A Comparison of the Characteristics of Zimbabwean Women Who Abandon Their Children and Those Who Do Not

Dr. Clara Haruzivishe
Senior Lecturer, Department of Nursing Science, College of Health Sciences,
University of Zimbabwe, Zimbabwe
Maxwell Mhlanga
Teaching Assistant, University of Zimbabwe, College of Health Sciences, Zimbabwe

Abstract:
Objective: To examine the relationship of child abandonment with maternal perception of the infant and perceived social support during the perinatal period.
Design: Correlational two group comparative survey
Setting: Khami women's prison and United Bulawayo Hospital
Subjects: Women who had abandoned their babies
Main outcome Measures: Demographic variables included maternal age at the time of pregnancy, parity, education level, marital status, medication used in pregnancy, length of pregnancy, health status. Maternal perception of the infant was measured using a Neonatal Perception Inventory. Social support was measured using the Perceived Social Support Scale -Friends and Family (Prociano and Heller, 1983).
Results Bi-variate correlation showed a negative correlation to infant perception. Further analysis showed that the groups were also different in terms of age, marital status, place of delivery, but not different in terms of the education attainment, employment status, and child factors such as age, sex, and gestational age of the child.
Conclusion Child abandoners were younger mostly single and did not deliver in hospital settings. They were likely to have had a negative perception of their infant. However, child abandonment was not associated with education attainment, employment status, and child factors such as age, sex, and gestational age of the child.

Keywords: Child Abandonment, Perceptions, Correlational comparative survey

1. Introduction

Abandonment of children by their parents challenges the most basic human parenting norms. Although either parent can be guilty of this act, mothers have been found to be the most frequent perpetuators of child abuse and infanticide and other forms of child maltreatment (Mark 1996). Mothers who abandon their babies are viewed as selfish, and uncaring, pursuing their own pleasure while neglecting their children. News headlines such as "Killer Moms" are echoed throughout the world where record numbers of infants and children have been left to die or to the kindness of strangers. Adverse attitude by the public has been directed at the women through the electronic and print media, calling for stiffer sentencing to prevent child abandonment. While the public attitude towards child abandoners is extremely negative, there has been very little research done within nursing, health and social science fields to find out what compels a woman to act so unnaturally and abandon her child. This study attempted to address this question.

Child abandonment is an old phenomenon that has been ignored by society but is now receiving increasing coverage in both electronic and print media in Zimbabwe and the United States of America alike. It is an extreme form of maltreatment. In addition to the loss of life and the physical health problems it perpetuates, abandonment reportedly is associated with abnormal personality development and negative social patterns of behavior which are exhibited in delinquents and criminals (Fagan, 1995; Anderson, 2006). Negative perceptions of child abandonment and its effects are not universal: In countries such as Japan and China where infanticide is not uncommon, child abandonment is viewed as a humane alternative to infanticide (Coales, 1994). Abandonment of unwanted infants rather than infanticide in these countries diminishes parental feelings of responsibility for harm to the child and allows parents to harbor the hope that an altruistic individual would rescue and rear their child (Wagatsuma, 1983). John Boswell (1988) relates how in Western Europe, during the Renaissance, parents were not obliged to keep their offspring; actually children owed gratitude to the parents for not abandoning them at birth. In Zimbabwe and in the United States of America child abandonment is a criminal offense, punishable by up to 5 years in jail.

Over the past 16 years, in Zimbabwe, babies have been abandoned in hospitals, clinics, bus terminals, churches, bushes and bathrooms ("Baby found," 1995; Mother jailed," 1995). Available statistics from the police show a gruesome outcome of child abandonment. Of the 567 babies abandoned in 1983 only 22 were saved. Only 2 babies survived out of the 479 abandoned in 1986 ("Call to," 1994). The number of abandoned children has continued to increase at an alarming rate over the years. In 1996, the news media reported as many as 20 babies abandoned per day in Zimbabwe, and estimated that 300 newly born babies die every year as a result of abandonment (Herald, 1996). The above figures are alarming, taken in the context of a nation with a population of only 12 million.

The general feeling in Zimbabwe is that specific post independence policy decisions aimed at correcting economic imbalances, contributed to the escalation of child abandonment in the country. One of these policies is the Economic Structural Adjustment Program. To reduce the significant socio-economic disparities Zimbabwe had inherited, in 1980 the government invested heavily in health care, education, rural development and the productive sectors. These policy actions led to an increase in public expenditures, (45% of the 1980 GDP). Although social indicators improved particularly health and education, per capita income stagnated (Scott, 1982; Meldrum, 1995). The population grew faster than job creation, widening the disparities in income levels. In 1991, at the instigation of the World Bank and International Monetary Fund, the government introduced a policy agenda that formed the basis for the Economic Structural Adjustment Program (ESAP). The ESAP sought to promote higher economic growth, reduce poverty and unemployment. However, a severe drought hit Zimbabwe in 1992 causing the worst recession since independence. The climate of uncertainty contributed to a worsening of living conditions, for the poor in particular and the population as a whole, causing economic and social hardships.

