

A Uni-Variate Analysis of Hedonistic-Altruistic Behavior of Home Reared, Institutionalized and Street Children

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Abstract: To investigate the hedonistic oriented altruistic behavior of home reared, institutionalized, and street children, one-hundred seventy four subjects ranging from seven to eighteen years were administered a prosocial motivation questionnaire (PSMQ). Equal numbers of subjects were taken from each group; with equal number of male and female subjects; and with equal number of subjects from each age category. Homogeneity of variance assumption was found to be tenable using Levenes test of homogeneity of variance. Normality of the distribution of hedonistic behavior in the population was also found to be tenable employing a Chi square test. First, one-way between-subjects ANOVA tested the effects of residential setting on the hedonistic behavior of home-reared, institutionalized and street children. Second, a 2(sex: male, female) x3(residential setting: home reared, institutionalized, street children) x3(age :7-10, 11-14, 15-18) univariat analysis of variance tested the effects of sex, residential setting, and age on the hedonistic behaviors of home-reared, institutionalized, and street children, respectively. Third, a 3(family size: small, medium, large) x3(birth order: first born, last born, neither)x3(maternal presence: alive, don't alive, separated) univariate analysis of variance tested the effects of family size, birth order, and maternal presence on the hedonistic behaviors of home-reared children. Results of the one-way between-subjects ANOVA on the hedonistic orientations by residential setting for the three residential settings were not equal ($P>0.005$). Results of a 2x3x3 univariat analysis of variance using sex, residential setting and age indicated significant result for the main effects of residential setting factors on hedonistic oriented altruism ($F(2, 171) =112.016, P<0.0005$). Significant result for the main effects of the maternal presence factor on hedonistic oriented altruism ($F (2, 55) = 5.378, P = 0.008$) were found. The results highlighted the importance of residential setting, sex and maternal presence to the variation in the hedonistic behavior of children. The results were interpreted as suggesting that it may not be residential setting alone that is important for the motivation of hedonistic oriented altruistic behavior but other background variables of sex and maternal presence have also contributed to it.

Keywords: hedonistic oriented altruistic behavior, uni-variate analysis, street children, institutionalized children, home reared children, residential setting, birth order, family size

1. Introduction

Compassionate concerns reflect larger changes in human styles of interaction (Weiss, Boyer, Lombardo, & Stick, 1999). In relation to these Batson et al (1995) stated that “although there have been considerable fluctuations in the patterns of societal and individual interaction over centuries, in general, with the passage of time, human kinds inhumanity to itself had decreased as humanitarian concerns have increased”. Supporting this argument Katz (2001) suggested that attitudes towards the dignity of human life, and toward slavery, torture, and similar issues have, on average, become more humanitarian. Furthermore, in accordance with this conclusions Krebs (2000) on his part added that as humanitarian attitudes have increased concern for the weak, helpless, poor, and sick and other needy or dependent groups including children has increased. Investigating this condition Buckley, Winkel and Leary (2004) speculated that such a shift in perspective may well have laid the group work for and, perhaps stimulated an interest in the development of positive behaviors and concern for others.

In lights of the above arguments, Gest (2001) have also regarded helping behavior as one of the elementary behaviors necessary for the survival of human beings indicating that “in view of their biological and physical limitations throughout their lives human beings function numerous times as helpers and helpees”. In the same fashion Batson and Shaw (2001) indicated that it is almost

impossible to imagine any social group in which individuals do not help one another. Regarding this point MacDonald and Leary, (2005) have indicated that the importance of helping has long been recognized, and even ancient religions had placed special emphasis upon on the value of helping others.

A research on positive behaviors such as helping, sharing and cooperation is limited unlike studies on anti-social behavior (Eisenberg, 1992; Hetherington & Park, 1993; Fehr& Gachtr, 2002). The link between hedonistic behavior and social exclusion is investigated by only few researchers (Twenge, Baumeister, & Nuss, 2002). Habtegiorgis Berhane (1994 and Argaw Biru in 2001) attempted to study the hedonistic motives of Ethiopian children..These studies consider residential setting as the sole factor ignoring other independent variables for instance birth order, family size, age, sex and maternal presence which are more likely to affect children's hedonistic behaviors.

