



## The impact of factors on the learning profile of orphaned children in particular in Harare, Zimbabwe

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DOI: <https://doi.org/10.33545/nursing.2020.v3.i2.A.101>

### Abstract

**Background:** The impact assessment of HIV/AIDS on the Education Sector in Zimbabwe (2001-2002) revealed that out of 1009 interviewed students within the range of 15-19 years, 286 (28%) were orphans, 100 (9.9%) had lost their mothers whilst 186 (18.4%) had lost their fathers. The same report stated that the assessment was not able to quantify in any rigorous way the impact that orphanhood had on educational outcomes.

**Materials and Methods:** The Evaluation-Process and Outcome design was used, with a random selection of a sample of 516 secondary school students and 18 teachers in the Harare Metropolitan. Maslow's hierarchy of needs, was the theoretical framework. The study was approved by respective ethical review boards. All participants gave written informed consent. The SPSS statistical software was used for analysis.

**Results:** Students who lost one parent more than four years prior to the study performed better. In the peri-urban area, those orphaned for one year or less performed with a significant difference ( $p < .023$ ). Accompanying the compromised performance was lack of books, which was significantly different ( $p < .033$ ). Orphans without mothers lacked financial resources, and there was a significant difference in their performance, according to average coursework marks ( $p < .001$ ) and average examination marks ( $p < .005$ ). Those orphaned for one year or less, (40%  $n = 15$ ) reported absenteeism caused by accompanying the sick people to the clinic. There were significant perceptions in responses to psychological scale statements; '*I feel like crying all the time*' ( $p < .000$ ); '*I feel lonely all the time*' ( $p < .008$ ). Those orphaned for one year or less (62%  $n = 29$ ) and those orphaned for two to three years (62.5%  $n = 48$ ) had less information on HIV/AIDS prevention.

**Conclusion:** Being orphaned for one year or less presented challenges that impacted negatively on learning; the impact of lack on orphans without mothers influenced their learning outcomes; and that different challenges arose depending on the type of orphan and the length of orphanhood, whilst two to three years category required re-adjustment. In giving assistance, priority must be given to the double orphan

**Keywords:** Orphanhood, single orphan, double orphan, performance, HIV/AIDS

### Introduction

Child population makes up 2.2 billion of 7 billion world populations; 143 to 210 million of child population are orphaned and the regions where most orphans are living include Asia, Africa, Latin America and the Middle East [2]. Orphanhood has remained a huge phenomenon in Zimbabwe. Its size continues to defy instituted measures to curb the spread of HIV, since the report of the first AIDS case in 1985. The prevalence of HIV infection has remained uncomfortably high, adding to a reported 1, 400 000 orphans, 22.67% of the total population [2]. The Government of Zimbabwe has continued to implement the National Case Management System in order to address the needs of the Orphans and Vulnerable Children. School related assistance has improved coverage through Basic Education Assistance Module (BEAM) [3]. Researchers assessed the effects of providing school support on educational outcomes of orphan girls in rural Zimbabwe. Results indicated comprehensive

support reduced school dropout and absence but did not improve test scores, further research was needed about contextual factors affecting girls' school participation and learning [4]. Other causes of orphanhood include road traffic accidents, war (the Syrian war), natural disasters (recent Cyclone Idai, March 2019) and violence [5]. Orphans are exposed to being trafficked, given up for adoption, enlisted to unclear missionary work, child soldier recruitment, child labour, organ mafia, getting involved in criminal activities and substance abuse because of their vulnerability [2]. Loss of loved ones, particularly during childhood, brings with it, depressive thoughts and feelings to include sadness, anger and guilt, which are normal at time of bereavement. With passage of time, the negative emotions are expected to disappear [6]. Psychosocial stresses have been identified in HIV illness with the prospect of death in the family being obvious but, often not discussed with children [6]. The same authority mentioned that children are highly traumatized by