The ESAP program's Social Dimension of Adjustment (SDA) component was to address the transitional hardships brought on by the reduced civil service, the removal of maize subsidies to poor urban consumers, and the introduction of health charge and school fees. It was supposed to provide a reserve for food, health, and educational expenses, and employment training. The SDA had many problems, such as poor prior assessment and targeting of the beneficiaries, leading to urban and regional bias. Application costs were high, the needy, women and youth had no access, and its training strategies were too short and ineffective. Economic hardships led to young people migrating to urban areas, which in turn led to overcrowding in high-density suburbs. This in turn led to poverty, and the breakdown of family and cultural structures. One result of this urban shift was an increase in child prostitution and teenage pregnancies and associated cases of child abandonment.

Another policy decision that had a great impact on child abandonment is the Legal Age of Majority Act, which was meant to empower women by giving them rights of citizen at age 18, including the rights to vote (" Social impact," 1994). Every man or woman under this law becomes a major at the age of 18 years, and is free to make choices and decisions for themselves. Women were generally pleased with this Act, but parents worried about their daughters leaving home or stopping schooling at 18. A record number of abandoned children were discovered the year following the enactment of the Legal Age of Majority Act. This provoked public and parliamentary concern as to the wisdom of instituting this legislation ("Infanticide Bill," 1990).

Efforts to reduce child abandonment in Zimbabwe have been made: the creation of homes for the abandoned children, shelters for women and girls abandoned by their families, and rehabilitation of child abandoners. The success of such projects has been hampered by financial constraints, the dominant worldviews held concerning child abandonment, and lack of consensus regarding the solution of the problem.

2. Materials and Methods

2.1. Design
The study employed a correlational two group comparative survey, in which structured interviews were used to elicit data from two groups of women: those who have abandoned their babies in the first year of life and those who have not. Since no study had been done to establish the relationship of the stated variables with child abandonment, it was anticipated that there would be difficult in attributing any identified characteristics to child abandoners only. A comparative two-group design was therefore used.
Study setting: Khami women's prison and United Bulawayo Hospital

2.2. Sample Size
Purposive samples of mothers who abandoned their babies in the first year of life and those who did not were selected. The sample size was based on power analysis suitable for the t-test statistics used in this study. Since there were no studies on child abandonment to calculate an effect size, a medium effect size was used. The medium effect size for T test statistics was 0.50(Cohen, 1988). Thus setting alpha at 0.05, power at 0.80 a sample of 100 was adequate for the study to observe a medium effect size.

2.3. Eligibility Criteria
Appropriate subjects for the child abandoners were those who had a police record of child abandonment within 12 months of delivery. Women appropriate for non-abandoners sample were those who still had their children within 12 months of delivery. Child abandonment was an event where a mother secretly left her newborn infant of 12 months or less with no intentions to return to the child and to continue parenting ties. A report by the police or social workers that child abandonment has occurred was necessary. This included episodes where a baby was left in hospital, public place, police stations, bushes and parks. This did not include children separated from their mothers through formal or informal adoption and foster care.

2.4. Procedures and Ethical Considerations

Approval was sought from IRB at Case Western Reserve University, Zimbabwe Health Research Council, The Superintendent of Khami prison, The United Bulawayo Hospitals Medical Superintendent, Paediatric clinic staff at United Bulawayo Hospitals. Potential subjects were then identified. Potential subjects for child abandoners group were identified by the prison superintendent from a list of offenders at Khami Prison. The list was usually given to the social worker that visits these women for counselling at Khami prison. Permission was solicited from the Khami Prison Superintendent to request permission from the women to participate in the study.

The Sister in Charge identified potential subjects for non-abandoners from a list of women attending well baby clinic at the United Bulawayo Hospitals. The investigator gave the Sister in Charge the inclusion criteria used to select women for the non-abandoner group.

All the women who were legible for the abandoners group were called and addressed by the Prison Superintendent. Women were introduced to the research team and the purpose explained to them. Informed consent of participation obtained. Subjects were assured of confidentiality. Using structured interview, the investigator and the four data collectors each interviewed a subject one at a time. The data collectors included a social worker and three state registered nurses that were all fluent in English and Ndebele. Each interview was done in privacy. The subjects were interviewed in the language of their preference English, or Ndebele.

