

**Social Adjustment of Kenyan Orphaned Grandchildren,  
Perceived Caregiving Stresses and Discipline Strategies used  
by their Fostering Grandmothers**

Paul Odhiambo Oburu



Psykologiska Institutionen  
Göteborgs Universitet, Sverige

Faculty of Education  
Maseno University, Kenya

2004

© Paul Odhiambo Oburu  
ISSN 1101-718X  
ISRN GU/PSYK/AVH--134—SE

Printed in Sweden  
Department of Psychology, Göteborg 2004  
Bound by  
Kompendiet, Göteborg

Abstract

Oburu, P.O. (2004). *Social Adjustment of Kenyan Orphaned Grandchildren, Perceived Caregiving Stresses and Discipline Strategies used by their Fostering Grandmothers*  
Department of Psychology, Göteborg University, Sweden

The aim of the thesis was to examine whether experienced stress, adjustment of orphans and discipline strategies used by 328 grandmothers were linked to disruptions in life courses that occurs when children are orphaned and elderly caregivers are required to assume extensive parenting roles. For comparative purposes, 113 partially responsible grandmothers and 115 biological mothers were also included in the sample. **Study I** examined factors contributing to elevated levels of experienced stress by 128 full-time and 113 partially responsible grandmothers. The total stress experienced was investigated using Parenting Stress Index-Short form. **Study II** investigated the discipline strategies used by 128 full-time and 113 partially responsible grandmothers through self-reported Parent Discipline Interview. The study also determined whether significant levels of experienced stress increased full-time caregiving grandmothers' propensity to employ easily instituted power assertive discipline strategies. **Study III** compared stress experienced by 136 caregiving grandmothers and 115 biological mothers. The adjustment levels of orphans raised by grandmothers and children living with their own biological parents were also assessed. The main aim of this study was to examine the links between experienced stress and child adjustment difficulties. Child adjustment was assessed using caregiver and teacher rated Strengths and Difficulty Questionnaire. **Study IV** compared the adjustment levels and composite risk factors that 128 orphaned and 113 non-orphaned children were exposed to. The degree of each child's exposure to risk factors was quantified by integrating several measures of risks to form a composite risk factor index. Direct associations between risk factors and child adjustment and the interactive functions of protective parenting and family processes in moderating child risk factors were also investigated.

Results of **Studies I and III** indicated that experienced stress was linked to caregiving load, perceived child behavioural difficulty, and perceived lack of emotional and instrumental support. In **study II**, older caregivers, those experiencing elevated levels of stress or possessing basic education preferred power assertive strategies especially when dealing with transgressions of children over 6 years old. Grandmothers with limited education, those below 62 years, and caregivers of children below 6 years favoured coercive and inductive strategies. There was lack of evidence in **Studies III and IV** to suggest that orphans raised by grandmothers were less adjusted than did the non-orphaned children. Child adjustment was linked to caregivers' perception of competency, positive caregiver-child relations and availability of instrumental support.

*Keywords: caregiving stress, child adjustment, physical discipline, grandmothers, orphans*

Paul Odhiambo Oburu, Department of Psychology, Göteborg University, Box 500, SE 405 30, Göteborg, Sweden. Tel: +46317731662 Fax: +46317734628 E-mail:

[paul.oburu@psy.gu.se](mailto:paul.oburu@psy.gu.se)

ISSN 1101-718X

ISRN GU/PSYK/AVH--134—SE

This thesis is dedicated to all grandmothers who have taken new roles as caretakers of Kenya's orphaned grandchildren.

## APPRECIATIONS

There are several persons whom I would like to express my sincere gratitude. Associate Professor Kerstin Palmérus for opening up research doors for me, devoting her time, energy and resources so as to fulfill her part of the bargain of enabling a student from Maseno to complete the PhD. Program. I am also grateful to her for being the diligent and patient supervisor and having had faith in me over the years. Professor John Agak for all that you have done.

Professor Boo Johansson for your input, encouragements, insistence on clarity and also that I had to be well focused in whatever I was doing. Philip Hwang, Tommy Gärling, Jan Hanse Johansson and Dennis Beach for the useful discussions that we had during my PhD program. I am also grateful to the following persons for their support or devotion to my work: Antoinette Rodgers, Kirby Deater-Deckard, Jennifer Lansford, Marc Bornstein, Rainer Silbereisen, Erick Nyambedha and all anonymous reviewers. Karin Dif of the Swedish Institute for extending my guest researcher's scholarship several times; Anne-Marie Hagerell for the support you provided to all SI scholarship holders and Anders Broberg for the book donations.

Ricardo Berrio and Paul Svensson for never getting tired of my 'numerous computer problems'; My room mate Jeremy Ray (and his family of Johanna and little Noah) for being there when I needed a friend and always reminding me that 'tough PhD times don't last but tough people do'; Bengt, David and Maria Palmérus, Martin Nilson, and Ingela Thylefors for the moral and practical support you gave to me. Prof. Ogot, Prof. Serem, Dr. Othuon, Edwina Kawaka, Lena Kirop, Maureen Ochieng, and Alice Olewe for the valuable support you provided or by taking over my teaching responsibilities while I was away.

My fellow PhD students including Göran Jutengren, Lars Olson, Tomas Adelbratt, Kerstin Ekeroth, Karin Lundén, Peter Loukopoulos, Ted Hedesström, Marek Meristo, Andreas Nilsson, Karl Ask, Lars-Olof Johansson, Risper Awuor, Paula Tripichio, and Ásgeir Juliusson for your kindness, support and laughter during the coffee breaks. Thanks are also due to Pär-Anders Granhag, Agneta Swerlander, Max Ricciardi, Louise Miller-Guron, Gunilla Palm, Ann Backlund, Härma Jensen, Kristina Ahlinder, Marie-Louise Ryberg, Stefan Kjellberg and Kjell Söderberg. The help I got from friends including Heidi, Kang, No, Dan Owino, Ojwang Awuor, Girma Berhanu, Abraham Getahun, Franzi Wiesner, Federico Ghirelli, Umberto, Abby Matoro, Diang'a, Onyango, Rex Nguashi, Oloo, Anayesu, Ruthuku, Odhiambo and Dominic were also invaluable.

Lastly I reserve special thanks to Agneta Akinyi for her love, faith in me and also for taking over all my responsibilities while I was away; Sally, Stalin, Robert, my father, mother, brothers and sisters, my uncles Vitalis, Peter, Joseph, Ouko, Reverend Dominic and the Milimani community for the love, support, and encouragements; Yogo, Aura, Oloo, Johnie, Franc, Carro, Mzee and Onuong'a for their help in data collection and all grandmothers for sharing their experiences with me.

Financial support for the four studies were obtained from Göteborg University, Maseno University, the Swedish Institute, Jacobs Foundation, Nordic African Institute, Adlerberska forskningsfonden, Wilhelm and Martina Lundgren's Research Foundation, and the Royal Society of Arts and Sciences in Göteborg.

## LIST OF PUBLICATIONS

The thesis is based on the following four studies that will be referred to as **Studies I, II, III, and IV.**

**Study I** Oburu, P. O., & Palmérus, K. (2004). Stress related factors amongst primary and part-time caregiving grandmothers of Kenyan grandchildren. *The International Journal of Aging and Human Development* ( in press).

**Study II** Oburu, P. O., & Palmérus, K. (2003). Parenting stress and self-reported discipline strategies of Kenyan caregiving grandmothers. *International Journal of Behavioral Development*, **27(6)**, 505-512.

**Study III** Oburu, P. O. (2004). Caregiving stress and socio-emotional adjustment of Kenyan orphaned children raised by grandmothers. *Infant and Child development* (in press).

**Study IV** Oburu, P. O., & Palmérus, K. (2004). Family adversity, caregiving practices and socio-emotional adjustment of Kenyan orphans raised by grandmothers. (Submitted)

## TABLE OF CONTENTS

|  |    |
|--|----|
| INTRODUCTION.....  | 1  |
| GENERAL AIMS.....  | 4  |
| FAMILY LIFE AMONG THE LUO ETHNIC GROUP.....  | 5  |
| CONCEPTUAL FRAMEWORK.....  | 9  |
| A life course approach to experienced stress.....  | 11 |
| Previous research on extensive caregiving roles<br>and experienced stress.....               | 12 |
| Conceptual explanation of links between experienced stress<br>and discipline strategies..... | 16 |
| Conceptual explanation of adjustment of grandchildren<br>raised by grandmothers.....         | 18 |
| Development of attachment relationships and children's<br>internal working models.....       | 18 |
| Disruptions or alterations of attachment relationships.....                                  | 19 |
| Child, caregiver and family resources and risks.....   | 21 |
| PREVIOUS RESEARCH ON CHILD ADJUSTMENT.....   | 25 |
| SUMMARY OF THE STUDIES.....  | 27 |
| SPECIFIC AIMS.....   | 27 |
| METHOD.....  | 28 |
| Participants.....  | 28 |
| Sample selection.....  | 30 |
| Procedures .....   | 31 |
| Instruments .....  | 32 |
| METHODOLOGICAL ISSUES.....   | 35 |
| RESULTS.....   | 41 |
| DISCUSSION.....  | 44 |
| CONCLUSIONS AND RECOMMENDATIONS.....   | 47 |
| REFERENCES:.....   | 49 |

## INTRODUCTION

In most traditional and pre-industrial societies, grandparents were the second line of defense for vulnerable children during times of calamities (Nyambedha, Wandibba, & Aagaard-Hansen, 2003a; Roe & Minkler, 1999). In such societies, the prospect of grandparents raising their grandchildren is not a new phenomenon. What is new is the rapid development of grandmothers as primary caregivers of their grandchildren due to widespread parental divorce; teen pregnancy, poverty, drug dependency, incarceration and HIV/AIDS related deaths (Roe & Minkler, 1999). In many Kenyan families, just like several others in sub-Saharan Africa, a considerable number of grandmothers are primary caregivers to their grandchildren mainly due to the devastating impact of HIV/AIDS related deaths (Nyambedha *et al.*, 2003a).