watching parents die and not being able to talk about it, stress and depression could compromise function and well-being in all areas of family life including school performance. Case studies from Eastern and Southern Africa also shed light on consequences of HIV/AIDS for teaching and learning due to large numbers of teachers who have succumbed to HIV [7]. The anticipated behavioural changes attributed to learning outcomes in literacy, numeracy and life skills encompass vision, character and competence. Thus, the moral development theories of both Kohlberg [8] and Gilligan [9], Maslow [10] and Erickson's [11] psychosocial theories of development are relevant in the acquisition of life skills. These theories underpin the importance of morality and self-worth to learning in orphanhood as young people grapple with distinguishing right from wrong and identifying themselves as unique persons. Orphans must make choices that enhance their self-esteem and self-preservation in order to improve their chances of survival in an environment where they are at great risk of infection with HIV and exposure to aforementioned death-traps. Reviewed literature revealed factors that deter learning and thus unveiled the need for research into the learning of orphans. It is against this backdrop that the study assessed the impact of those factors on the learning profile of orphaned children in particular, providing empirical evidence regarding learning outcomes.

**Materials and Method**

This was a quantitative study. The Evaluation-Process and Outcome design was used because its strength lay in its ability to assess causal outcomes and impact [12]. Approval for the study was granted by respective ethical review boards. All participants gave written informed consent. Interviews were conducted privately and the researcher had sole access to filled-in questionnaires that were kept in a lockable cupboard. In this study five methods of data collection were used, namely experimental, structured questionnaires for students, observations of teaching sessions, document analysis and interviews with teachers. From randomly selected secondary schools in the Harare Metropolitan, after stratification, a sample of 516 form four students, aged between 14 and 19 years, and eighteen teachers (18) from 18 schools was drawn and interviewed. Maslow's motivational, humanistic learning theory, was adopted as the theoretical framework for the study<sup>10</sup>. Three experimental groups were created to include those recently orphaned, those who had been orphaned for two to three years and finally those who had been orphaned for four years or more. These were compared to assess any learning

differences and whether the impact of identified factors became greater as the years of orphanhood progressed. A total of 261 orphans constituted the experimental groups and the remainder, 245 non-orphaned students, constituted the control group within the sample. The SPSS statistical software was used for analysis. ANOVA was used to compare the means of three or more variables. Post-hoc analysis showed how the groups differed.

**Application of Maslow's theory to the study**

The factors that impact on learning in orphanhood, identified in the literature review emanate from basic needs, which Maslow calls deficiency needs and arranges them hierarchically from the lowest need. The next level of needs Maslow calls growth/being needs; the lower level needs in this category are cognitive and aesthetic, and the higher-level needs are self-actualisation and self-transcendence ones<sup>12</sup>. According to Maslow one is ready to act upon growth needs only if deficiency needs are met. Orphanhood is characterized by deprivation and identified factors are akin to basic needs through which the impact of factors on learning was assessed.

**Results**

Coping mechanisms: Within orphanhood, 8 (36.4% n=22) of those orphaned for one year or less, 24(60.0% n= 40) orphaned for two to three years, and 28 (48.3% n= 58) orphaned for four years or more, suggested praying to God. Knowledge of HIV/AIDS: The majority of those orphaned for one year or less 18(62% n = 29) and those orphaned for two to three years 30(62.5% n = 48) and those orphaned for four years and more 39 (50% n=78) had less information on HIV and AIDS prevention. Sexual Relations: Pressurized into having sexual relations; those orphaned for one year or less; 8 (27,6% =29); those orphaned for two to three years 8 (10,3% n=78) and those orphaned for four years and more 4 (8,9% n=45). Absenteeism: Those orphaned for one year or less; 6(40% n= 15); those orphaned two to three years 5(14,7% n=34); and those orphaned for four years and more 10 (20% n=48) were absent from school because they had to accompany sick people to the clinic.