2.5. Data Collection Tools

The mothers' perception of the infant was measured using a Neonatal Perception Inventory (Walker, 1987). It allows a mother to make a comparison of her baby with an average baby on the following six behavioural areas crying, feeding, spitting, sleeping, elimination, and predictability. Each behaviour was scored on a scale of 1 to 5. A score of 1 indicated the least negative perception and 5 the most negative perception. The discrepancy between the scores for an average baby and her own baby is the perception score. The NPI was designed to be administered at birth (NPI I) and 6 months later (NPI II). In this study however only the second part of the assessment the Neonatal Perception Index I (NPI II) was used. A higher rate score indicates some possible problem areas in child and maternal relationship. The NPI II was used to assess the women's perception of their infants. The instrument has established validity (Walker 1982). Scoring is obtained by subtracting the sum of maternal perception of an average baby (part b) from maternal perception of own baby (part a). Broussard classified mothers at high risk if their perception of their own baby was not better than the perception of an average baby. A better score would be less negative. In this study the reliability for the NPI part (a) was alpha = 0.60. The reliability for the NPI part b was. Alpha = 0.70.

Social support was measured using the Perceived Social Support Scale -Friends and Family (Prociano and Heller, 1983) and measures the extent to which an individual perceives the support she receives from family and friends. The scale consists of two subscales that elicit perceptions of social support from family and friends. Each subscale has 20 items which requires response on a three-point scale as "yes", "no", or "don't know". The PSS-Fr has a test retest reliability of r = .83 for one-month interval and a Cronbach's alpha of .90 (N =222). In this study the instruments reliability was = .92 (N=84).

3. Results

The results of the study indicated that women who abandoned their babies were significantly different from those who did not in terms of maternal perception of the infant, social support, maternal age, marital status number of children, and place of delivery. Child abandoners perceived their infant more negatively and reported less social support from family than non-abandoners did. Child abandoners were younger, mostly single, had fewer children and delivered outside hospital settings. The groups were not different in their perception of social support from friends, employment status, educational attainment and gestational age of the infant. Maternal perception of the infant was associated with family resources.

3.1. Sample Demographics

A sample of 84 women was obtained. The calculated effect size that could be detected on a sample of 84 with a power of 80% using the statistical software Query Advisor table was 0.557. The power needed to detect a medium effect size of .5 was calculated at 72%. Demographic variables are presented in Table 1. The sample consisted of 34 mothers who abandoned their babies in the first year of life and 50 non-abandoners. The place of delivery was reported as hospital settings, home and bush. Half of the abandoners delivered alone in the bush while most (92%) of the non-abandoners had delivered in a hospital. There were 37 males and 45 female children. There was no significant difference in the sex of the child between the abandoners and non-abandoners groups. Child age in the study ranged from less than a month old to 12 months old. Most (63.5%) of the babies were abandoned within the first three months following birth.

Variable	Non abandoner	Child Abandoner	Total	Sig.
Age Range Mean	18-42 26.62	18-43 23.35	18-42 25.29	.012
Marital Status Single Married Divorced Widowed	13(26%) 36(72%) 1(2%) 0	27(79.4%) 2(5.9%) 4(11.8) 1(2.9%)	40(47.6%) 38(45.2%) 5(7.2%) 1(1.2)	.000
Employment No Yes	6 44	5 29	11(13.1%) 73(86.9%)	.718
Education No schooling Primary schooling Second. Schooling College/University	3(6%) 23(46%) 21(42%) 3(6%)	3(8.8%) 23(67%) 8(23%) 0	6(7.1%) 46(54.8%) 29(34.5%) 3(3.6%)	.111
Delivery Place Hospital Home Bush	46(92%) 2(4%) 2(4%)	9(26.5%) 8(23, 5%) 17(50%)	55(65.5%) 10(11.9%) 19(22.6%)	.000
Gestational age Preterm Full term	9(18%) 41(82%)	6 (17.6) %. 28(82.4%)	15(17.9%) 69(82.1%)	.966
Child age at abandonment 0-3 months 4-6months 7-12 months Unknown		21(62.52) 5(15.125) 6(18.150) 2		

Table 1: Comparison of abandoners and non-abandoners on age, marital status, employment, and education

3.2. Description of the Study Variables

Descriptive statistics for the study variables are presented in Table 2. While the statistics show some skewedness in some the variables, no transformation of the data was required on the limits of +/- 2.58. Pearson's product moment correlations among the study variables were reviewed. The correlation matrix was reviewed for multi-collinearity. None of the correlations reached .80, where multicolinearity would be a concern.