Even more these studies did not address for the interaction effects of those variables. This implies that very little is investigated about hedonistic behaviors. It is imperative to fill this knowledge gaps by including residential settings of home, institution and street; and other background variables of family size, age, sex, birth order, and maternal presence versus absence, as independent measures.

Volume 6 Issue 5, May 2017

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Curiosity in everyday life encounters was another deriving factor. I had seen people commonly engaging in activities that are costly to them and mostly benefit others. I used to question firstly why they volunteer, help strangers, vote, give to political or charitable organizations, donate blood, join rescue squads and sometimes sacrifice their life for strangers.

Generally, the present study may:

- Provide further evidence with respect to the role of environmental or residential factors in influencing hedonistic behavior of children.
- Suggest on whether background of children such as sex, age, birth order, family size, maternal presence or absence, and religion, affects the hedonistic behavior of children.
- Provide an interesting and useful piece of information for the growing literature on hedonistic behavior. I.e. it might serve as a spring board from which other researchers can explore the issue more deeply employing different methods and subjects.
- Serve for policy makers and welfare institutions to adjust their policies and programs so as to reduce criminal behavior that can be emanated from living in streets and problem behaviors developed due to socially excluding environmental settings.
- Pinpoint some of the gaps and weakness in the work in prosocial behavior and to stimulate integration of this work with research and theory on other aspects of development of hedonistic behavior in children.

1.1. Alternative Hypothesis

The main purpose of the study was to test whether there exists a significant difference in hedonistic-oriented altruistic behaviors among children of the home, the child-care institution and the street. Thus, to achieve these purposes the following working or alternative hypotheses were formulated in such a way this hunch could be tested:

1. The mean on hedonistic oriented altruistic behaviors for children of the three residential settings are not equal
2. There is a difference in the mean on each of hedonistic oriented altruistic behaviors among the three different age groups of subjects.
3. The mean on hedonistic oriented altruistic behaviors for home reared children with different birth order in the family are not equal.
4. There is a difference in the mean on each of hedonistic oriented altruistic behaviors among male and female subjects of the study.
5. The mean on hedonistic oriented altruistic behaviors for home reared children whose mothers are alive, do not alive, and who were separated from their mothers are not equal.
6. The mean on hedonistic oriented altruistic behaviors of home reared children with large, medium and small family size are not equal.

2. Method

2.1. Research Design

A descriptive survey research design on the hedonistic oriented altruistic behavior of home-neared, institutionalized and street children was used to determine differences between non-manipulative variables. To achieve this objective, a descriptive survey research design was employed to describe the hedonistic oriented altruistic behaviors of home reared, institutionalized and street children.

2.2. Population

All home-reared, institutionalized, and street children in Addis Ababa were the target population. The first group of home-reared children was recruited from Tsehay Chora primary school on grounds of ease of access. Likewise, the second and the third groups of institutionalized and street children were recruited from the Kechene and Kenema children's home, and the street areas of Giorgis, Piassa and Mexico, respectively.

2.3. Eligibility

In all groups, I took equal numbers of male and female subjects. In each of the three age categories equal numbers of subjects were included. The sample sizes of the three groups were made equal to minimize the effect of heterogeneity of variance on the type I error rate. Fabes and Eisenberg (1996) have suggested the use of self report to the prosocial motivation questionnaire to study hedonistic behavior of children from preschool age (3 years of age) onwards. However, considering factors of nutrition and socio economic status which might influence the development of the children's prosocial moral reasoning, children from age seven through eighteen were recruited to self report to the prosocial motivation questionnaire. According to global security (2000-2005) the age range of most observable children on the street is between seven to eighteen. Similarly this study included those children who were within the age range of seven to eighteen. In addition, in both the child care institutions and the street areas, children who had stayed six years were eligible for sampling. School records and peer nomination (using contact person) were employed to select institutionalized and street children, respectively. The home-reared children whose age ranged from seven to eighteen were obtained from school records in Tsehay Chora primary school. Finally, subjects from all religious groups, birth order, family size, and maternal living status were included with no discriminating criteria.