The scourge, by concentrating on young adults and the middle-aged population (between 15 and 49) has minimized the pool of economically active blood relatives (UNICEF, 1999) and created a large number of orphans (children below 15 years who have lost one or both of their parents; Central Bureau of Statistics, 1999). The joint United Nations' AIDS Program (UNAIDS), and Children's Emergency Fund (UNICEF) report indicated that before the large-scale advent of HIV/AIDS related deaths in the late 1980s, only 2% of the Developing World's children were orphans. By the end of 2002, over 14 million children in the whole of sub-Saharan African countries (or 12% of all children under the age of 15) were total orphans (UNAIDS/UNICEF, 2002).



Kenya's 1998 orphan figures indicated that 363,593 were maternal orphans, 973,909 had lost their fathers and 1,220,633 had lost either one of the parents (Bicego, Rutstein & Johnson, 2003). The number of Kenyan orphans is expected to exceed two million children (16% of the 12 million children below 15) by 2010 (UNAIDS/UNICEF, 2002). In the absence of data to indicate the actual cause of parental deaths, it is realistic to presume that the rise in number of sub-Saharan African orphans from early 1980's figure of 2% (before the large scale advent of the epidemic), to the current ones of between 12-16% are attributable to HIV/AIDS related illnesses (Barnett & Blaikie, 1992; UNAIDS/UNICEF, 2002).

Studies conducted in the rural areas of Western Kenya (Nyambedha *et al.*, 2003a), Zimbabwe (UNAIDS/UNICEF, 1999) and four Ugandan districts (Barnett & Blaikie, 1992; Hunter, 1990) that have borne the brunt of the HIV/AIDS epidemic indicated that due to the higher magnitude of the orphan crisis, limited state involvement in social welfare structures and general absence of elaborate social institutions to take them in, most of these orphans will either be living alone in their parents' homes or raised by elderly widows (over 55 years, Range = 50-96) without access to education and property (UNICEF, 1999; Yamba, 2003).

Parenting responsibilities now required of many Kenyan grandmothers who adopt their orphaned grandchildren are contrary to these caregivers' traditional roles (Adoption means taking in these children to live with them in their own homes without following any legal procedures as required in the industrialized countries). In many traditional African societies, social norms dictated that the elderly received more assistance than they gave (Makoni & Ferreira, 2002; Nyambedha *et al.*, 2003a). In the absence of elaborate state based social welfare systems to take care of the elderly and destitute children, a protective

layer of kin relations, acquaintances or 'convoys' (Antonucci & Akiyama, 1987; Makoni & Ferreira, 2002) were the major source of social security at old age (Håkansson & LeVine, 1997).

Elderly people's life courses roughly followed predictable scripts where they were the main recipients of social welfare benefits (Makoni & Ferreira, 2002). The labor contributions provided by adult children and secure non-restrictive and comfortable life at old age for caregiving parents were expected to be the rewards for successful child rearing (Cattell, 1993). Among the Luo (Nyambedha *et al.*, 2003a) and Gusii communities of Western Kenya (Håkansson & LeVine, 1997), the ideal life course role model for a woman at old age mainly consisted of occasional advisory duties on cultural matters, and non-restrictive caregiving roles that did not include strenuous caregiving roles and disciplinary duties.

The availability of a large number of people at their disposal to provide assistance and also take up primary child rearing duties in the traditional family contexts meant that these elderly women still had freedom to have lives of their own and unlimited opportunities to indulge their grandchildren or pursue their own life interests whenever they wanted to (Mboya, 1965; Nyambedha *et al.*, 2003a). Full-time caregiving responsibilities has thus connoted that these elderly grandmothers have to shoulder the burdens of 'old age unsupported by adult children' (Barnett & Blaikie, 1992; Makoni & Ferreira, 2002; Nyambedha *et al.*, 2003a). They also have to assume child rearing responsibilities and social welfare functions on behalf of the deceased or ailing children (these orphans parents) on their own without expecting extra familial assistance (Nyambedha *et al.*, 2003a). Caregiving grandmothers also have to deal with the pressures exerted on them by

the need to fend for their orphaned grandchildren, manage adequately emotional problems associated with deaths of their own children, and the loss of stage appropriate roles (Mukwaya, 1999; Ocholla-Ayayo, 1997). This is especially at a time when they require assistance, are isolated, old, ill, and living in impoverished socio-economic contexts (Barnett & Blaikie, 1992; Mukwaya, 1999; Yamba, 2003).

Apart from witnessing their parents die after long and trying periods, orphans also experience repeated traumas of bereavements (Barnett & Blaikie, 1992; Mukwaya, 1999; Yamba, 2003). Majority of them are forced by the deaths of own biological parents, or prospective kin adopters to undergo numerous transitions from their own biological to other adoptive grandparent homes. In the new households, they are required by the changed circumstances to either become family heads or share in age inappropriate adult care taking responsibilities (Barnett & Blaikie, 1992; Mukwaya, 1999; Yamba, 2003). Some of them also venture onto the streets for lack of alternative accommodation or when their grandmothers are unable to adequately provide for them (Forsythe & Rau, 1996).

## **GENERAL AIMS**

This thesis explores the implications of the changes in Kenyan Luo family configurations attributable to HIV/AIDS related deaths on discipline strategies used, perceived child adjustment and total stress experienced by grandmothers who have assumed full-time adoptive responsibilities for their orphaned grandchildren. Comparative samples of biological mothers and partially responsible grandmothers were also used.

The research questions addressed were that when full-time caregiving grandmothers take in their grandchildren to live permanently with them at a time when traditional social networks are either disintegrating or overwhelmed by the large number of children requiring adoption

(Nyambedha *et al.*, 2003a; 2003b), does the reversed roles and increased work load translate into elevated levels of experienced stress than did the partially responsible grandmothers? Do grandmothers who take care of their orphaned grandchildren on full-time basis differ from partially responsible grandmothers and biological mothers in terms of experienced stress and perceived child maladjustment? What discipline strategies do grandmothers taking care of their grandchildren on full- or part-time basis use? Do caregiving grandmothers experiencing elevated levels of stress resort to physical discipline? Are the risk factors and risky contextual conditions the same for children raised by full-time and by part-time caregiving grandmothers, and does positive parenting operate similarly relative to these risks in both groups?

## **FAMILY LIFE AMONG THE LUO ETHNIC GROUP**

The Kenyan Luo (groups with similar ethnicity are also found in southern Sudan, Ethiopia, Congo, Uganda, and Tanzania) occupy the North-eastern shores of Lake Victoria where they live in family homesteads called *dala* (see Grigorenko *et al.*, 2001; Nyambedha *et al.*, 2001; 2003a; 2003b; Ocholla-Ayayo, 1976 for detailed ethnographic characterization of the Luo). Traditionally, each *dala* consisted of three generations (i.e. parents, married sons, children, uncles, aunts and grand parents). Luo societies are highly ordered and hierarchical in terms of space, relationships, age and gender. For instance, spaces and structures in Luo family life also have symbolic meanings. There were principles that governed house arrangements, social relations and groupings within each '*dala*' (Ocholla-Ayayo, 1976).

Traditional Luo societies were relatively homogeneous, patrilineal (i.e. children belong to the fathers' family and descent is traced through the paternal line) and virilocal (i.e. women married outside their clans and lived in the man's family place). Common child rearing

policies practiced by the Luo and members' strong kinship ties ensured that traditional beliefs and attitudes permeated (and still does) most of the Luo institutions such as family life, ideologies and ethics (Ocholla-Ayayo, 1976). From infancy up to the age of seven, socialisation of the child was (and still is in many respects), the mothers' main responsibility. However, caregiving assistance is also obtained from grandmothers, aunts, older children (below 14 years) and female child minders (*jopidi*) aged between 10-14 years (Grigorenko *et al.*, 2001; Ocholla-Ayayo, 1976). In the traditional contexts, the *Jopidi* were drawn from the mothers' kinsfolk to ensure that the receiving families did not abuse them. In the contemporary Luo societies, *jopidi* are in most cases non-relatives permanently living within the homes of their employers and are paid by mothers for their child minding services.

Fathers in the traditional contexts, while privileged in terms of the direct controls over family resources and extensive powers that they wield over the rest of the family members, have limited child minding roles for their own children aged below 7 years. Their parenting roles in traditional contexts were limited to co-ordination of family and child rearing issues and passing on of gender related practical skills (i.e. aptitudes) to boys aged over 7 years. Fathers and grandfathers also convened 'male only' eating and discussion forums called '*duol*'. These forums were carried out in special houses reserved for the male head of the homestead (the eldest male alive) between 7.00 and 11.00 pm. Adjudication of family matters, disagreements or quarrels, and identification of the needs of vulnerable children (i.e. orphans) were carried out in the '*duol*'.

Grandmothers (*'dayo'* or *'pim'*), although not directly involved in the daily parenting roles for their grandchildren), also had limited caregiving roles. Grandmothers raised children neglected by their own parents, those born out of wedlock or whose parents were ailing or

dead. They also had culturally sanctioned responsibilities of educating their grandchildren on sexuality, family life, and cultural matters. These were already weaned children (boys aged 7-14 and girls till marriage) of each *dala* who slept in their grandparents' houses ('*siwidhe*') due to strict taboos that barred them from sleeping in their own parents' houses (Grigorenko *et al.*, 2001). Boys over 14 years slept in a 'male only' dormitory ('*simba*'). A '*simba*' was the house of the eldest eligible bachelor located on either side of the main gate (depending on birth order) that also served as a peer education centre for senior boys.

This extended family system practiced by the Luo, apart from providing siblings with a wider pool of individuals to offer affection, physical comfort, assistance, and coherent moral and cultural understanding of societal expectations, also ensured that children were brought up as part of a larger social system. Luo children were socialised to conform to societal expectations, respect age and social status during their daily interactions, in the '*duol*' and also when sleeping in '*simba*' or '*siwidhe*'. Children who failed to conform to societal expectations or parental requirements were immediately punished for their offences. The Luo ideology of child rearing (and punishment in particular) was that it had to be contingent upon age (severity increased with age), proportional to the nature and persistence of the offence, and had to begin earlier in life (i.e. 'a tree is shaped while still young, when it is grown up it breaks', or 'iron is forged while still hot or else you will need extra force to forge it or it breaks' (Ocholla-Ayayo, 1976).