Variable	Mean	SD	Range	Skewedness
Maternal perception of infant	-3.181	5.6	29.00	-.700
Events	.690	1.172	6.00	2.473
Perceived social support from family	10.367	3.871	13.00	-1.640
Perceived social support from friends	14.610	5.577	20.00	-1.329

Table 2: Summary of Participants scores on major study variables

3.2.1. Difference in the Perception of the Infant between the Women Who Abandon Their Babies and Those Who Do Not

The Hypothesis stated that women who abandon their babies would perceive their children more unfavourably during the perinatal period than those who do not abandon their babies. Student's t-tests were used to examine significant differences between the two independent groups on perception of infant. The Levene's test for equality in variance showed p value for the F test greater than .05 for maternal perception of the infant, indicating unequal variance. The pooled variance model was used. The hypothesis was supported. The groups differed significantly in their perception of their infants. Child abandoners compared to non-abandoners reported their babies as more bothersome than an average baby (t = 2.26, p = .027).

	Non abandoners N (50)		Abandoners N (34)		
Variable	Mean	SD	Mean	SD	Sig
Perception of the infant	-2.061	5.577	-4.79	5.307	.027

Table 3: Comparison maternal perception of the infant between child abandoners and non-abandoners

3.2.2. Difference in the Level of Perceived Social Support during the Perinatal Period in Women Who Abandon Their Babies and Those Who Do Not?

The study hypothesised that women who abandon their babies would report less social support during the perinatal period than those who do not abandon their babies. The hypothesis was supported. The Perceived Social Support from Family (PSS-FA) scale was used to measure perceived social support from family during the perinatal period. Student's Independent t-tests were used to identify significant differences between the two groups on women's perception of social support from family friends. Since the sample variances were equal for the two social support scales, separate variance model was used. Child abandoners differed from non-abandoners significantly in their perception of social support from family (t =-4.10, p = .000).

The study also hypothesized that women who abandon their babies would report less social support from friends during the perinatal period than those who do not abandon their babies. The hypothesis was not supported. Child abandoners did not differ significantly from non-abandoners in their perception of social support from friends (t = .01, p= .991).

	Non abandoners (n= 50)		Abandoners (n = 34)		
Variable	Mean	SD	Mean	SD	Sig
Perceived social support from family	11.027	2.336	8.200	3.055	.000
Perceived social support from friends	14.617	6.592	14.600	3.926	.991

Table 5: Comparison perceived social support from friends and family between child abandoners and non-abandoners

3.2.3. What Is the Relationship among Infant Perception, Life Events, Family Resources, Perceived Stress and Perceived Social Support with Child Abandonment?

It was stated that child abandonment would be inversely with perception of infant social support and family resources. In addition, it was expected that for abandoners and non-abandoners, life events, stress, family resources, social support and maternal perception of the infant would be related to each other. Analysis for this hypothesis was done on both groups. Child abandonment was significantly inversely associated with maternal perception of the infant (r -. 2414, p = .014) and social support from family (r-.3614, p = .002). However, there was no significant relationship between child abandonment and social support from friends (-. 0016, p = .495). Thus women who abandoned their babies perceived their babies more negatively and had less social support from family. The relationship between child abandonment and social support from friends was not significant (r = -. 0001, p < .9905).

	1	2	3	4	5	6	7	8
1. Abandonment	1.000	.0736NS	**.5107***	-.2414*	-.3614**	-.2462*	.1441 NS	-.0016 NS
2. Perception of Infant				1.000	.2110	.2760**	-1098 NS	-.065 NS
3. Social Support Family					1.000	.2100	-.3152 **	.4214**
4. Social Support Friends								1.000

Table 6: The Correlation of child abandonment with maternal perception of infant and social support
***P < 0001, **P <. 001, *P </= .05

The relationship of social support and infant perception approached significance (r = .211, p = .054) for both groups but was not significant. Women who perceived more social support from family also reported less stress during the perinatal period.

Logistic regression was also performed to further explore the relationship of child abandonment with major study variables. Perceived social support from family showed a protective function against child abandonment. From Table 7 result shows that every unit increase in Social support there is .7222 increases in the protective factor against child abandonment.