2.4. Sample Size Determination

Since type I errors are generally more serious than type II errors, several behavioral science researchers have suggested a 4:1 ratio of β to α (Hinkle, Wiersma, and Jurs, 1979). In the present study the level of significance is established, a priori, at 0.05. Therefore, the corresponding power $1-\beta$ (0.05) = 0.08 was used in the study. The expected error (Δ) was assumed to be small, that is, it is

0.35 (this is a rule of thumb according to Cohen (cited in Shavelson, 1988)). It is also acceptable to use error variance cited in the research literature to determine appropriate sample size (Fabes & Eisenberg, 1996).

Obviously, the basic research questions were non directional. Hence, a two tailed-test was used to determine the sample size. Since the study involves two sexes, and is non directional, the size of each sex was:

$$N_h = \frac{(Z\beta + Z_{\alpha/2})^2}{\Delta^2}, \text{ Where}$$

Z_β = Standard score in the sampling distribution associated with Ha, corresponding to $Z_{\alpha/2}$ for a given power

$Z_{\alpha/2}$ = Critical value of the test statistic in the sampling distribution associated with Ho for a two-tailed test at a given α level

$$\Delta^2/\delta^2 = \text{Population error variance}$$

$$N_h = \frac{(1.28+1.96)^2}{(0.35)^2} = 86.694 = 87$$

Since the study involves two sexes, the total number of subjects required was $N_t = 87 \times 2 = 174$. And since the study also involves three groups with a proportionate cell frequencies, the researcher sampled $174 \div 3 = 58$ from each group of home reared, institutionalized and street children. It implies that the sample size necessary for the two-tailed test of the null hypotheses at $\alpha=0.05$ with a power to detect a 0.35 difference is 174.

2.5. Sampling and Participants

There were three groups of subjects, fifty eight in each group with equal proportion of male and female. All groups ($N = 174$ subjects) were children in Addis Ababa. The first group of home reared children ($n_1 = 58$) were selected by stratifying the student population of Tsehay Chora primary school by sex and age using school records. This is because this population is assumed to be heterogeneous for the dependent variable of hedonistic behavior since hedonistic behavior can vary with the variables of sex and age in the population of home reared children of Tsehay Chora primary school. The second groups of institutionalized children ($n_2 = 58$) were obtained through stratifying children at Kechene and Kenema children's home by sex and age using each child's record in the institution; and then using simple random sampling technique. More specifically, sampling without replacement (using lottery method) was employed to select the final subjects. The use of stratified sampling for the population of institutionalized children can be justified by the assumed heterogeneity (variability) of hedonistic behavior with the independent variables of sex and age in the population. The third group, the street children ($n_3 = 58$) were selected randomly (using lottery method) from the seven main street areas in Addis Ababa, namely Merkato, Giorgis, Piassa, Megenagna squares, Mexico, National theatre, and stadium.

2.6. Pilot Test

The purpose of the pilot test was to check the applicability and quality of the PSMQ which was adapted to collect data about hedonistic behavior in the context of children in Addis Ababa. The pilot study was intended to check the clarity of the questions and their cultural appropriateness, the time it takes to feel the questionnaire, the reaction of the respondents to the questions and other such issues. With these objectives in mind, before administering the inventory to the pilot group, it was translated into Amharic. Firstly, the English and Amharic version was evaluated by four judges in the psychology department. The judges were asked to give their reactions to each statement in relation to two basic questions: 1) Does the item measure hedonistic behavior? And (2) how strong is the item in measuring the hedonistic behavior of Ethiopian subjects? For the first question the choices were "very high", "uncertain", and "no" while for the second question, the choices were "very high", "average", and "very low". All of them have rated the English and the Amharic version of the PSMQ. Then, the inter-correlation among these four judges was calculated using Pearson product moment correlation analysis and the coefficient of 0.9262 inter rater (judge) correlation was obtained. This implies that the translation was accurately done and the PSMQ is reliable to measure hedonistic behavior.

Secondly, after this translation, the PSMQ containing sixty six items was pilot tested on twelve randomly selected subjects, four from each of the three groups with equal number of male and female subjects who were not participated in the main study. Since there are more than one constructs underlying the PSMQ, the reliability of each subscale was decided to be assessed separately. The consistency presented in Table 1 was calculated for the hedonistic oriented altruism underlying PSMQ using SPSS- version -12 windows.