The Luo, while considering severe punishment of children for non-conformity as repressive, also accepted it as necessary means of eliminating undesirable behaviours. The disciplinary strategies used ranged from whipping, threats of magic or encounters with witchcraft for serious offences, to permanent or temporary denial of privileges, food, rights and humiliating

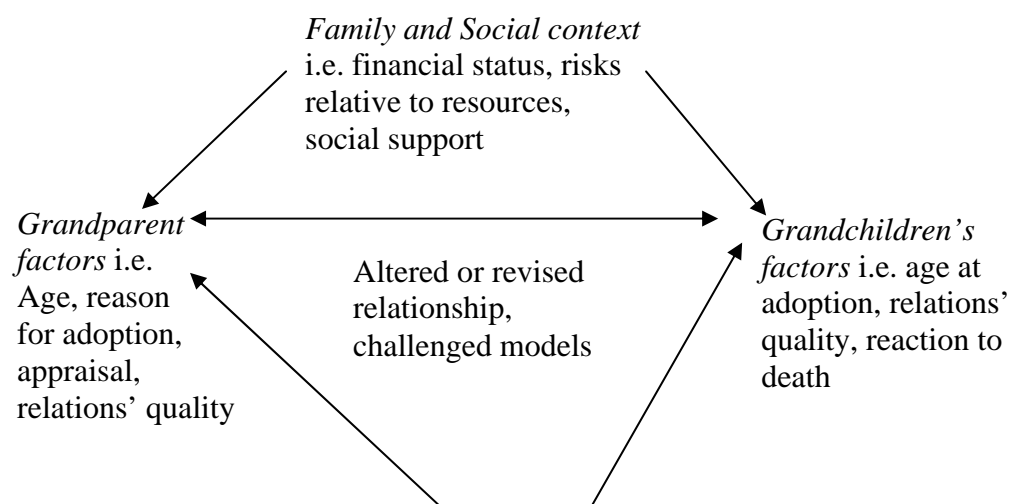
psychological tortures (e.g. nasty names, rebukes, reprimands and embarrassing songs or 'huwege') for less serious or persistent transgressions. Rewards and praise were also concurrently used to reinforce socially approved activities.

During the child's formative years, severe forms of discipline were seldom used. Discipline for girls of all ages and that of children below 7 years were viewed as the responsibility of mothers, and older siblings. Fathers' disciplinary responsibilities were limited to those of male children aged between 7 and 14 years. However, they sometimes delegated less serious disciplinary roles to mothers and older children (Ocholla-Ayayo, 1976). With the exception of grandparents who were only duty bound to reward any child for good conduct, all adult members irrespective of whether they were the child's close relatives, were expected to punish children for deviations from societal norms.

Among many contemporary Luo societies, these traditional child rearing ideologies, practices and the extended family structures are rapidly declining especially in the urban and peri-urban areas. Nucleated families, grandmother and children headed households are continuously replacing the larger 'dalas' mainly due to modern Kenyans gravitation towards individualistic Western lifestyles, the harsh economic realities characterised by galloping inflation, chronic unemployment, land scarcity and the devastating impact of HIV/AIDS related deaths (Håkanson & Levine, 1997; Weisner, 1997; Ocholla-Ayayo, 1997). The magnitude of the HIV/AIDS related orphan crisis especially among the Luo where most families have been affected has reduced the pool of middle generation and negatively impacted upon the ability and willingness of family based welfare systems to adopt or sustain the large number of children requiring adoption (e.g. Forsythe & Rau, 1996; UNAIDS/UNICEF, 2002; Nyambedha *et al.*, 2003a).

## CONCEPTUAL FRAMEWORK

Existing empirical information on grandmother caretakers (e.g. Bowers & Myers, 1999; Pruchno & McKenney, 2002, Gatz, Bengtson & Blum, 1990), relevant theoretical models (e.g. the life course, role context approach, Moen, Robinson, & Dempster-McClain, 1995), and broader adult caregiving literature (e.g. the social situational model; Belsky, 1984; Gelles & Cornell, 1985) and finally the attachment theory and literature (Bowlby, 1969/1982; Poehlmann, 2003) were integrated to develop a theoretical framework used in the four studies. The model explained caregivers' experienced stress; adjustment of orphans and discipline strategies used by grandmothers as a function of risks relative to resources and disruptions in life course role model that occurs when grandmothers adopt their orphaned grandchildren. Our model was based on Gatz *et al.*, (1990) and Poehlmann (2003) proposals that caregiver and child outcomes could be a function of four interlinked aspects including: 1). Grandparental factors i.e. challenged life course role models, advanced age, underlying factors that precipitated caregiving duties (i.e. death of children's parents), information processing (i.e. appraisal of parenting and child difficulty, caregiving roles, perception of child adjustment, and behavioral difficulty); 2). Child factors such as altered or revised working models, age at placement, quality of relationships, and difficult behaviors; 3). Parental factors i.e. reason and nature of biological parents absence and 4). Family resources (i.e. financial status, caregiver education, perceived availability of instrumental and emotional support) relative to risks (i.e. impoverished status, role restrictions) were also considered.





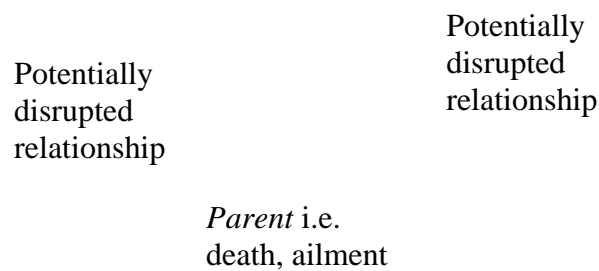


Figure 1. Attachment and caregiving models in grandparent headed households

*Caregiver factors*

*Life course approach and 'double ABCX' model of caregiver experienced stress*

We borrowed ideas from McCubbin & Patterson (1982) 'double ABCX' model and life course perspective to development (Neugarten & Hagestad, 1976; Moen *et al.*, 1995), to explain experienced stress as a function of breaches in normal life course, widespread deaths of the middle generation and role overload among caregiving grandmothers and their families. In the double ABCX model, 'A' is the precipitating stressful event i.e. assumption of caregiving responsibilities due deaths of children's biological parents, 'B' is the family resources, 'C' is perception or appraisal of the crisis, 'X' is the outcome, sense of strain or amount of crisis, and 'Double' is the accumulation of additional problems secondary to the initial stressor i.e. breaches in life expectations (Gatz *et al.*, 1990).

The 'double ABCX' model suggest that apart from the precipitating stressor (i.e. role overload), there are always competing or secondary stressors (i.e. changes in caregivers' life courses) that also contribute to caregiver experienced stress. The 'double ABCX' model

suggest that caregiver appraisals of their new roles occur on two fronts (i.e. how their new responsibilities are upsetting or manageable and also their perceived acceptability of the alterations in their lives that occurs when they take up the new roles). According to the life-course perspective to development (Neugarten & Hagestad, 1976; Moen *et al.*, 1995), people usually build expectations of what their lives should entail. The life course model assumes that crises in peoples' lives that occur when presumed ideal life roles are breached usually complicates caregiver adjustments (Neugarten & Hagestad, 1976; Moen *et al.*, 1995).

Custodial grandmothers required to raise another generation of children at a time when they are elderly, impoverished or grieving over their dead children are likely to be distressed by their appraisals of new extensive roles as burdensome and caregiving as a breach in their life expectations (e.g. Gatz *et al.*, 1990). However, as regards the morbidity effects of breaches in ideal life roles and role constraints on experienced stress, previous studies have found inconsistent results reflecting caregiver resiliency or coping skills (i.e. ability to solve problems, seek help, or sacrifice self-interests) and appropriate management of stress symptoms (i.e. through diversional activities, seeking social support; Brouard & Joslin, 1991; Pearlin, Turner & Semple, 1989).

Coping skills (also influenced by perceived acceptability of the alterations in the caregiver's life), resource availability and social support thus acts as mediators of caregiver experienced stress (the outcome). The outcome can either be in the form of objective burden (i.e. actual changes in the life of caregiver) or subjective burden (i.e. feelings of distress, and positive consequences e.g. sense of competence in managing caregiving tasks, self-respect and attained importance from others for taking on arduous caregiving duties, Gatz *et al.*, 1990).

## Previous research on extensive grandmother caregiving roles and experienced stress

Data obtained from some studies have however, suggested that the relationships between extensive caregiving roles and grandmothers' experienced stress can sometimes be complex. While primarily responsible grandmothers are most likely to experience elevated levels of stress due to the reversed roles (e.g. Cherlin & Furstenberg, 1986; Thomas, 1986; Minkler, Roe, & Price, 1992), results of other investigations that assessed the links between assumption of extensive caregiving duties, perceived role satisfaction and experienced stress (e.g. Pruchno & McKenney, 2002) have shown that resumption of parenting duty at old age is an activity that can either have positive or negative valence among caregiving grandmothers.

In a study that compared caregiving load, experienced stress, psychological satisfaction and coping capabilities among primary and partially responsible grandmothers, Musil (1998) and Minkler & Fuller-Thomson, (2001) noted that assumption of extensive parenting responsibilities did not necessarily connote that full-time adoptive grandmothers were more inclined to experience elevated levels of stress than did those with limited responsibilities. Their argument was that since the parenting roles for the partially responsible group of grandmothers are not clear-cut, differences in caregiving load could be less important in determining the total stress experienced. Role ambiguity could also lead the partially responsible grandmothers to experience greater or different stresses than did the full-time adoptive caregivers (Jendrek, 1994).

The total stress experienced may also be a function of the age and gender of the caregiver (greater for elderly women than men), presence or absence of other responsible people in the home, length of time involved in caregiving and degree of choice in the care of grandchildren

(e.g. Minkler & Fuller-Thomson, 2001; Musil, 1998). Some of the previous studies (e.g. Nyambedha *et al.*, 2003a; 2003b; Cherlin & Furstenberg, 1986) indicated that while grandparents may not always 'choose' to take up full-time care for their grandchildren, caregiving responsibilities could sometimes be positively affirming to adoptive grandmothers.