Variable	B	S.E.	Wald	df	Sig	R	Exp.(B)
BEBSI.1	-0.0835	0.0759	1.2097	1	.2097	0.000	0.9199
EVENTS.2	0.7480	0.4904	2.3265	1	.1272	0.0734	2.1127
FRS.1	-0.0164	0.0157	1.0904	1	.2964	0.0000	0.9838
NPIAB.1	-0.0294	0.0968	0.0924	1	.7612	0.0000	1.0299
PSI.3	0.0137	0.0291	0.2217	1	.6378	0.0000	1.0138
PSSFA.2	-0.3254	0.1634	3.9654	1	.0464	0.0000	0.7222
PSSFR.1	-0.0236	0.0803	0.0864	1	.7689	-0.1801	1.0239
Constant	4.2266	3.0052	1.9780	1	.1596	0.0000	

Table 7: Logistic regression showing the likelihood group membership according to the study variables of the study

4. Discussion

4.1. Maternal Perception of the Infant

The quality of mother and child relationship has been cited as one of the most important factors determining how a mother treats her infant (Walker, 1993). Previous studies have indicated that children viewed negatively by their mothers are deprived of maternal affection and are usually mistreated (Grimes, 1996). It was expected that abandoners would report more difficulties with their infants like crying, sleep and feeding problems, more often than non-abandoners. Researchers have shown that those infant difficulties are related to negative perception of child and maternal depression (Walker, 1983). Child difficulties coupled with lack of social support also have been cited as antecedents of post-partum depression (Kendall-Tackett).

In this study child abandoners reported their infants as more problematic than the average child. Infant perception was also associated with maternal poor perception of herself as a mother. In this study most of the abandoners saw themselves inadequate as mothers. Women who felt that their babies caused more problems with their spouses abandoned them in a way that decreased any chances for that child to survive, (e.g. in dumpsters, pit latrines and plastic containers). On the other hand, most of the women who felt they were not good mothers left the babies deliberately in a way that someone would rescue the child, e.g. left in hospital, or outside someone's doorstep. This finding was incidental and needs to be examined further to see if the way a mother feels about herself as a mother and about her child influences the way the child is abandoned.

The importance of the baby's behavior in determining the quality of care the child receives is important to note, since it is one of the most important predictors of child abuse. The finding suggests that intervention to reduce child abandonment should focus on the mother child relationship, particularly the mothers' feelings towards the baby. Reduction of factors such as infant temperament, stress and social isolation has been cited as measures that would enhance efforts to prevent maltreatment (Holden et al., 1992) and child abandonment.

4.2. The Relationship between Abandonment and Social Support

Past research found that social support is associated with child maltreatment. Specifically, women who abuse or neglect their children have been reported as deficient in social support. Social support is cited as a protective factor in new mothers (Norbeck & Tiden, 1983), and against antecedents of abuse and moderates the effects of abuse risk and stress (Cameroon & Vanderwoerd, 1997; Smith & Carlson 1997; Litty et al., 1996, Muller, et al. 1997). Although the relationship of social support and neglect is not clear, mothers without social support have been reported to be more prone to physical and health problems (Durnst, Trivette, Hamby, 1994) and neglect (DePanfilis, 1996).

In maltreatment literature, mothers of abused babies reported less perceived support from family and partners and more depressive symptoms (Kinard, 1993). Perception of low social support also is reported as predictor of low self-esteem and depression in mothers and can lead to abuse (Kinard, 1996). Social support interacts with life events. Life events can increase the risk of maltreatment while social support moderates the effects (Kotch, et al, 1997).

In this study, results showed a significant difference between abandoners and non-abandoners in terms of perceived social support from family. Women who abandoned their babies reported less support from family than women who did not abandon their babies. This finding is consistent a previous study on child abandonment (Abedin et al., 1993). Although these researchers did not measure social support per se they found that the rate of child abandonment in hospitals was higher in women who lacked strong family links that rallied together to form a supportive network. Results are also consistent with findings in child abuse literature. Low levels of social support were predictors of child abuse (Cameroon & Vanderwoerd, 1997; Egeland, 1979; Litty et al. 1996; Muller, et al. 1997; Smith, Carlson, 1997 ;).

These findings are also consistent with the media reports in Zimbabwe (Herald 1996). The Herald reported that pregnant unmarried girls in Zimbabwe are customarily evicted by their families and encouraged to seek the father of the unborn child with the hope that the man would take responsibility of the pregnancy and marry the girl. The Herald reported that since the expectant fathers often refuse responsibility, the girl is left alone with no social and financial support.