**Table 1:** Duration of Orphanhood - Period since Parent passed away

Period	Mother	Father
One year or less	15.2%	13.0%
2-3 years	23.9%	23.9%
4years and more	60.9%	63.0%

**Table 2:** Loss of either Father or Mother Performance of students according to period since one parent died.

Subject	1 year or less	2 – 3 years	4 yrs and above	ANOVA significance Level	Decision
<b>Arts</b>					
History	50.54	48.91	55.74	0.357	Means are not different
Shona	52.21	54.06	53.08	0.900	Means are not different
English	47.77	51.11	50.28	0.780	Means are not different
English Literature	57.46	51.76	58.61	0.498	Means are not different
Religious Education	38.67	47.71	38.88	0.649	Means are not different
<b>Science</b>					
Geography	53.09	47.88	54.43	0.370	Means are not different
Maths	57.36	54.58	60.54	0.575	Means are not different
Integrated Science	55.00	55.90	55.07	0.989	Means are not different

Physics	59.50	47.03	54.33	0.325	Means are not different
Biology	60.43	56.86	62.26	0.641	Means are not different
Agriculture	57.63	57.60	49.55	0.713	Means are not different
<b>Commercials</b>					
Commerce	47.50	58.19	55.54	0.592	Means are not different
Accounts	56.57	61.85	63.19	0.626	Means are not different
<b>Practical</b>					
Food and Nutrition	60.75	48.50	56.00	0.598	Means are not different
Fashion and Fabrics	49.50	34.50	50.45	0.425	Means are not different
Metalwork	39.50	51.58	48.67	0.554	Means are not different

**Table 3:** Learning Outcomes in terms of Subject categories Performance of students by orphanhood

Subject	Double orphan	Single orphan	Not orphaned	ANOVA significance Level	Decision
<b>Arts</b>					
History	51.42	52.52	48.72	0.336	Means are not different
Shona	50.27	52.67	51.74	0.734	Means are not different
English	45.10	50.42	49.06	0.353	Means are not different
English Literature	59.95	55.33	59.14	0.458	Means are not different
Religious Education	40.75	42.63	46.48	0.559	Means are not different
<b>Science</b>					
Geography	47.70	50.42	48.10	0.591	Means are not different
Maths	55.81	56.71	56.91	0.988	Means are not different
Integrated Science	43.89	54.79	52.68	0.184	Means are not different
Physics	33.07	51.50	49.45	0.098	Means are not different
Biology	44.50	59.26	64.61	0.001	Means are different
Agriculture	61.50	51.47	52.29	0.649	Means are not different
<b>Commercials</b>					
Commerce	53.92	54.55	48.38	0.295	Means are not different
Accounts	52.33	61.46	55.91	0.174	Means are not different
<b>Practical</b>					
Food and Nutrition	62.83	53.73	53.50	0.368	Means are not different
Fashion and Fabrics	50.00	45.69	45.32	0.852	Means are not different

**Table 4a:** Major problems experienced by students

	Sum of Squares	df	Mean Square	F	Sig.
Inability to pay fees:	8.016	3			
Between Groups	1064.294	322	2.672	.808	.490
Within Groups	1072.310	325	3.305		
Total					
Lack of books:	21.995	3			
Between Groups	853.523	344	7.332	2.955	.033
Within Groups	875.517	347	2.481		
Total					
Lack of uniforms:	2.159	3			
Between Groups	637.390	300	.720	.339	.797
Within Groups	639.549	303	2.125		
Total					
Lack of bus fare:	4.282	3			
Between Groups	628.438	285	1.427	.647	.585
Within Groups	632.720	288	2.205		
Total					
Repeated academic failure:	11.627	3			
Between Groups	656.804	286	3.876	1.688	.170
Within Groups	668.431	289	2.297		
Total					
Break up of home:	3.967	3			
Between Groups	904.686	293	1.322	.428	.733
Within Groups	908.653	296	3.088		
Total					

**Table 4b:** Lack of Books Post Hoc Tests Homogeneous Subsets

Lack of books Tukey B			
A 5 If you lost one parent when did s/he die?	N	Subset for alpha = .05	
		1	2
one year or less ago	22	2.2727	
Not orphaned	220	2.6000	2.6000
four years or more ago	67	3.0000	3.0000
2-3 years ago	39		3.2051
Means for groups in homogeneous subsets are displayed.			
A Uses Harmonic Mean Sample Size = 44.166			
B The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.			