Table 1: Reliabilities for the hedonistic orientations

Dependent var.	Cronbach alpha	Chronbach's alpha based on standardized item	No of items
Hedonistic	0.943	0.943	11

As can be seen in Table 1 the consistency of the instrument was found to be between 0.943. This is similar to that of Boehke et.al (1989) who found it to be between 0.59 to 0.88. Thirdly, standard deviations of each item was computed. Then, it was decided that items having standard deviation below 1.3 or above 1.7 to be discarded or improved. Based on this decision certain items were discarded (See the appendix C on items statistic).

In sum, the PSMQ seems to be reliable and valid to measure hedonistic behavior of Ethiopian subjects. This is because cultural differences, changes in language overtime or simply sample and situation differences which may affect the PSMQ were corrected through item calibration.

2.7. Instruments

Subjects were required to respond to the modified version of pro-social motivation questionnaire (PSMQ). The rationale for the use of the questionnaire is the lower cost of sampling over a wide geographical area, three researches cited and the less amount of time required to collect the data on hedonistic behavior. Silbereisen and his colleagues originally developed this scale in 1986. It consists of 24 story situations in which there is an opportunity for pro-social action. In half of these, subjects are described as having helped, and in other 12 subjects refrained from helping (Silbereisen et al, 1991). The investigator considered 11 scenarios for the sake of the present study. Then six possible motives were presented in random after each scenario. After each story, children were presented with a series of questions intended to elicit the following information: (1) why they acted in each story (scenario) the way he or she did (b) how they feel (c) whether they felt the way for himself or herself or for the victim (needy person) or for the task or for the audience. Finally, subjects were made to rate each motivation on a 5 point Likert scale with the poles ranging from not at all=0; probably not=1; perhaps=2; most probably=3, and quite surely=4 (Boehke et al, 1989). The subject's answers to these questions were coded and analyzed.

Furthermore, the use of PSMQ for measuring altruism among Ethiopian children is justified by the principle of universalism that makes the assumption that basic psychological processes are common to all members of the species. Berry et al (2002) indicated culture influences the development and display of psychological characteristics and comparisons will lead us to see similarities and differences among different cultural groups. It implies that even if there are some variations, the basic psychological principles are the same for all human beings irrespective of culture, sex, age, race and ethnicity. It meant that, the basic principles of hedonistic behavior are the same for all human beings whether for Americans or Ethiopians even if there are some variations. However, to minimize these variations, the PSMQ was pilot tested prior to its administration to see its validity and reliability. Cronbach alpha coefficient alpha coefficient, ranging between 0.66 and 0.77 was calculated on twelve subjects as indicated in the section on the "test tryout". Boehke et al (1989) calculated the consistency of the instrument (PSMQ) to be between 0.59 to 0.88. After pilot testing the translated questionnaire, questions or items which are ambiguous for the subjects were discarded or improved.

In sum, the instrument consists of residential setting sex, and age (7-18), and religion for all subjects of the study. Certain part of the measure asked home reared children about their birth order, family size, and maternal presence or absence. Institutionalized children are required to respond to actions taken by their care takers when they commit mistake is indicated. Street children were asked about actions taken by the police when they commit mistake and their perception about the attitude of the society toward them.

2.8. Variables and Scoring

2.8.1. Independent variables

- Residential settings (categorical): home, street, and institution.
- Sex(categorical): Male and female
- Age(categorical): 7-10, 11-14, and 15-18
- Birth order (categorical): First born, last born, and neither.
- Family size (categorical): Small (1-4), medium (5-7), and large (>7) family size.
- Maternal presence (categorical): Alive, don't alive, and separated (not there for job or other purpose).

2.8.2 Dependent variables

The dependent variables were hedonistic oriented altruistic behaviors measured by scores of subjects/children on the hedonistic orientation scales in PSMQ. Subjects were asked to rate each motive on a five point Likert scale ranging from 0 to 4. Then, the rating of subjects on all the 11 scenarios was added.

2.9. Procedures

Before administering the data collection tool, some important rapport were established with the selected sample members. Participants were given necessary clarification to respond to the questionnaire. They were encouraged to ask questions if anything is unclear during administration of the instrument. They were also assured that the response they provide were confidential and any information they provided would not be known since they do not write their name on the questionnaire.