According to Nyambedha *et al.*, (2003a), in the absence of alternative forms of accommodation or when the child's home circumstances become unbearable, Kenyan grandmothers usually take 'emotionally driven but economically unsound decisions' to take up full-time caregiving responsibilities for their orphaned children. These authors noted that while full-time adoption is usually very difficult to elderly and impoverished grandmothers who take in their grandchildren who had nowhere else to go, primary caregiving responsibilities could also generate positive dispositions in these caretakers that their orphaned children have in them a responsible caretaker.

Particular stressors such as lack of reciprocal support from significant others and conflictual relationships with the grandchildren's parents commonly reported among grandmother caregivers (e.g. Minkler *et al.*, 1992; Kelley & Damato, 1995), are also likely to affect the partially and primarily responsible grandmothers differently (Musil, 1998). It is possible that the permanent absence of orphaned children's parents and degree of choice among primarily responsible grandmothers to carry on with parenting responsibilities despite the numerous economic difficulties could moderate the levels of experienced stress among the primarily responsible grandmothers (Minkler *et al.*, 1992).

However, full-time adoptive role is an activity that is potentially stressful to grandmother caregivers given the monetary or physical constraints (e.g. advanced age and limited energy to

get involved in viable economic activities; Nyambedha *et al.*, 2003a). Reversal of roles and complicated life adjustments required of them when they have to shift from less responsible and independent life roles to restrictive parenting duties also present numerous caregiving challenges to elderly grandmothers (e.g. Nyambedha *et al.*, 2003a; Ntozi *et al.*, 1997; Hunter, 1990). Declining support for grandmother caregivers from equally affected relatives mainly due to the higher magnitude of the orphan crisis, and their impoverished living contexts has meant that these elderly grandmothers have to struggle to cope with their new care providing roles at a time they also grieve over the deaths of their own children (e.g. Nyambedha *et al.*, 2003a; Ntozi *et al.*, 1997).

In situations where caretaking grandmothers had exclusively relied on their deceased children for own upkeep, they were highly stressed by the long hours that they were now required to put into unproductive subsistence production systems and their inability to generate meaningful economic livelihoods (e.g. Nyambedha *et al.*, 2003a; Kilbride, 1985). Previous non-Kenyan studies conducted on primarily responsible grandmothers (e.g. Burton, 1992; Kelley, 1993; Harrison *et al.*, 2001; Musil, 1998; Minkler & Roe, 1993), have also consistently reported that the enormous responsibility linked to the revival of parenting roles a second time can be stressful, difficult and life altering to older persons with less energy and limited access to property. In addition, the effects of caregiving may be cumulative on primarily responsible grandmothers (Kelley, 1993) forced to adopt a large number of children for a longer period of time (18 years on average; Moen *et al.*, 1995; Musil, 1998).

Prior studies (e.g. Jones & Hansen, 1996; Dubowitz *et al.*, 1994) linked elevated levels of experienced stress, and impoverished living contexts to grandmothers' inability to provide stable and consistent family environments necessary for positive child adjustment. In a study

carried out in Western Kenya (Nyambedha *et al.*, 2003b), grandmothers experiencing child-rearing difficulties were reported to be neglectful of children they considered troublesome. They also used denial of food, physical punishment and ignoring strategies to get their grandchildren to be actively involved in subsistence production.

*Conceptual explanation to the links between experienced stress and discipline strategies*

The information-processing model of parenting behavior (Rubin, Mills, & Rose-Krasnor, 1989; Milner, 1993) was used to explain the expected association between elevated levels of stress and caregiver employment of easily instituted discipline strategies (i.e. power assertive strategies). The model views discipline strategies used by caregivers as contingent upon socio-ecological and personal-social setting conditions (i.e. differential occurrence of stress) and parental goals and /or beliefs about socialization.

The model portrays caregivers as constantly processing information about different aspects of the child's behaviors. Their evaluations of the child's behaviors are expected to be in accordance to dispositional characteristics of the child, quality of ongoing relationships and beliefs about children's developmental competence. Milner (1993) suggested that significant levels of experienced stress increases caregiver propensity to employ easily instituted power assertive and coercive discipline strategies. Economically disadvantaged caregivers who are stressed by these socio-ecological setting factors also fail to be sensitive and responsive to the needs of their children (Belsky, 1984; Belsky, Robins, & Gamble, 1984; Booth, Rose-Krasnor, & Rubin, 1991).

Inter- and intra personal-social setting factors such as maternal age, marital conflict or breakdown and lack of supportive social network (Booth *et al.*, 1991) may also be a source of

parental stress and consequently affect discipline strategies used. Lack of social support from one's relatives, friends and spouse were also related to maternal restrictiveness and punitiveness (Colleta, 1979; Desfosses & Bouchard, 1987). High-risk single and poor caregivers who lacked social support from friends and relatives were found to be more likely to have insecure relationships with their children than those who had a partner's or extra familial social support (Spieker & Booth, 1988; Zur-Szprio & Longfellow, 1981).

The choice of the information-processing model as a conceptual explanation for the expected link between experienced stress and discipline strategies used was based on the realisation that the model was developed for use in collecting data about children of age range 4-10 years. The present study also assessed the behavioral outcomes of grandparental practices on children of similar age group. Secondly, whereas the model consist largely of a search for direct connections between clusters of parental practices and given socialization outcomes on children, consideration is also given to other mediating factors that may affect caregiver practices (i.e. levels of experienced stress) and consequently children's adjustment outcomes. The researcher found this complex approach adopted by the information model grand since it assessed how socio-ecological and personal-social contexts could influence the strategies adopted by caregiving grandparents to socialize their children.

### *Child factors*

#### *Conceptual explanation of adjustment of grandchildren raised by grandmothers*

The first part of our model focused on the adjustments required of grandmothers when they take up non-normative or non-traditional caregiving roles for their orphaned grandchildren

from a stress coping, life role theory (Moen *et al.*, 1995; Minkler & Roe, 1993). However, it is also important to understand the diverse and complex relationships and adjustments that emerge when children are orphaned and grandmothers are required to assume primary caregiving responsibilities.

Prior studies (e.g. Poehlmann, 2003) indicated that many areas of family life and grandchildren's development (i.e. affective, cognitive and social-contextual dynamics) are transformed when grandparents assume primary caregiving responsibility. To address these processes, research focusing on attachment and attachment theory (e.g. Bowlby, 1969/1982; Poehlmann, 2003) especially in regard to attachment formation, disruptions in relationships, and development of children's internal working models were incorporated into the model to help explain how deaths of biological parents and grandparents' transition into primary caregiving roles could be linked to child adjustment problems.

#### *Development of attachment relationships and children's internal working models*

According to the attachment theory, from infancy through the first early years of life, maintenance of proximity and availability of attachment figures is crucial to child development (Bowlby, 1969/1982). The theory proposes that during this early period in children's lives, they develop an internal working model on life expectations and also on how their relationships with significant attachment figures should proceed.

This internal model is assumed to be malleable in children's early years but takes an enduring, refined and predictable form from infancy through pre-school years. Positive quality of caregiver-child relationships, consistency of the attachment figure in the lives of the concerned children are linked to their later security (e.g. Bohlin, Hagekull & Rydell, 2000). Breaches in the ideal or normal working model, characterized by caregiver absence,



negativity and insensitivity were linked to child insecurity (e.g. Belsky, Rovine, & Taylor, 1984).

### *Disruptions or alterations of attachment relationships*

According to the attachment theory, disruptions in relationships occur when the dominant attachment figure is not accessible (i.e. absent or unresponsive) or when discontinuity in care occurs (Bowlby, 1973). The disruption could be temporary (i.e. separation) or permanent (i.e. death or abandonment of children by own parents). The second disruption could be between grandparents and their grandchildren (due to challenged caregiving working models) and the last one involves grandparents and dead or ailing children (due to unanticipated work load and challenged working model of ideal life course). Depending on the balance between cumulative risk factors and family resources, all these disruptions can lead to child maladjustment and altered or revised relationships between children, own parents and their caregiving grandparents (Poehlmann, 2003).

The nature of HIV/AIDS related deaths where some of these children have lost one parent, or will lose both (single or double orphans) make each of these groups of children to typically experience different psychological, social, and economic disruptions. In the HIV/AIDS heavily affected areas, majority of these children were single orphans who had lost their fathers (Barnett & Blaikie, 1992). Some of the previous sub-Saharan studies (e.g. Barnett & Blaikie, 1992; Bicego, Rutstein, & Johnson, 2003) indicated that while double orphans presumably faced the most severe social and physical dislocations, the initial paternal and subsequent maternal HIV/AIDS related deaths, requires single orphans to make difficult adjustments as health conditions of surviving parent worsens.

The most disruptive pattern in single orphans lives occur in cases where maternal deaths precedes that of fathers and the affected children are distributed among relatives due to fathers' presumed or actual inability to take over traditional 'maternal caregiving roles' (Barnett & Blaikie, 1992). In Rakai District of Uganda, these authors observed that when the father's health worsens, mothers are sometimes forced to desert their husbands or divert their attention and time that could have been used in viable economic activities or on children to caring for the ailing husbands. With the eventual paternal deaths, the mothers' attentions are further deflected from childcare to fending for themselves, and also in generating family income (Barnett & Blaikie, 1992).

Kenyan studies carried out on HIV/AIDS affected children (e.g. Human Rights Watch, 2001) also reported that single orphans are made to become breadwinners or heads of households when the health of the surviving parent worsens. Older children and girls were sometimes forced out of school to become caregivers for dying parents and other siblings. Some of these children are involved in exploitative labor due to lack of alternative means of survival (Human Rights Watch, 2001). In a study of single orphans carried out in Rusinga Island in Western Kenya, 77% of those interviewed indicated that despite the terrible and exasperating ordeal of taking over parenting responsibilities for their ailing parents and other siblings, or watching their parents ail and eventually die, they had no one else apart from themselves to 'tell their troubles'. Most of them were neglected by their ailing parents and stigmatized or rejected by the extended family members (Human Rights Watch, 2001).