**Table 4c:** Area of Location: Multiple Comparisons of Means: Average Examination Marks of Orphans

Area of location	Orphan- 0-1 yr ( $p < .023$ )	Orphan- 2-3 yrs ( $p < .034$ )	Orphan- > 4 yrs ( $p < .001$ )
Peri – Urban	34.8190	39.5546	42.7804

**Table 5:** Loss of both parents: considering the period since the mother died Performance of students who lost both parents: taking into account the period since the mother died

Subject	one year or less	2 – 3 years	4 yrs and above	ANOVA Significance Level	Decision
<b>Arts</b>					
History	57.63	46.38	51.88	0.614	Means are not different
Shona	53.25	43.43	51.40	0.520	Means are not different
English	41.50	45.80	47.82	0.829	Means are not different
English Literature	60.75	56.00	62.50	0.957	Means are not different
Religious Education	24.50	34.50	58.67	0.051	Means are not different
<b>Science</b>					
Geography	34.50	46.38	51.50	0.333	Means are not different
Integrated Science	55.50	33.07	46.75	0.301	Means are not different
Biology	48.67	24.50	57.00	0.010	Means are different
<b>Commercials</b>					
Commerce	39.50	44.50	56.00	0.582	Means are not different
Accounts	45.75	34.50	54.17	0.542	Means are not different

**Table 6:** Descriptive Statistics: Average course work and examination marks of the orphans who had lost their mothers and those whose mothers were alive

Question A3: Is your mother alive?	N	Mean	Std Deviation	Std Error
Average coursework mark Yes	391 76	41.887	12.875 9.512	.651
No	467	36.645	12.532	1.091
Total		41.034		.580
Average examination mark Yes	375 72	49.2369	15.2117	.7855
No	447	43.8203	13.3689	1.5755
Total		48.3645	15.0488	.7118

Question A3: Is your mother alive?	95% Confidence Interval for Mean			
	Lower Bound	Upper Bound	Minimum	Maximum
Average coursework mark Yes	40.607	43.167	24.5	80.7
No	34.472	38.819	24.5	70.2
Total	39.894	42.173	24.5	80.7
Average examination mark Yes	47.6923	50.7815	24.50	85.45
No	40.6787	46.9618	24.50	82.94
Total	46.9656	49.7633	24.50	85.45

**ANOVA:** Average course work marks and examination marks

	Sum of Squares	df	Mean Square	F	Sig
Average coursework mark					
Between Groups	1748.115	1	1748.115	11.379	.001
Within Groups	71438.569	465	153.631		
Total	73186.683	466			
Average examination mark					
Between Groups	1772.226	1	1772.226	7.947	.005
Within Groups	99232.078	445	222.993		
Total	101004.30	446			

**Table 7:** Psychological Scale adopted from study by Professor Sengendo &Nambi 1997:123

Item	Sum of Squares	Df	Mean Square	F	Sig.
I feel like crying all the time:					
Between Groups	8.977	2			
Within Groups	176.021	467	4.489	11.908	.000
Total	184.998	469	.377		
I feel lonely all the time:					
Between Groups	3.301	2			
Within Groups	159.740	467	1.650	4.825	.008
Total	163.040	469	.342		
Things bother me all the time					
Between Groups	3.027	2			
Within Groups	179.867	467	1.514	3.930	.020
Total	182.894	469	.385		
I am bad all the time					
Between Groups	1.536	2			
Within Groups	91.993	460	.768	3.840	.022
Total	93.529	462	.200		

Amongst orphans only who responded to significantly different statements; *I feel like crying all the time* 19(50% n=38) double orphans, 71(42% n =169) single orphans; *I feel lonely all the time* 20(52.6% n=38) double orphans, 71(42% n= 169) single orphans; *things bother me all the time*, 99 (58.6% n= 169) single orphans, 18 (47.4% n =38) double orphans; *I am bad all the time* 44 (26.2% n=169) single orphans, and 3 (8.3% n=36) double orphans.