Data was collected from January-March 2010, using PSMQ self report inventory. During the administration of the inventory, the main objectives of the study were explained to the subjects. Oral instructions and necessary helps were given to the subjects in order to bring about genuineness in their responses. First, subjects were interviewed on the background variables. Then, they were requested to proceed to the prosocial motivation questionnaire (PSMQ) scale. The average time spent to complete the inventory by the subjects was one 45'. Generally, the scoring procedures used during the main study were the same as those used in the tryout.

2.10. Data Analysis

To run a test of analysis of variance three assumptions must be met: normality of the distribution, homogeneity of variance, and independence of treatments. To test the normality of the distribution, a chi square, Goodness of fit test was run. A chi square obtained was presented in table 2.

Table 2: Chi Square Values for the Hedonistic Oriented Altruistic Behavior

	Hedonism	Task	Self	Conformity	Empathy	Other
X ²	276.621	74.276	304.943	103.793	39.483	61.184
df	43	35	43	37	40	36
Asymp.sign	0.06	0.057	0.88	0.68	0.65	0.10

As indicated in table 2, since $P > 0.05$ for all the six subscales, the distribution of the dependent variable don't depart from normality. Secondly, tests of homogeneity of variance employing Levene's test was run automatically on SPSS version 12- for the scales as indicated in Table 3 and

neither were found to have significant result. This implies that the variance of the hedonistic oriented altruistic behavior is equal across the respective independent variables.

Table 3: Test of Homogeneity Variance of Hedonistic Oriented Altruistic Behavior across Sex, Birth order, Age and Maternal presence or absence of the Subjects

Dependent var.	Independent var.	Levene	d1	d2	Sig
hedonistic	sex	1.599	1	172	0.208
	birth order	2.495	5	52	0.042
	age	1.816	2	171	0.166
	maternal presence	0.389	1	56	0.536

Since Levene's $P > 0.05$, the variation of hedonistic oriented altruistic behaviors across age sex, birth order, age and maternal presence or absence of subjects is equal; there is equality of variance. This implies that the error variance of hedonistic orientations is equal across children/population with different characteristics. This is important in terms of the reliability of the results and in supporting the robustness of the inferential statistics.

After satisfying the two very important assumptions (see Table 2&3), data were organized using SPSS-12- software programs. Preliminary descriptive statistical values such as mean, standard deviation, and maximum-minimum scores were computed to describe the data on hedonistic behavior. Gupta (1988) recommends analysis of variance (ANOVA) to assess the performance of various people in common activities. Hence, this technique was preferred for comparing the mean differences (ratio) between the three groups of the study. Since there is one independent variable (residential setting) with three levels of that variable (home, institution and street), a one way between subjects ANOVA was used to compare the mean of hedonistic behavior among the three groups.

Employing Levene's test of homogeneity of variance (Koul, 1988), the assumption of homogeneity of variance was found to be tenable and the computation of analysis of

variance was justified. Test of significance was established at alpha 0.05. A one way analysis of variance (ANOVA) was employed to compare the means of hedonistic behavior of the children of the three residential setting of home, institution and street in order to determine whether or not there is a statistically significant difference in hedonistic behavior. ANOVA was used, because it is robust with violations of assumptions, except in the case of unequal variances with unequal sample sizes. Then, a $2 \times 3 \times 3$ univariat analysis of variance was performed to determine whether there existed a statistically significant difference in terms of sex, and age, environmental setting and among the children on the mean scores of hedonistic behavior to see the independent and interactive effects of any combination of the independent variables in explaining the dependent variable of the study, namely the hedonistic behavior. That is, a $2 \times 3 \times 3$ univariat analysis of variance was carried out to test the effects of sex, residential setting and age. Finally, a $3 \times 3 \times 3$ univariat analysis of variance was employed to test the effect of birth order, family size and maternal presence or absence on the hedonistic behavior of home reared children. After significant F- ratio is obtained, unplanned or a posteriori multiple comparison (Tukey method) was carried out to determine which pairs of means differ significantly.

