form of employment?	Contractual employment Informal employment Self-employment Other specify

A18. What is your main source of livelihood?	Employment Business Farming Casual Labor Other specify
A19. On average how much income do you earn per month?	0-50,000Ugx 50,001-200,000Ugx 200,001-500,000 Ugx 500,000 and above
A20. What is the main source of your household food?	Own production Market Begging Family income Other specify
Section B: Questions on stunting and health of the reference Child and other health care Basics ***Note;*** *Questions to be responded to by the reference mother*	
B1. What is the identification code of the reference child?	……..
B2. Does the child (mention his or her name) have a child health card? ***Note; If yes Ask for the child's health card to confirm***	Yes No
B3. What is the Gender of the reference child?	Male Female Other, specify
B4. What is the age of the reference child? **Note:*Ask for the Child Health Card to verify the age of the child***	Write the age of the Child in Months?
B5. Check for presence of bilateral pitting edema in the child. *Note: if the child is edematous skip the*	Record 0 if no edema 1 if edema present

measurement of weight and MUAC	
B6. Measure the Weight of the reference child ***Note;****Ensure the child has minimal clothing during weight measurement*	Record the weight in Kgs
B7. Measure the height/length of the child using a height/length board	Record the Height/length of the child in CMs
B8. Has the child been fully immunized? *In case the child health card is availed, check to confirm the immunization status of the child if the response is "Yes"*	Yes No
B9. If no in B8 above, why hasn't the child been immunized?	Record the reasons given by the mothers
B10. Did you attend ANC while you were pregnant for (mention the name of the reference child)?	Yes No
B11. Do you have an ANC card?	Yes No
B12. If yes in Qn. B10 How many times did you attend ANC during the pregnancy for(Mention the name of the reference child)	1 time 2 times 3 times 4 times Above 4 times ***Note; Confirm from the ANC card***
B13. If No in Qn10 why didn't you attend ANC	Record the reason(s) as reported by the mother
B14.If yes in B 10, From where did you go for your ANC visits?	Health Center Hospital Clinic Community Outreach post None Other specify
B15. Were you able to consumer all the Folic	Yes

acid tablets that you were given during the ANC	No
B16 If no in Qn 15 above why	Record any reason given by the respondent
B17. Where did you give birth to (***mention the name of the child***) from?	Health Center (II, III, IV, Hospital) Clinic Home/Community Other specify
B18. Who conducted the delivery when you were giving birth to Mention ***the reference child?***	Professional Health Worker VHT Traditional Birth Attendant Community member Other, specify
B19. What was the type of delivery for this reference child?	Normal Birth Cesarean Birth Other, specify
B20. What was the type of labor for the child?	Term(at 9 months) Preterm(before 9 months) Post term(beyond 9 months)
Section C On IYCF Practices and other health concerns	
C1. Have you ever breastfed the child since delivery?	Yes No
C2. If No in C1 above, why have you not breasted the child?	Document the reasons why
C3. After how long was the child*(mention the name of the child)* put on the breast after birth	Within the 1st hour After more than 1 hour Other, specify None
C4. For how long did you breast feed the child*(mention the name of the child)* before introducing other solid foods	1-2 Months 3-4 months 5-6 months Above 6 months None

C5. At what age did you start giving the child*(mention the name of the child)* solid or semi solid foods like porridge, mashed foods, soups etc.	1-2 Months 3-4 months 5-6 months Above 6 months None
C6. Is the child still breastfeeding? *Only for children below 2 years*	Yes No
C7. If no in question C6 above, at what age did you stop breastfeeding the child? *Only for children below 2 years*	1-2 Months 3-4 months 5-6 months 7-9 Months 10-12 months 13-15 months 16-18 Months 19-21 months 22-24 months None
C8. If yes in Qn 6, At what age do you intent to stop breastfeeding the child *Only for children below 2 years*	1-2 Months 3-4 months 5-6 months 7-9 Months 10-12 months 13-15 months 16-18 Months 19-21 months 22-24 months Above 24 months
C9. On average how many times do you breast feed the child per day? *Only for children below 2 years*	1-4 times 4-8 times 8+ times

C10. In the last 6 months Has the child been dewormed ***If yes Confirm from the child health card***	Yes No
C11. Has the child received Vitamin A? *If yes confirm from the Child Health Card*	Yes No
C12. In the last 2 months has the child fallen sick?	Yes No
C13. If yes in Qn 12 How many times has the child fallen sick?	1 time 2-3 times 4-5 times 5+ times
C14. If yes in the Qn 12 above, what was the child suffering from	Malaria Diarrhea Typhoid Pneumonia Cough Flue Other specify
Mosquito net usage	
C15. Do you and the child sleep under an insect treated mosquito net?	Yes No
C16. If no in Qn C15 above, why?	Document the reasons given by the mother
C17. If yes in Qn 15, where did you get the mosquito net	Purchased it Given under Government program Given at the Health facility Donation Other specify
Water Sanitation and Hygiene	
C18. What is the main source of water in this household?	1=Piped Water A)Piped into dwelling

	B)Piped into yard plot C)Public tap 2=Borehole 3=Well A)Protected well B)Unprotected well 4=Spring A) Protected spring B)Unprotected spring 5=Rainwater 6=Tanker/Truck 7=Pulled cart 8=Water kiosk 9=Surface water (River/Dam/Lake/Pond/Stream) 10=Packaged water A)Bottled water B) Sachet water Other (specify)
C19. Do you **usually** pay for this water?	1=Yes 2=No
C20. If yes in Qn 19 above, approximately how much do you pay for a 20 liter jerrican/container?	Answer in local currency
C21. On average How many 20 liter jerricans/containers of water do you use per day?	Record the number of jerrycans
C22. Are there times that the household does not have access to water?	Yes No
C23. If yes in Qn 22 above, why	1=Failure to pay/no money to pay 2=Irregular supply of water/poor availability Other (specify)
C24. If yes in Qn 22, How would you describe the frequency of this water inaccessibility in a	1= Once a week 2=2-3 times a week

week?	3=More than 3 times a week
C25. What is the MAIN toilet facility used by members of your household?	1=Ventilated improved pit latrine (VIP) 2= Pit latrine with slab 3= Pit latrine without slab/open pit 4= Flush toilet 5= No facilities/bush/field/flying toilet Other (specify)