These findings suggest that even before the deaths of one or both parents, orphans might have experienced long periods of relative neglect or rejection. They could also have been involved in age inappropriate income generating activities that may eventually compromise

their adjustment potentialities. Grandmothers who step in to fill vacuums in childcare brought by the deaths of their own children could also have had their working models of caregiving or ideal life courses challenged. They may also be dealing with grandchildren who had experienced insecure attachment relationships prior to and after the deaths of one or both parents. These conditions that predate the adoption of the orphaned children could have cumulative negative effects on their adjustment (Bowlby, 1969/1982; Poehlmann, 2003).

#### *Child, caregiver and family resources and risks*

In addition to the attachment literature, relevant family and contextual models including transactional developmental theory (Sameroff & Fiese, 2000), ecological theory (Bronfenbrenner, 1986; 1992) and social situational model (Belsky, 1984; Gelles & Cornell, 1985) were also included into our model (*see Figure 1 page 14*) so as to determine how the cumulative risk factors and protective family resources could also predict child adjustment. Sources of risks or protection against child maladjustment considered in our model included child's age, cognitive and emotional expectations, and the balance between risk factors, caregiver and family resources (Poehlmann, 2003).

A child's potentiality to develop secure attachments with non-biological parents diminishes with increasing age at time of placement (i.e. it is lower beyond infancy, e.g. Bowlby, 1969/1982; Stovall & Dozier, 1998). Other factors that have been linked to insecure post-placement grandparent-grandchild attachments include: (1) whether secure attachments were established with the current caregivers prior to adoption, (2) caregiver insensitivity to child's requirements, (3) negative quality of caregiver-child relationships, (4) dysfunctional caregiver marital relationship and (5) interactions among these factors (Poehlmann, 2003).

The attachment literature suggest that children's past experiences with their own biological parents or other significant attachment figures, information provided to them on the nature of the current separation and support provided to them by their new caretakers could cognitively and emotionally prepare them to accept temporary or permanent absence of their biological parents (Poehlmann, 2003). For example in the case of orphaned children, past experiences with own biological parents' terminal diseases, support provided by caregivers and realistic assessments by orphaned children who have been abandoned or neglected following the death of one or both parents, could influence their reactions to parents' absence and interaction patterns with their caregiving grandmothers (Forehand *et al.*, 1999; Poehlmann & Kindermann, 2001).

Support provided by caregiving grandmothers to their orphaned children will however be contingent upon available family resources (i.e. availability of instrumental support, economic security) and their appraisal of caregiving situation (Hayslip *et al.*, 1998). Whereas some caregiving grandmothers will focus on stresses linked to raising children a second time (Emick & Hayslip, 1996), others will emphasize on the potential rewards of filling in gaps in family structures brought by their children's inability or absence (Burton & DeVries, 1992). It is these appraisals of caregiving load and costs of caring for their grandchildren that provide insights into meanings grandmothers attach to their caregiving roles and also to children's overall adjustment (Emick & Hayslip, 1996; Poehlmann, 2003).

Depending on the balance of cumulative risks relative to available support and resources, adoption of children by grandmothers may be viewed either as a protective factor (Werner, 2000) or a potential risk (Crittenden, 1996) to the adjustment of their grandchildren

(Poehlmann, 2003). In many Kenyan societies, adoption of children by grandmothers during times of crises was a tradition of strength (Nyambedha *et al.*, 2003a). In individualistic societies where biological parents were the dominant attachment figures (Minuchin, 2002), disruptions in relationships between children and their own biological parents are always viewed as a breach in children's internal working models that could negatively affect later adjustment. However, even within these highly nucleated families, by the time they were 18 months of age, children are also reported to select extra familial attachment figures outside their own nuclear families circles (e.g. grandparents; Howes, 1999).

A cross-cultural perspective is thus useful when considering the relevance of the attachment theory in understanding the complex intergenerational relationship that evolves and child adjustment that occurs when grandparents become primary caregivers to their orphaned grandchildren. In the Kenyan contexts or in communal societies where children are socialized from infancy as part of a social group, and also where multiple attachments are possible early in life (Grigorenko *et al.*, 2001; Nyambedha *et al.*, 2003a), the absence of biological parents and eventual assumption of caregiving roles by grandmothers may not necessarily entail disruptions in attachment processes or development of unique intergenerational relationships. In the absence of biological parents, fostering grandparents could sometimes provide required sense of security, continuity and stability that may protect their grandchildren from adversely stressful backgrounds (e.g. Barrera, 1981; Jones, 1996; Greenberg, Siegel & Leitch, 1983; Heywood, 1999; Forehand *et al.*, 1999).

This suggest that grandmothers providing secure bases, physical and emotional care for their orphaned children could sometimes meet the criteria proposed to identify effective extra familial attachment figures (e.g. Myers, Jarvis, & Creasy, 1987). Earlier North American

investigations (e.g. Barrera, 1981; Jones, 1996) indicated that stable family environments, strong and supportive grandparent-grandchild relationships, and proximity to other significant attachment figures could function as protective factors against child maladjustment despite the numerous risks to maladjustment.

While many intergenerational households headed by grandparents may serve a protective function to vulnerable children without alternative forms of accommodation, they are also characterized by an overrepresentation of family markers of risk factors (Poehlmann, 2003; Fuller-Thomson, Minkler, & Driver, 1997). Some of the US (e.g. Fuller-Thomson *et al.*, 1997; Roe & Minkler, 1999) and Kenyan studies (e.g. UNICEF, 2000; Nyambedha *et al.*, 2003a; 2003b) carried out on primarily responsible grandmothers documented that these grandmother caregivers were in most cases single, elderly and with limited educational attainment. They also had lower income and lacked reliable, or consistent family support. The subsistence living arrangements noted among these willing but already overburdened, and economically inactive, single or elderly women has also been linked to perceived child behavioral difficulty (e.g. Petterson & Albers, 2001), elevated levels of caregiving stress (Rodgers, 1999), and reduced caregivers' sense of control over their own lives (Klebanov *et al.*, 1994).

Children in kinship care were thus likely to experience persistent poverty than did those still living with their own biological parents (Foster *et al.*, 1997; Ntozi, 1997). They are also likely to be discriminated against or excluded in the provision of limited food and services particularly when the underlying factors for their adoption was stigmatizing (e.g. HIV/AIDS related deaths; Bledsoe, 1988; Forsythe & Rau, 1996; Nyambedha, *et al.*, 2001; 2003a; UNICEF, 2002; Saoke & Mutemi, 1996).

### *Previous research on adjustment of children raised by grandparents*

Research focusing on the adjustment of children raised by grandmothers after difficult early experiences or deprivations have obtained conflicting results. For example, Howe (1995) reported that later adopted children with a prior history of neglect, abuse or multiple placements had difficulties forming social relationships. These children were also reported to display indiscriminate attachment behaviors to strangers and reduced adjustment potentialities (Stovall & Dozier, 1998). Others (e.g. Jones, 1992; Jones & Hansen, 1996) however, indicated that US children of abusive and neglectful birth parents when placed in the care of receptive fostering grandmothers fared better than other children in out-of-home placements. However, most of the available studies that have assessed the psychological well-being of children raised by grandparents are US studies that have either focused on non-orphaned children of drug abusing parents or on those maltreated prior to adoption (Poehlmann, 2003). There is a paucity of comparative studies from the rest of the world.

With the growing HIV/AIDS related orphan crisis especially in sub-Saharan Africa, it is clear that more research is needed on child adjustment and stress experienced by grandmothers caregivers. Musil (1998) noted that most of the previous studies focused on grandmothers with primary responsibility of raising their grandchildren (e.g. Kelley, 1993) while neglecting the partially responsible grandmothers living in multi-generational homes. Studies that have compared experienced stress by full-time adoptive grandmothers and those providing partial care are still lacking (Musil, 1998).

To date, little is still known about adjustment of children orphaned by HIV/AIDS related mortalities (Forehand *et al.*, 1999). Research on contemporary discipline methods used and

caregiving stress experienced by Kenyan grandmothers with the primary or partial responsibility of raising their grandchildren are also not available. Limited efforts have also been made to place literature about grandmother caregivers into a theoretical framework (Bowers & Myers, 1999).

## ***SUMMARY OF THE STUDIES***

### ***SPECIFIC AIMS***

The specific aims of the four studies are as follows:

***Study I:*** This study examined whether significant differences existed between caregiving stress experienced by grandmothers with partial and full time responsibilities of caring for their grandchildren. Another aim was also to assess the links between caregiver-experienced stress, extensive caregiving roles, perceived availability of emotional and instrumental support, and child manageability.

***Study II:*** The second study examined the contemporary discipline strategies used and also whether extensive caregiving roles and potentially stressful child rearing duties predispose full-time adoptive grandmothers to resort to easily instituted physical forms of discipline than did the partially responsible caregiving grandmothers. Other parenting and contextual factors that *were associated with* caregiver employment of power assertive strategies were also investigated.

***Study III:*** This study compared caregiving stress experienced by full-time adoptive grandmothers to that of biological mothers. Another aim was also to examine whether statistically significant differences existed in self-reported child adjustment difficulties among



orphans raised by primary responsible grandmothers and non-orphaned children living with their own biological parents.

**Study IV:** The focus of this study was to explore whether caregiving grandmothers perceived their orphaned grandchildren as less adjusted especially when compared to non-orphans. Another aim was to examine the child risk factors, family processes; caregiver and child variables that were associated with child adjustment problems experienced by orphans and non-orphaned children.