4.3. Demographic Variables

There were other variables that differentiated the two groups. Although these variables were not initially the study variables, preliminary descriptive analysis revealed that maternal age, marital status, and place of delivery were significant associations of child abandonment. This made it necessary to include the three variables in the analysis to find variables that differentiated the two groups. Maternal age has been found to be associated with social disadvantage such as low family resources and poor educational attainment (Chang, 1994). Maternal age has also been associated with premature birth and low birth weight babies. In this study child abandoners were significantly younger than non-abandoners were. Efforts were made to ensure that subjects in both groups were of similar age. Descriptive statistics following data collection from child abandoners revealed that ages range of 18 to 43 years and mean of 23.35. This range was used to obtain the sample of non-abandoners. However, it was difficult to get similar mean age, resulting in age range of 18 to 42 years and mean of 26.62 for non-abandoners, and 25.29 for the total sample. This finding is consistent with findings in child abuse literature, where child abuse was found more common in younger mothers (Chang 1994). In this study, although there was no difference in the educational attainment between abandoners and non-abandoners the abandoners tended to be younger. In this study the weight of the baby was not determined but women were asked if they had full term or preterm delivery of their infant. The age of the mother was not associated with pre-term delivery.

Place of delivery was also another variable that differentiated the two groups of study. According to the newspaper reports, most of the babies were found in the bush. Women were asked to state where they delivered their baby. The most common places were delivery in hospital, at home, and in the bush. The child abandoners were more likely to deliver unattended in the bush than non-abandoners were and child abandoners were also less likely to deliver in a hospital setting than the non-abandoners were. It is not clear whether the decision to abandon was made during pregnancy or at delivery. If the decision were made at delivery, then the place of delivery would not be an issue. On the other hand, if the decision were reached during pregnancy, then this would explain the high numbers of child abandoners who delivered in secrecy in the bush. More research is needed to find what part the place of delivery plays in child abandonment.

Chan (1994) posited that the number of children was associated with child abuse. Chan (1994) stated that the number of children was a stressor, producing stress in the family and hence leading to abuse. In contrast in this study the relationship of the number of children was inversely related to child abandonment; child abandoners were mostly first time mothers and hence had less had few children.

The model for the study posited the relationship between stressors, stress moderators and outcome. Hypothesized H4 proposed that stressors; life events, perception of the infant and family resources would be associated positively with stress and child abandonment. Social support would act as a moderator for stressors and stress. Neonatal perception of infant, life events and family resources were proposed as stressors according the model. According to the model the stressors would be positively related to stress and child abandonment and negatively to social support. The hypothesis was supported for the relationship of life events with parenting stress variables and global stress variables. The hypothesis positing the relationship of stress and neonatal perception of the infant and family resources was not supported.

One explanation could be that in the model these variables were not stressors but moderators; that are; the decision to abandon was not only affected by the amount of social support she perceived but also the family resources and how she perceived the infant. These variables were also positively associated with perceived social support from family, further proof that they belong together. Examining life events and family resources as stressors, these were positively related to stress and child abandonment: The more stressors, the more stress and the more likely to abandon. Partial correlation controlling for stress showed a larger Pearson's r and significance for stressors. This means the stressors had a direct relationship and an indirect relationship with child abandonment. Controlling for social support, the stressors had a higher Pearson's r and a significant p value showing that social support from family, family resources and maternal perception of the infant were moderators of stress and abandonment.

Social support was proposed as the moderator for stress. It was also expected that social support would be a moderator for stress Past studies on social support have shown social support as a moderating influence on daily hassles' influence on maternal behavior. Women who have social support are less likely to see their infant as more difficult than the average infant. (Crnic & Greenberg, 1990) This hypothesis was supported for social support from family. Social support from family was negatively related to the stressor variable life events but positively related to perception of infant and family resources. Analysis of the perceived social support, maternal perception of the infant and family resources as moderators showed that there was a fit if the three variables were viewed as moderators for stress in the model.

It was expected that women who received more social support also perceived their infant more positively. Past research has reported that women who had low perception of social support were less likely to see their infant as more difficult (Adler, et al 1991; Crnic & Greenberg, 1990) and that low social support is one of the antenatal predictions of mother-infant difficulties (Adler et al 1991). To prevent maltreatment, it is suggested that a reduction of factors such as infant temperament, stress, social isolation would be paramount (Holden et al 1992).

It was proposed that stress would have a mediator function between stressors and child abandonment. This meant that stress would play a part in the decision to abandon one's child. Partial correlation was done between the stressor variables controlling for stress variables

4.4. Limitations

A major limitation of the study is the restricted generalizability. The non-probability method of sampling involved selecting a purposive convenient sample of women who abandoned and those who did not abandon their babies. In this study the non-probability sampling constituted a threat to both internal and external validity (Cook & Campbell, 1979). However, while the results of the study cannot be generalized, because the sample was not randomly selected, the findings of the study point towards a number of variables that might be useful in determining who is at risk for child abandonment. There were no refusals in this study for informed consent, which enhanced both internal and external validity.