**Discussion**

**Specific factors and their impact on learning in orphanhood**

Orphanhood creates a deprived environment that contrasts with the environment Maslow advocates as conducive to learning<sup>12</sup>. Table 1, showed that the majority of orphaned students in the study had lost parents in the four years preceding the study. Table 2, showed that students who lost one parent more than four years prior to the study performed better suggesting the use of coping mechanisms and also overcoming of feelings of loss as alluded to earlier in the literature<sup>6</sup>. Although means for Religious studies were not significantly different, all students failed this subject and yet faith in God, as their chosen coping mechanism was prayer, requires a sound knowledge-base and relates to Maslow’s higher-level needs of connecting to something beyond the ego.

Table 3, showed that performance of single orphans and double orphans did not differ significantly, but the post hoc analysis revealed that in most subjects, double orphans performed worse than others. Thus, despite location of school, (low density, high density and peri-urban) and period of orphanhood, the double orphan performed poorly. Statistically there was not much difference in the students’ means (single orphans and double orphans) except in Biology where double orphans were the worst performers but in Agriculture; Food and Nutrition; Fashion and Fabrics, they performed better than the single orphans.

In the study, the peri- urban areas in Harare are a low resource setting, and from there, those orphaned for one year or less performed poorly with a significant difference ( $p < .023$ ) as depicted in the comparisons of means in Table 4 (c) and accompanying the compromised performance was lack of books, which was also significantly different ( $p < .033$ ) in Table 4 (a), showing major problems encountered by students. Post hoc analysis in Table 4 (b) depicted the difference between those orphaned for one year or less and those orphaned for two to three years, with those orphaned for one year or less lacking more than any other category. A majority of them were absent from school accompanying

sick relatives to the clinic. At the level of safety and security, the deficiency needs caused by loss of parents as well as poverty, create psychological insecurity and do not motivate creative and critical thinking essential for problem solving, decision making and the acquisition of life skills<sup>[13]</sup> and this exposes orphans to delinquency as stated in literature<sup>[2]</sup>.

Table 5, showed that the performance of double orphans, taking into account the period since the mother had died, there was no difference in means except in Biology. The students who had lost their mothers four years before the study had the highest averages. The post hoc analysis showed that those with mothers who had died two to three years before the study were significantly different from other groups suggesting a salient pressure may be of dealing with change. Failure in Biology relates to the dissatisfaction with HIV/AIDS education reported in this study, because Biology provides basic facts on reproduction, which are an essential component of sexual reproductive health and more orphaned students in the one year or less and two to three years categories were pressurized into having sex. Coercing students into sexual relations amounts to a sexual offence and is punishable by law. Students require training in negotiation skills and in developing self-preservation skills to protect them against sexual abuse of any form. Sexually traumatized students require psychological care as part of counselling as this type of injury can impact negatively on learning<sup>[15, 10]</sup>.

Table 6, shows that there was a significant difference in the performance of orphans without mothers and those whose mothers were alive. Orphans without mothers lacked more, as was evidenced by the significant difference in learning outcomes. Maslow states that if the need for psychological comfort, lack of love and acceptance are not met, creative and critical thought processes are unlikely to take place. Those students orphaned for four years or more had the best average performance.

Table 7, has responses to psychological statements which concur with literature that say that orphans received neither death education, bereavement counselling, grief therapy nor

emotional rehabilitation sessions, so that their grief and depression remained hidden and unrecognized<sup>[16]</sup>.

### Conclusion

- Being orphaned for one year or less presented challenges that impacted negatively on learning
- Impact of deficiency on orphans without mothers influenced the difference in learning outcomes.
- Different challenges arose depending on the type of orphan (single or double) and the length of orphanhood, whilst the period of two to three years of orphanhood required change management. In giving assistance, priority must be given to the double orphan
- Illness that precedes death, as in AIDS-related orphanhood, increases the burden on the students' learning capacity, although it appeared that as orphanhood progressed, learning outcomes improved.

### Recommendations

- There is a need to augment the identified strength of mothers in their excellent support for students' education. Fathers, especially widowers, require national counselling programmes to assist them to participate actively in their children's education.
- Research is required to explore double orphans' building of skills in practical subjects and its link with career development
- Research is required to explore the impact on educational performance of BEAM and other measures instituted to help orphans with a view to targeting double orphans first amongst vulnerable children.
- Research is required to explore the teaching learning process of biology as the study does not explain students' poor performance in Biology.

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