## **METHOD**

### **Participants**

Sample surveys were used to select 262 primarily responsible grandmothers and their orphaned grandchildren, and control groups of 113 partially responsible grandmothers and 115 biological mothers from the rural areas of West Karachuonyo and Kasipul Divisions of Rachuonyo district, Nyanza Province, Kenya. In studies I, II, and IV, the participants comprised of 128 caregiving grandmothers who adopted their orphaned grandchildren on full-time basis (the FTC group). The rest were partially responsible grandmother caregivers (the PTC group; n = 113) living in homesteads (three generational families) that also included at least one of these children's biological parents. In study III, 115 biological mothers and 134 grandmothers raising their orphaned grandchildren on full-time basis were used.

These participants all belonged to the Luo ethnic group (see Grigorenko *et al.*, 2001; Nyambedha *et al.*, 2001; 2003a; Ocholla-Ayayo, 1976 for detailed ethnographic characterization of the Luo). Our choice of the study population was influenced by two main factors: (1) some of the previous studies (e.g. Nyambedha *et al.*, 2003a; UNAIDS, 2002) indicated that the major urban and rural areas of Western Kenya, especially the region within

the Lake Victoria basin predominantly occupied by the Luo, had the highest HIV/AIDS prevalence rates in the country. These studies' estimates put the number of infected people aged between 15-49 to be over 30%. It was our anticipation that a large pool orphans would be readily available in these HIV/AIDS hard hit areas. (2) Since most of the rurally based Luo people are still living in clan-based systems in which individuals trace common ancestry and traditional beliefs and attitudes still transcend most of the family life (Nyambedha *et al.*, 2003a; Ocholla-Ayayo, 1976), it was anticipated that comparative groups of non-adoptive grandmothers still living in traditional three generational families would be easily found in the selected study areas.

While our main focus in the four studies were grandmothers who take care of their orphaned children on full-time basis, the partially responsible group of grandmothers were included in studies I and II for comparative purposes. In the traditional Luo family contexts, it was the norm that children born out of wedlock, children of ailing sons and daughters, those neglected by their own parents and breastfeeding babies who had lost their parents were brought up either on partial or full-time basis by grandmothers who had reached menopause stage (Ocholla-Ayayo, 1976; Nyambedha *et al.*, 2003b). The partially responsible group of grandmothers (PTC) was used as comparative samples, despite their heterogeneity, since the PTC family units (with almost the same age group, educational attainment and operating in near 'traditional circumstances') to some extent had elements of traditional Luo three-generation families (e.g. grandparents, families of their married sons and children). The PTC thus represented the ideal comparison group (i.e. operating traditional contexts before the large scale advent of the AIDS scourge).

In the traditional and contemporary rurally based Luo societies, partial responsibility connote contexts slightly different from that of Euro-American ‘part-time’ or ‘half-time’ work schedules. Apart from disciplinary responsibilities that were not of their concern, the partially responsible grandmothers carried out many parenting responsibilities when surviving parents are incapable or occupied. For example mothers-in-law who had reached menopause could also “breastfeed” ailing daughters-in-laws’ children since it was assumed these elderly caregivers’ milk had stood the test of time (fed husbands of their daughters-in-law) and also because grandmothers were above many traditional rules and restrictions (Nyambedha *et al.*, 2003b).

Consequently obtained differences between the full-time responsible grandmothers (FTC) and partially responsible grandmothers (PTC) in our studies were assumed to be attributable to extensive caregiving roles and nature of adoption (whether on full-time or partial basis) and separation between children and their biological parents (whether permanent or temporary). Comparisons between the FTC and biological mothers as was done in papers III and IV were made necessary by the need to assess individual group variations between orphans and non-orphans, and also that of biological mothers in ‘normal circumstances’ to those grandmothers operating in a ‘unique’ situation of raising children a second time on a permanent basis.

### Sample selection

The basic sampling unit was the clan based, rural administrative divisions called ‘sub-locations’. Each sub-location consists of several clans (villages) made up of individuals belonging to the same lineages (Nyambedha *et al.*, 2003a). A simple random sampling technique was then used to select sub-locations and then primary schools to be focused on in our studies. Such a sampling strategy was made necessary by the general lack of reliable

population data in the rural areas. We carried out a fact-finding, open-ended interview with key informers living or operating in the vicinity of 16 primary schools found within the selected sub-locations in order to identify grandmothers raising orphans.

Those interviewed included teachers, religious leaders, local government agents, and non-governmental organizations dealing with children affected by HIV/AIDS related mortalities. Data obtained from these informers were then used to select a target of 30 full-time caregiving grandmothers (FTC) per school willing to participate in the study. For comparative purposes, biological mothers and partially responsible grandmothers (PTC) were also randomly selected from the first three adjacent homes to those of the FTC. They were expected to be living within the same rurally based patrilineal, extended family systems as the FTC.

## Procedure

After identifying our target population, we sought their verbal or written consent about their willingness to participate in the study. Data was collected on two occasions by the researcher and two other assistants who were well known to the participants. The initial session was used in locating, obtaining verbal consent, necessary demographic information and booking a future interview schedule. The demographic interview determined the age and relationship of children to that of caregivers, educational attainment, current marital status, perceived economic security, family sources of income and factor(s) responsible for these children's adoption.

The other research instruments were administered during the second visit. They were carried out in these fostering grandmother's own homes away from other family members. The participants were assured that information obtained will remain confidential and not to be

used for other unintended purposes. Targeted children were also followed to their respective primary schools where 20 class teachers also filled in adjustment scale to corroborate caregiver ratings.

## Instruments

### Parenting Stress Index-Short Form (PSI-SF)

Although the instrument was initially designed to evaluate stress experienced by biological parents, the Parenting Stress Index-Short form (PSI-SF; Abidin, 1990) has also been used on grandparent samples (e.g. Kelley, 1993; Musil, 1998). The PSI-SF used in studies I-IV, determines overall levels of caregiving stress and specific domains of stresses related to parental distress, child difficulty and parent-child dysfunctional interactions. The PSI-SF has items rated on a 5-point Likert scale ranging from '1' (strongly disagree) to '5' (strongly agree) assessing stress related to parental distress, child difficulty and parent-child dysfunctional interactions.

The parenting distress evaluates caregivers' perceptions self-esteem, sense of competence, and role restrictions. The child difficulty subscale appraises stress linked to behavioral and temperamental difficulty of the child. The parent-child dysfunctional interaction subscale focuses on stress related to negativity in caregiver-child bonds and the degree to which the child meets the expectations of the caregiver (Abidin, 1990). The total stress scores are arrived at by adding the three subscale scores but excluding defensive responding items as specified by the PSI-SF author. Twenty-five out of the 36 items ( $\alpha = .86$ ) of the PSI-SF was used to assess the overall levels of experienced stress. A range of 'normal stress scores' is reported to fall within the 15<sup>th</sup> to the 85<sup>th</sup> percentile (Abidin, 1990). Scores at or above the 85<sup>th</sup> percentile are considered to fall within clinical levels of stress (Abidin, 1983).

### *Emotional and Instrumental support*

The 5-point Perceived Support scale (Marshall & Barnettt, 1993) ranging from '1' (strongly disagree) to '5' (strongly agree) was used in studies I, and IV to assess available support from spouses, friends and relatives. Perceived availability of instrumental support from significant others in carrying out selected household chores and child rearing duties were determined by the 3-point Instrumental support scale (Cowan & Cowan, 1987). The scale ranged from '1' (I do it), '2' (spouse and I share it) to '3' (someone else does it).

*The obtained caregiver ratings were summed up and then used in computing two score dichotomies of participants with/without emotional or instrumental support. Scores above the median split of 47 (Mean = 45; SD = 5.4; Range = 16-50) in Support scale and 27 (Mean = 28; SD = 6.9; Range = 18-53) in the Instrumental support scale were assumed to be an indication of perceived availability of emotional and instrumental support. Continuous scores obtained by our participants in the two scales were also used in running linear regression analyses.*

### Overall Child adjustment

*In study III biological mothers, grandmother caregivers (alpha = .75) and teachers (alpha = .77) evaluated the adjustment of targeted children using Strengths and Difficulties Questionnaire (SDQ; Goodman (1997). The SDQ has 25 items divided into five sub-scales assessing hyperactivity, emotional*

*symptoms, conduct, peer and child prosocial behavior problems. The SDQ scale has a 3-point scale ranging from 'not true', 'somewhat true', to 'certainly true'. 'Somewhat true' is always scored as 1, while 'certainly true' = 2 and 'not true' = 0 in 20 out of 25 cases ('Not true' = 2 and 'certainly true' = 0 in the remaining 5 cases). The total subscale items ranges between 0 and 10. The range for the total SDQ scores, arrived at by summing all the subscale items with the exception of prosocial items, varies between 0-40.*

*For analysis purposes, the scale author recommends that the obtained total SDQ should be dichotomized into normal/borderline (0-16 for caregiver and 0-15 teacher ratings) and high/abnormal (over 17 and 16 for caregivers and teachers respectively). In our study, a multi-informed teacher and caregiver rated SDQ scale was generated by combining the two ratings. The scale author recommends that combining information from two raters increase the reliability of the SDQ (Goodman, 1997). Children with scores below the high/abnormal range (below a mean of 17 for the combined scores) were regarded to exhibit adjustment symptoms.*

### **Child adjustment problems**

*In study IV, children's negative emotionality and limited self regulation were assessed using items derived from the Manageability Index (Scarr & Ricciuti, 1987) and EAS: Temperamental scales (Buss & Plomin, 1984) scales. These two*

*domains were focused on as a measure of adjustment problems in study IV since evidence obtained from previous studies (e.g. Eisenberg & Fabes, 1992) suggested that they are the central predictors of children's problem behaviors and psychopathology. The raw scores obtained from the negative emotionality and child limited self-regulation were converted to Z-scores and then summed up to generate a standardized child adjustment scale ( $r = .65$ ).*

### Parental Discipline strategies

*Scarr, Pinkerton and Eisenberg (1994) Parental Discipline Interview (PDI) was used in studies II and IV to determine the discipline styles that caregiving grandmothers could use if a target child: (1) refuses to be dressed on a busy morning; (2) deliberately hits and causes injury to a playmate; (3) runs onto a busy road, falling and hurting self; (4) demands a bun while shopping together and (5) refuses to sleep quietly. These participants were asked to mention the discipline strategy they would use the first time the infraction occurred, a second time (the following day) and a third time (the following week). Parental responses to the PDI were written verbatim.*