Another limitation is that the subjects were recruited from a captive population. All the abandoners were in prison at the time of interview. Inclusion of women who had not been imprisoned would have added more information about the characteristics of the abandoners. Omission of these weakened not only the ability to develop a representative sample of the target population but also reduced the power to make inferences about the overall population of child abandoners. However, there is no reason to believe that these women are any different from other abandoners. If anything these women could be older and cleverer at concealing their act than those captured.

The model used may have underrepresented the variables associated with child abandonment. Future studies should explore associations with other variables and demographic data, nature of abandonment.

In summary many strategies were employed to enhance the internal validity, external validity and the statistical conclusion validity of the study design. While the external validity of the design is confined by factors that limit generalization to the target population, strong features that support confidence in these findings characterize the internal validity and the statistical conclusion validity.

4.5. Recommendations
While it is premature to suggest the study provided a checklist for screening for child abandonment, the results of the study support continued research in this area. There is a need to test the stress model and clarify the relationship of the variables with child abandonment. In future there is need to explore the relationship of maternal self-concept and perception of the infant with nature of abandonment.

4.6. Implications
Nurses may assist in fostering family relationships and offering formal support to women without family support. Nurses in Zimbabwe compared to other health care professionals, have unlimited contact with women and children through school health programs, family planning and prenatal care. They are in a position to identify and assist the women with problems in social support, resources, life events, and stress, and intervene to prevent child abandonment. Potential child abandoners can be identified at the prenatal clinic and counselled and referred to appropriate social agents and preventive action taken. Mothers at risk can be monitored following delivery to rule out any abnormal mother and child relationship.
The importance of social support from family draws attention to the need of multi-sectorial approach to prevention of child abandonment. Social services, health services and women groups could work together to make sure women have adequate social support during the perinatal period. The creation of training programs that include financial and social support and rehabilitation would ensure these women gain skills to support themselves and their families. There is a need to change public opinion and policy towards the women who abandon their babies.

5. Conclusion
The study revealed that child abandoners were younger mostly single and did not deliver in hospital settings. They were likely to have had a negative perception of their infant. However, child abandonment was not associated with education attainment, employment status, and child factors such as age, sex, and gestational age of the child. There is need to strengthen policy on the social support and rehabilitation of women in the perinatal period.

6. References
i. Abedin, M.; Young, M.; Beeram, M. (1993). Infant abandonment: Prevalence, risk factors, and cost analysis. AJDC 147.
ii. Anderton, DL (1994). The effects of Agricultural colonization in Taiwan: 1906-1942. Demography, 27(3), p 397-411.
iii. Anderson, V. (1996). Portrait of infant killer hard to put into focus, psychological experts say. Atlanta Journal Constitution Jan 13, Sec C, p6 Col1.
iv. Baby found dumped in bush (1995, Feb. 5). The Herald, Zimbabwe.
v. Baird F. (1982) Perinatal screening for child abuse potential. In S. Humernick (Ed.), Analysis of current assessment strategies in the health care of young children and childbearing families (pp179-190). Norwalk: Appleton-Century- Croft.
vi. Bauer, W. D. Twentyman, C.T. (1985) Abusive neglectful and comparison mothers' responses to child related and non-child related stressors. Journal of Consulting and Clinical Psychology, 53, 335-343.
vii. Besharov, D. J. (1996). Recognizing and reporting child abuse. Utah Chapter of the national committee to Prevent Child Abuse (UCPCA).
viii. Burrell, B., Bruce, T., Sexton, D. (1994). Predicting child abuse potential across family types. Child Abuse and Neglect, 18(12), 1039-1049.
ix. Boswell, J. (1982), The kindness of strangers: The abandonment of children in Western Europe from the late antiquity to the renaissance. Penguin Publication.
x. Baird F. (1982) Perinatal screening for child abuse potential. In S. Humernick (Ed.), Analysis of current assessment strategies in the health care of young children and childbearing families (pp179-190). Norwalk: Appleton-Century- Croft.
xi. Coales, A.J. (1994). Five decades of missing females in China. Demography, 31(3), p459-479.
xii. Collins, N., et al. (1993). Social support in pregnancy: psychosocial correlates of outcomes and postpartum depression. Journal of Personality and Social Psychology, 65(6), 1243-1258.
xiii. Conway, J.F. (1995). Child homicide. The Canadian Family in Crisis. Aberdin M. Young, M., Berram, M.R. (1993). Infant abandonment: prevalence risk factors, and cost analysis. AJDC. 147 pp. 714-716.
xiv. Call to consolidate the family unit (1994, 22 June) The Herald, Zimbabwe.
xv. Chan.Y. (1994). Parenting stress and social support of mothers who physically abuse their children in Hong Kong. Child Abuse and Neglect, 18(3), 261-269.
xvi. Clayton T., Shorkey, MS W. (1976). Psychological characteristics of child abusers: speculation and the need for research. Child Abuse and Neglect Vol2 p69-76.
xvii. Coohey, C. (1995). Neglectful mothers, their mothers and partners: the significance of mutual aid. Child Abuse and Neglect, 19(8), 885-895.