3. Findings

3.1. The effects of residential setting

Table 4: Descriptive Statistic on the Six Hedonistic Orientations by the Three Residential Settings

Dependent	Residential setting	N	Mean	SD	Std. Error	95% Confidence Interval for Mean
Hedonistic	SC	58	3.6097	.57798	.07589	3.4577 3.7617
	IC	58	3.0862	.78654	.10328	2.8794 3.2930
	HC	58	1.3652	1.07827	.14158	1.0817 1.6487
	Total	174	2.6870	1.27342	.09654	2.4965 2.8776

Street children had greater mean on hedonistic orientation (3.61)(see Table 4). Contrary to this, home reared children tended to have lower means on those measures of hedonistic orientation- with a mean of 1.4 and 1.6 on hedonistic.

Table 5: One-Way between Subjects Analysis of Variance of Residential Settings

Dependent variables	Source	Sum of Squares	df	Mean Square	F	Sig.
Hedonistic	Between Groups	159.959	2	79.980	113.425	.000
	Within Groups	120.577	171	.705		
	Total	280.537	173			

There was significant difference in the mean of hedonistic orientations among children of the home, the day care center and the street ($F(2, 171) = 113.425$, $P < .0005$) (see Table 5).

Table 6: A Posteriori Multiple Comparison of Hedonistic Oriented Altruistic Behavior of Children of Three Residential Settings

Dependent Variable	Residential setting	Residential settings	Mean Difference (I-J)	Std. Error	Sig.
Hedonistic	SC	IC	.52351(*)	.15593	.003
		HC	2.24451(*)	.15593	.000
	IC	SC	-.52351(*)	.15593	.003
		HC	1.72100(*)	.15593	.000
	HC	SC	-2.24451(*)	.15593	.000
		IC	-1.72100(*)	.15593	.000

*The mean difference is significant at the .05 level.

The means for street children on hedonistic orientation was different from institutionalized children and home reared children with a mean of 0.52351 and 2.24451 at the 0.05 level of significance, respectively (Table 6). The population mean for institutionalized children on hedonistic orientation is different from home reared children with a mean of 1.72100 at the 0.05 level, but it is not different from street children (-.52351).

3.2. The main and interaction effects of residential setting, sex and age

Street children had greater mean on hedonistic orientation (with a mean of 3.8182 for male street children, and with a mean of 3.4013 for female street children). Male street children had greater mean than their counterparts. Regarding age classification those street children whose age ranges from 15-18 had greater mean (3.7149) than the other two groups. In sum, male street children whose age ranged from 15-18 had higher mean (3.9256) on hedonistic oriented altruism. Home reared children had lower mean (2.6870) than institutionalized children (3.0862). Regarding sex composition, male home reared children had higher mean than their counterparts.

Table 7: Tests of between Subjects' Effects on Hedonistic Oriented Altruism by Residential Setting, Sex and Age

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	η^2
Corrected Model	173.903(a)	17	10.230	14.966	.000	.620
Intercept	1230.604	1	1230.60	1800.324	.000	.920
1.Residential setting	153.136	2	76.568	112.016	.000	.590
2.Sex	2.645	1	2.645	3.869	.051	.024
3.Age	.163	2	.081	.119	.888	.002
4.1x2	3.346	2	1.673	2.448	.090	.030
5.1x3	1.368	4	.342	.500	.735	.013
6.2x3	.288	2	.144	.210	.810	.003
7.1x2x3	5.719	4	1.430	2.092	.084	.051
Error	106.633	156	.684			
Total	1536.851	174				
Corrected Total	280.537	173				

The main effects of residential setting on hedonistic orientation revealed significant result ($F(2, 171) = 112.016$, $\eta^2 = 59\%$, $P < .0005$) (see Table 7). 59% of the variance in hedonistic orientation was accounted for by residential setting.

The main effects of sex on hedonistic orientation was not statistically significant ($F(1, 172) = 3.869$, $P = .051$) (see Table 7). The main and interaction effects of other factors were not statistically significant (see Table 7).

Table 8: A Posteriori Multiple Comparisons on Hedonistic Oriented Altruism by Residential Setting

(I)residential setting	(J)Residential setting	Mean Difference (I-J)	Std. Error	Sig.
SC	IC	.5235(*)	.15353	.002
	HC	2.2445(*)	.15353	.000
IC	SC	-.5235(*)	.15353	.002
	HC	1.7210(*)	.15353	.000
HC	SC	-2.2445(*)	.15353	.000
	IC	-1.7210(*)	.15353	.000

*The mean difference is significant at the .05 level.