*Scarr et al (1994) manual was then used to code the 18 PDI responses into designated categories. Two additional discipline categories (i.e. supernatural intercession and denial of food) that could not be coded using the original manual were also used.*



## METHODOLOGICAL ISSUES

*Several methodological limitations should be considered especially in regard to strategies used in data collection. For example we relied heavily on self-reports and cross-sectional data. There was a possibility that shared method variance could have been introduced. This connotes that causality between the assessed variables could not be implied. Furthermore, study I dealt mainly with negative costs of caregiving without assessing the benefits that grandmothers attain when they adopt their grandchildren. This was in disregard to the results from earlier studies(e.g. Pruchno & McKenney, 2002) reporting that grandmother assumption of caregiving roles could have both negative and positive valence.*

*Except for study III and IV where comparative samples were included, the participants were mainly grandmothers in a uniquely difficult child-rearing situation. None of the studies incorporated children's perspectives in understanding the implications of current living arrangements on their own adjustment. Without comparative samples or independent confirmatory measures (e.g. for experienced stress) to confirm or disapprove the answers provided, social desirability could have affected some of the obtained data. Children's perspectives or reports from biological mothers and caregiving roles of fathers and grandfathers that could have provided information on alternative disciplinary strategies were also not part of the attributes assessed in study II. Study II also relied heavily on hypothetical, vignette based form of assessments.*

*Quantification of risks into a composite factor as was done in study IV (on the basis of available Euro-American literature or arbitrary median splits) could also have introduced context or selection bias. Child risks unique to the Kenyan context could have been inadvertently excluded.*

### Reliability and Validity issues

Research requires that instruments used must elicit relevant data, be reliable, valid, and appropriate to the specific sample. This suggests that factors that influence respondents' views and interpretation of underlying concepts being tested (i.e. language of item presentation, cultural variability, ethnicity, gender, and age) also interfere with reliability and appropriateness of any given research instrument (Ferketich, Philips & Verran, 1993). In our studies, the need to adapt relevant research instruments was made necessary by a general lack of measures specifically developed for grandmother population.

With the exception of the economic security scale utilized in study IV to assess economic impoverishment, all the other instruments were also not specifically developed for use among Kenyan participants. This hindrance was not unique to our situation. Some of the previous studies on the elderly also reported that instruments specifically developed and tested among grandparent caregivers are still lacking. Most of the instruments were developed and are intended for use on US biological parents (Trockman *et al.*, 1997). Systematic approaches to adapting instruments developed for use in other cultures (Flaherty *et al.*, 1988) were employed in order to address issues pertaining to reliability, validity and appropriateness of the measures utilized in the four studies. Instrumentation issues considered in our studies included content, semantic, technical, criterion and theoretical equivalences.

*a) Content and semantic equivalence*

*Content equivalence requires that the content of the items should have their equivalence in the culture of those studied. Semantic equivalence requires that the intent of each item must remain the same irrespective of language variability (Troickman et al., 1997). Questionnaire items were translated into Dholuo (ethnic language of Luo speaking group) since this was expected to be the dominant language of the participants. The major criterion used in selecting the translators was that they had to be well versed in both Dholuo and English. Two groups (each consisting of 2 members possessing undergraduate education) were recruited for the translation job. Group 1 was based at Oyugis town where the author also resided. The other group operated in Nairobi about 400km away.*

Before involving the two groups in the actual translations, the author specified to them what was expected of them. For example they were to note places in the research instrument that did not translate well, or were inappropriate for different age groups or culturally insensitive. Words that elicited several meanings in particular contexts were also to be identified. Group members were also expected to make suggestions for improvements of 'defective' instruments without necessarily losing item meaning. In cases where discrepancies were identified, and alterations in the wordings of the translated versions were deemed necessary, they were required to possibly indicate reasons for doing so. The other requirement was that

the group members were to make changes in the demographic information form to reflect locally meaningful contexts.

*Why the two different groups living apart were used*

The two groups were used in the initial translations so as to identify as many discrepancies in item wordings as was possible. It was the assumption of the author, that different translators working on the same instrument but operating apart from each other could best identify unclear wordings or variations in meanings of individual items. The author together with the two different groups, then reviewed the identified discrepancies, discussed these with others not involved in the actual translations and then made appropriate modifications. Care was taken not to unduly interfere with the intended original meanings (in the English version).

b). Technical equivalence

Technical equivalence means that the methods of data collection, procedures used and data analytic strategies should be comparable across cultures. In prior studies (e.g. Bowers & Myers, 1999), the instruments were administered through written and interview format. All the interviews in the present study were orally presented due to high illiteracy rates. The responses (e.g. on discipline strategies in study II) were written verbatim since most participants were uneasy when their responses were being recorded during an initial pilot study.

c) Criterion equivalence

*Criterion equivalence requires that that appropriate research norms and established criteria should remain the same across cultures. Pilot studies were carried out in order to assess the sensitivity and appropriateness of these*

*instruments to the Kenyan rural areas where the studies were carried out. Subjecting the instruments to reliability assessments and factor analyses tested sensitivity of these test items. The retention criteria adopted was that to increase overall reliability, items with low corrected item total correlations (less than .30) were deleted. Confirmatory factor analyses were also carried out to determine whether the selected items comprised similar factors.*

Some of these instruments have also been used across varied cultures and also on grandmothers. For example, the PSI has been used on biological and caregiving grandmothers living in culturally varied contexts (e.g. Musil, 1998). The validity and reliability of the SDQ, judged through the scale's ability to discriminate between high and low risk children, has been established across cultures ranging from United Kingdom, Sweden, Germany, and Bangladesh (see Goodman, Meltzer & Bailey, 2003; Goodman, Simmons, Gatward & Meltzer, 2003). The PDI has been used in Sweden, US, and Bermuda (e.g. Deater-Deckard & Scarr, 1996; Jutengren & Palméus, 2002; Palméus, 1999).

However, the author was not aware of empirical studies that had used the PDI to assess the disciplinary strategies of Kenyan participants or that of grandmothers.

To supplement the self-report data and also to determine the variance between these hypothetical grandmother responses to the PDI, additional interview questions were also presented to the participants (see Oburu & Palméus, 2002). These additional questions required them to state the discipline methods they had used against child transgressions since adopting them. Caregiver responses were coded using Scarr *et al.*, (1994) manual. A chi-square test of variability was then used to compare the frequency distributions of two

frequently mentioned strategies of power assertion (i.e. physical punishment and restraint, 38% in the PDI and 34% in additional interview) and Reasoning (6% PDI and 17% additional interview;  $X^2 = 4.56$ ;  $df = 1$ ;  $p < .05$ ).

*d). Theoretical or conceptual equivalence*

Theoretical or conceptual equivalence requires that the same constructs be measured in both cultures. The underlying assumption of conceptual equivalence is that theoretically predicted relationships obtained by the instruments should comply with published research and known theories (Trockman *et al.*, 1997). Deviations from expected relationships are assumed to be an indication of variability in constructs being assessed. In our studies, the expected positive correlation between Child difficulty sub-scale of PSI-SF (Abidin, 1990) with similar scales (i.e. total SDQ and child manageability; Scarr & Ricciuti, 1987) was confirmed.

*The total stress experienced and child adjustment problems were however negatively correlated suggesting novel findings or general lack of theoretical equivalence in the instruments used. Some of the previous studies that have adapted instruments for use across cultures (e.g. Trockman et al., 1997) noted that achieving conceptual equivalence across cultures requires rigor that may sometimes be difficult to achieve due to socio-cultural differences between the samples assessed and US or biological parent populations that the instruments were initially meant for.*

## Data Analyses

Descriptive statistics (i.e. means, standard deviations and percentiles), exploratory ANOVA analyses were used to assess for group variances in continuous variables. Chi-square tests were conducted where the data involved was nominal. Bivariate relationships between the dependent and independent variables were tested using Pearson's correlations. Predictors found to be related to the dependent variables were entered into multiple regression equation models to test the hypothesized mediating and moderating effects. A series of Analysis of Covariance (ANCOVAs) were also used to test for interaction effects where more than one outcome variables was involved.

## RESULTS

### *Study I*

The full time caregiving grandmothers (FTC) reported significantly higher levels of emotional support, child behavioural difficulty and higher levels of stress than did the partially responsible caregivers (PTC). The differences between these two groups in their perceived

availability of instrumental support were not statistically significant. About 20% of the total stress experienced by the primarily responsible grandmothers was mainly related to their perception of grandchildren's behavioural difficulty. For the partially responsible grandmother caregivers, experienced stress was negatively related to instrumental assistance and positively to emotional support. These significant variables accounted for 47% of the variance of the total stress experienced. Caregivers who lacked instrumental support reportedly perceived them to be behaviourally difficult to manage.

### *Study II*

Descriptive analyses indicated widespread employment of power assertive and coercive forms of discipline. There was limited use of the characteristic grandmother indulgent or inductive strategies. The results also indicated a higher prevalence of the assertive and behavior modification strategies among participants over the mean age of 62 years, respondents having basic education (1-12yrs), and those dealing with transgressions of children aged six years and above. Younger grandmothers or caregivers of children aged less than six years mainly used coercive verbal forms of control. Inductive strategies were favored by younger respondents, persons lacking formal education or those dealing with children of both genders, aged below 6 years. The results of the bivariate correlations, ANOVA tests and regression models run separately for the two groups suggested that the antecedents of power assertive strategies among the full-time group was mainly linked to caregiving stress. For the partially responsible group employment of the power assertive strategies was linked to child age (but not the gender) of children adopted and total stress experienced.

### *Study III*

Majority of grandmothers experienced elevated levels of caregiving stress than did the biological mothers. Experienced stress was linked to advanced age and extensive caregiving roles now occupied by adoptive grandmothers. A significant negative correlation was



obtained between child adjustment and experienced stress such that orphans raised by grandmothers experiencing elevated levels of stress, reportedly displayed adaptive symptoms. Most of them compared favorably to children living with biological parents in their socio-emotional adjustment.