xviii.   Coons, P.M. (1996) Child abuse and Multiple personality disorder. Department of psychiatry.
 xix.   Elliot & Eisdorfer (1982). Stress and human health. New York: Springer Publishing Company.
  xx.   Fagan, P. (1995). The real root cause of violent crime: The breakdown of the family. Vital speeches of the day 62(5) p157-158.
 xxi.   Feetham, L. Humenick, S. (1982). The Feetham family functioning survey. In S. Humernick (Ed.), Analysis of current assessment strategies in the health care of young children and childbearing families (pp179-190). Norwalk: Appleton-Century- Croft.
 xxii.   Fenster, L., et al. (1995). Psychological stress in the work place and spontaneous abortion. American Journal of Epidermiology, 142(11), pp.   1176-1183.
xxiii.   Grimes, C. (1996) (Ed.) Causes of child abuse and neglect Mom's and Dad's magazine
xxiv.   Heller, K. & Swindle R.K. (1983) Social networks, perceived social support, and coping with stress. In R. D. Felner, L. Jaison J. Moritsugu, J. & SS Farber (Eds.), Preventive psychology. New York: Pergamon Press.
 xxv.   Lobel, M., et al. (1992). Prenatal maternal stress and prematurity: a prospective study of socioeconomic disadvantaged women. Health Psychology, 11(1), pp. 32-40.
xxvi.   Mercer, R. (1985). Relationship of the birth experience to later mothering behaviors. Journal of Nurse Midwifery, 30, 204-211.
xxvii.   McCubbin, J. A. et al. (1996). Prenatal maternal blood pressure response to stress predicts birth weight and gestational age: a preliminary study. American Journal of Obstetrics and Gynaecology, 175(3). Pp. 706-712.
          Musengeyi, I. (1996). Extended family breaking up fast in Zimbabwe. Pana-african News Agency.
xxviii.   Neuspiel, D., (1994). Infant abandonment by drug -using mothers: blaming the victims? ARCH. Pediatric Adolescent Medicine, 148.
xxix.   New law leads to baby dumping (1995, July 12). Guardian section 1 p12 col. 17.
 xxx.   New charges for woman in baby dumping (1993, Mar 7). New York Times sec 1 p47 col. 15.
xxxi.   Nordentoft, M., et al. (1996). Intrauterine growth retardation and premature delivery: the influence of maternal smoking and psychosocial factors. American Journal of Public Health, 86(3), 347-354.
xxxii.   Noriyuki, D. (1996, Mar 28). The one who never make it to the cradle. Los Angeles Times. Sec E, p1 col1.
xxxiii.   Rothberg, A.D., Lits, B. (1991). Psychosocial support for maternal stress during pregnancy: effects on birthweight. American Journal of Obstetrics and Gynecology, 165(7) 403-407.
xxxiv.   Saunders, D. J. (1996, Mar 4). A bad mom and a bad system abandon kids. San Francisco Chronicle see p19 col5.
xxxv.   Singer, ML, Bussey, L., Lunghofer, L. (1995). The psychological issues of women serving time in jail. Social Work 40(1), p104- 113.
xxxvi.   Vaux, A. (1982). Social support: Resources and social context. In L. Goldberger & B. Shlomo (Eds.) Handbook of stress: Theoretical and clinical aspects. New York: The free Press.
xxxvii.   Wadhwa, PD et al. (1993). The association between prenatal and infant birthweight and gestational age at birth: a prospective investigation. American journal of obstetrics and gynecology, 169(4) pp.858-865.
xxxviii.   Walker, L. (1983`) Neonatal perception inventories. In S. Humernick (Ed.), Analysis of current assessment strategies in the health care of young children and child bearing families. Norwalk: Appleton- Century-Croft.
xxxix.   Walker, L., Avant, K. (1995). Strategies for theory construction in nursing. Norwalk: Appleton& Lange.