Using Tukey's HSD, significant differences on hedonistic orientation were found between the street and institutionalized children ($P=0.002$); the street and home reared children ($P<000$); institutionalized and street children ($P=0.002$); institutionalized and home-reared children ($P<.0005$); home-reared and street children ($P<0005$); and home-reared and institutionalized children ($P<.0005$) (Table 8).

3.3. Main and interaction effects of birth order, family size and maternal presence

The table on descriptive statistics in Appendix K reports that home reared children whose mothers don't alive had significantly higher score (2.1182) on hedonistic oriented altruism than those who have been separated (1.0260) or who live together with their mother (0.3030). Regarding family size, those home-reared children who live within a family consisting of small family size (1-4 persons living together) had higher mean (1.5808) on hedonistic orientation than children who reside in medium (5-7) and large (>7) family size.

Table 9: Tests of between Subjects Effects on Hedonistic Orientation by Birth Order, Family Size and Maternal Presence

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	η^2
Corrected Model	28.480(a)	13	2.191	2.551	.010	.354
Intercept	22.573	1	22.573	26.281	.000	.937
1.Birth order	2.155	2	1.077	1.254	.295	.221
2.familysize	1.213	2	.606	.706	.499	.023
3.Maternal presence.	9.228	2	4.614	5.372	.008	.005
4.1x2	.226	2	.113	.131	.877	.141
5.1x3	1.489	3	.496	.578	.633	.012
6.2x3	.265	1	.265	.309	.581	.003
7.1x2x3	.861	1	.861	1.002	.322	.044
Error	37.792	44	.859			
Total	174.372	58				
Corrected Total	66.273	57				

Table 9 reveals that only the main effects of maternal presence was significant on hedonistic orientation ($F(2, 55) = 5.372, P = 0.008$). The main effects of birth order on hedonistic orientation was not significant ($F(2, 55) = 1.254, P = 6.295$). The main effects of family size was not significant ($F(2, 55) = 0.706, P = 0.499$). The birth order by family size interaction was not significant ($F(2, 55) =$

0.131, $P = 0.877$). The birth order by maternal living interaction was not significant ($F(3, 54) = 0.578, P = 0.633$). The family size by maternal living interaction was not significant ($F(1, 56) = 0.309, P = 0.581$). The three-way interaction between birth order, family size and maternal living was not significant ($F(1, 56) = 1.002, P = 0.322$).

Table 10: A posteriori multiple comparison on hedonistic orientation by maternal presence among home reared children

(I)maternal presence	(J)maternal presence	Mean Difference (I-J)	Std. Error	Sig.
No	Separated	1.0922(*)	.25978	.000
	Yes	1.8152(*)	.57380	.008
Separated	No	-.10922(*)	.25978	.000
	Yes	.7229	.55754	.405
Yes	No	-.18152(*)	.57380	.008
	Separated	-.7229	.55754	.405

*The mean difference is significant at the .05 level.

It shows that home-reared children whose mothers don't alive have significantly higher mean on hedonistic orientation than either who were separated from their mother (1.0922) or who live together with their mother (1.8152). Significant differences were not found between

those home reared children who were separated from their mother and who were living with their mothers.

4. Discussion

The observed differences in hedonistic behavior among the three residential settings would have occurred by chance if the null hypothesis that states "the mean of hedonistic behavior among the three residential setting is equal" is true is less than 0.05. Therefore, it can be said that, not all of the three residential settings' hedonistic means are equal. Similarly Wortman et al (1992) described that the environmental conditions influences the development of hedonistic orientations in the growing child. It seems that the three residential settings differ in social exclusions.

The post hoc test indicated that street children were more hedonistic than both the institutionalized and the home-reared children. Institutionalized children were significantly more hedonistic oriented than the home reared children. It suggests that street children, more than the other two groups perform hedonistic acts for others to their own selfish gain expecting something in return. The street culture seems to have an influence in the development of egoistic helping behavior. Investigating this condition, previous study by Hegarty (1996) indicated that street children are considered by the society as criminals due to their lack of family contact and guidance by responsible adults.

Statistically significant main effect were found only for residential setting ($F(2, 171) = 112.016, P < 0.0005$). This proposes that there was a difference on the mean of hedonistic oriented altruism among children of the three residential settings. Similarly Wortman et al (1992) suggested environmental factors have stronger impact on hedonistic behavior rather than hereditary factors. It seems reasonable to assume that the type of the environment the child was socialized strongly influences the hedonistic behavior of an individual. The post-hoc test or after the event test on hedonistic oriented altruism indicated that street children were more hedonistic than both institutionalized and home-reared children, while institutionalized children were found to be more hedonist than the home reared children (this is similar to the post hoc test that was conducted after a significant one-way ANOVA). This implies that the street children perform hedonistic acts for the purpose of selfish gain to themselves. This might be emanated from the mere fact that they were socialized in hostile and conflict prone residential setting (street area). The main effects of sex and age were found to be non-significant. Therefore the researcher does not reject the held null hypothesis of no difference on sex and age.

The main effects of maternal presence was found to be significant on hedonistic oriented altruism ($F(2, 55) = 5.372, P = 0.008$). Therefore, it is tenable to reject the null hypothesis and concludes that there is a difference. Similarly, Steinberg, Greenberger, Garduque, Rugiero, and Vaux (1982) indicated that children's comforting behavior was positively related with parental dependency (including the need for help with chores) was particularly high for boys in mother headed homes. Home reared children whose mothers don't alive were significantly higher on hedonistic oriented altruism than those who were separated

from their mothers or who live together with their mothers. This connotes those children whose mothers don't live help others for their self benefit and expecting that the helpee will help them in the future. In this particular point, Keith, Nelson, Schlaback, and Thompson (1990) found that 10 - to - 14 - year olds from two parent families in which one parent was not employed participated in volunteer activities than did adolescents from single parent families. In a similar fashion, Mussun-Miller (1991) found that siblings were more helpful in the presence of their mothers than in the mother's absence. This implies that, in a single parent families where the mothers don't live may lesson opportunities or chances for socialization of certain types of sibling or peer related prosocial behaviors or for involvement in volunteer activities out of the home. This seems the reason that home reared children whose mothers don't alive were significantly more hedonistically or selfishly oriented to help.

5. Conclusion

There could be many variables that may facilitate or hinder the development of children's hedonistic behavior. But, the present study focused on the influence of environmental settings (child care institutions, streets and homes), sex, age, family size, birth order, maternal presence or absence, and religion on hedonistic behavior of children. It does not include biological, situational factors (e.g. mood states), cultural, and religious values and beliefs. Area wise, it was restricted to Addis Ababa city administration.

Significant main effects of residential setting on hedonistic orientation was obtained ($F(2, 171) = 112.016, P < 0.0005$); sex ($F(1, 172) = 3.869, P = 0.05$). Therefore, the researcher can take the risk of rejecting the null hypothesis of no difference and conclude that the mean for the three residential settings on hedonistic orientation are not equal. On the other hand, street children were significantly more hedonist than both the institutionalized and the home-reared children. Institutionalized children were in turn significantly more hedonistic oriented than home reared children. Street children perform hedonistic acts for their own selfish gain, expecting something in return.

Significant result were found for the main effects of maternal presence ($F(2, 55) = 5.372, P = 0.008$). It suggested a statistically significant difference among home reared children whose mothers were live, didn't live and whose mothers were not in the home. It confirms that home-reared children whose mothers don't alive have significantly higher mean on hedonistic orientation than both who were at odds from their mother (1.0922) and who live together with their mothers. This means that maternal absence is a contributive factor for children to be extrinsically oriented to help for selfish considerations. It is inevitable that maternal presence is important for the development of intrinsic hedonistic moral orientations among home reared children.

Acknowledgement

I would like to express my deepest gratitude to Dr. Teka Zewudie for the practical comments and criticisms that have been given by reading critically all the paper and making them ready for me to make the necessary improvement on time. I am also grateful to officials of Tsehay Chora Primary School, Kechene Children's Home and Kolfe Kenema Children's Home, and all subjects who took part in the study. Moreover, I am indebted to my families for their unreserved encouragement and moral support throughout my work. Moreover, I am indebted to my mother, Ehtaferahu Mamo and my father, Kess Desalegn Fentaw, for their unreserved encouragement and moral support, which helped me for the accomplishment of my work. My last word of affectionate gratitude is reserved to the school of graduate studies of Addis Ababa University for the financial support it rendered me to carry out the study.

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