#### *Study IV*

The results indicated that while orphaned children were exposed several risks that could potentially increase their maladjustment vulnerability, there was lack of evidence in our study to suggest they were less adjusted especially when compared to the non-orphans. Significant associations were obtained between optimal child adjustments, perceived self-competency in caretaking roles, availability of instrumental support and supportive child-caregiver relations. Orphaned children's vulnerability towards developing adjustment problems increased when they had dysfunctional relations with caregivers who lacked instrumental support. Non-orphaned children whose caregivers had low confidence in their parenting roles or lacked instrumental support were also at risk of becoming maladjusted. Caregivers limited use of restrictive practices and employment of physical punishment, especially when used within the context supportive caregiver-child relationships, appeared to moderate the links between risk factors and child adjustment problems.

## **DISCUSSION**

### **Study I**

In the first study, the predicted relationship between extensive caregiving roles and experienced stress was partly confirmed. Our findings that primarily responsible grandmothers experienced elevated levels of stress than did the less responsible group thus did not deviate from our expectations. However, it was worth noting that a large number of

the less responsible group of grandmothers were also experiencing elevated levels of stress probably due to limited instrumental support from their grandchildren's parents. The obtained higher levels of experienced stress among the full-time adoptive grandmothers are in line with some of the previous studies (e.g. Kelley, 1993; McCubbin & Petterson, 1982) that also linked the complicated caregiving adjustments and time-disordered nature of the new role restrictions to a rise in experienced stress.

The obtained negative links between availability of instrumental support and elevated levels of stress was in line with some of the previous studies (e.g. Crnic & Greenberg, 1990) that indicated that availability of instrumental support especially from significant others moderated caregiving difficulties and experienced stress. The negative correlations obtained from our findings suggested that caregivers high on support were also likely to be low on stress. The positive correlations between caregiver perception of child behavioral manageability and elevated levels of stress was in line with other studies (e.g. Pruchno & McKenney, 2002) that suggested that there was a possibility that experienced stress was linked to caregiver perception of child minding duties and behavioral difficulties.

### *Study II*

The important findings that emerged from the second study were that employment of power assertive strategies was related to caregiver-experienced stress, their age and that of the targeted children. The hypothesized positive links between elevated levels of stress and the assertive power assertive strategies was thus corroborated. We suggested that the limited use of the characteristic indulgent and low power disciplinary strategies (Nyambedha *et al.*, 2003b) and widespread employment of power assertive strategies among the highly stressed or older participants was linked to the child minding difficulties that older and highly stressed

caregivers were now experiencing. This was probably associated to the role restrictions that occurred when they took over primary caregiving responsibilities (Wagner *et al.*, 1985). Previous studies (e.g. Belsky, 1984) indicated that parental propensity to employ easily instituted power assertive strategies substantially increased with a rise in experienced stress, restrictive responsibilities and perceived child behavioral difficulty.

On the basis of results obtained from previous sub-Saharan discipline studies (e.g. Last, 2000; Whiting & Whiting, 1975) we proposed that these participants' widespread employment of power assertive strategies especially by those possessing basic education or when dealing with children older than six years was linked to wider acceptability and instrumental function of corporal punishment to aid learning and define age-based status. Last (2000) noted that in societies with well-structured age based pyramids, adults were more punitive to older children on the assumption that older children had the capacity to understand reasons behind parental actions. The author also noted that the unfounded belief that corporal punishment aided learning was an underlying factor behind its widespread use among those possessing basic primary school education.

#### *Studies III and IV*

In contrast to previous studies (e.g. Dunn *et al.*, 1998), and the anticipation that orphans or children of highly stressed caregivers were to be rated as maladapted, our findings did not confirm the envisaged positive links between child maladjustment, orphan status, and elevated levels of caregiving stress. Majority of the highly stressed full-time adoptive grandmothers considered their orphaned grandchildren as displaying adaptive symptoms. As expected, experienced stress was positively linked to caregiving load and non-normative caregiving roles.

Child adjustment was also positively linked to supportive caregiver-child relations, self-appraisals of role competence and availability of instrumental support from significant others. The reported positive adjustment of many orphans raised by primarily responsible grandmothers could also have been linked to other factors not directly assessed in the reported studies. For example secure bases that caregiving grandmothers were likely to provide to their grandchildren (Bowlby, 1969/1981), child resiliency, and genetic dispositions could have been behind the perceived adjustment of the orphans (Harris, 1998). In addition, the reported adjustment of orphans despite the constellation of risk factors could also have been linked to support those siblings residing in familiar homesteads initially consisting of three-generation families before the deaths of biological parents were likely to provide to each other. Attachment literature (e.g. Pinderhughes, 1998; Poehlmann, 2003) and previous sub-Saharan studies (e.g. Barnett & Blaikie, 1992) suggested that it is the dislocation of children from familiar to different environments that complicate their adjustment potentialities.

Some of the earlier Kenyan impact studies on the changing patterns of orphan care (e.g. Nyambedha *et al.*, 2003a; 2003b) have also suggested that adjustment competency of orphans at risk and that of caregiving grandmothers substantially increase with constant exposures to difficult circumstances. The passage of time since adoption and resiliency developed due constant exposure to difficult child minding duties was reported to buffer children from death linked difficult circumstances (Nyambedha *et al.*, 2003a; 2003b). Our suggestion was that since we did not assess the time that had elapsed since parental deaths and resiliency generating factors among children in our study, the unanticipated negative correlation between caregiving stress and the obtained relative adjustment of orphans in the custody of primarily responsible grandmothers could have been similarly linked to these factors not directly assessed in our studies.

## ***CONCLUSIONS AND RECOMMENDATIONS***

Despite the challenges of carrying out research among Kenyan grandmothers living within a rural setting (i.e. problems of recruiting random samples due to lack of reliable population data, instrumentation issues described above and absence of comparative studies), this thesis' main strength was on its focus on an understudied Kenyan population. It also made significant contributions in understanding family processes in the two generational grandmother headed households using well-articulated and empirically tested theories (e.g. attachment theory and related literature; Poehlmann, 2003). However, while the attachment theory has guided previous research on at risk children raised by their own biological parents (see Greenberg, 1999 for a review), limited efforts have been made to place the adaptive and maladaptive adjustment patterns of children raised by grandmothers into a theoretical framework (Poehlmann, 2003; Bowers & Myers, 1999).

From the literature that was reviewed, no studies were found that had used the attachment theory and related literature to explain explain how disruptions in life courses could influence the adjustment of children raised by Kenyan caregiving grandmothers. In the four studies presented in this thesis, where applicable, efforts were made to tap grandmothers and grandchildren's life situations from different angles using several models, ideas, ideas and instruments from related Sub-Saharan Africa, US and European studies. The instruments chosen were however adapted to yield ecologically valid measures. The obtained results were also analyzed using a cross-cultural perspective to avoid falling into the trap of using previous results obtained from predominantly US or European studies as '*golden standards*' or disregarding unexpected and inconsistent results.

The conclusion drawn from the four studies was that experienced stress was associated to the difficult and heavier loads related to child managerial difficulty, lack of beneficial emotional support, limited instrumental support and the extensive new adoptive responsibilities now occupied by adoptive grandmothers. Caregiver propensity to employ power assertive strategies was also partly linked to stressful circumstances emanating from unanticipated responsibilities and also to factors not directly related to the new adoptive roles (i.e. caregiver and child ages and instrumental functions of corporal punishment). There was also limited evidence from our findings linking experienced stress to child maladjustment.

Our recommendations were that adoption of orphaned children could still be carried out within the familiar grandparent headed households if capacity building programs and instrumental support were extended to these caretakers. This would in the long run make fostering grandmothers to be able to overcome economic handicaps that predispose them to experience elevated levels of stress, employ power assertive strategies and their grandchildren to be at risk of developing maladaptive symptoms.

We suggested that future studies should examine the following areas that were not the focus of the present investigations: (1) links between basic primary educational attainment and employment of power assertive strategies among diverse samples (i.e. both biological and adoptive caregivers); (2) positive affect (i.e. caregiving satisfaction) and child adjustment; (3) adjustment resiliency among highly stressed grandmothers and children exposed to psychosocial and structural risk factors.

## ***REFERENCES***

Abidin, R. (1983). *The Parenting stress index short form manual*. Paediatric Psychology Press: Charlottesville, VA.

- Abidin, R. (1990). *Parenting Stress Index*. Charlottesville, VA: Pediatric Psychology Press.
- Antonucci, T.C., & Akiyama, H. (1987). An examination of sex differences in social support among older men and women. *Sex Roles, 17*, 737-749.
- Barnett, T., & Blaikie, P. (1992). *AIDS in Africa: Its Present and Future Impact*. London: Belhaven Press.
- Barrera, M. (1981). Social support's role in the adjustment of pregnant adolescents: assessment issues and findings. In B.H. Gottlieb (Ed.), *Social networks and social support in community mental health*. Beverly Hills, CA: Sage publications.
- Belsky, J. (1984). The determinants of parenting: A process model. *Child Development, 55*, 83-96.
- Belsky, J., Robins, E., & Gamble, W. (1984). The determinants of parental competence: Towards a contextual theory. In M. Lewis (Ed.), *Beyond the dyad* (pp.251-279). New York: Plenum.
- Belsky, J., Rovine, M., & Taylor, D.G. (1984). The Pennsylvania Infant and Family Development Project III: The origins of individual differences in infant-mother attachment: Maternal and infant contributions. *Child Development, 55*, 718-728.
- Bicego, G., Rutstein, S., & Johnson, K. (2003). Dimensions of the emerging orphan crisis in sub-Saharan Africa, *Social Science & Medicine, 56*(6), 1235-1247
- Bledsoe, C. (1988). The cultural meaning of AIDS and condoms for stable heterosexual relations in Africa: Recent evidence from the local print media. *Paper presented at the IUSSP seminar on Population policy in sub-Saharan Africa*. Drawings on International Experience, Kinshasa, 27 February–2 March.
- Bohlin, G., Hagekull, B., & Rydell, A.M. (2000). Attachment and social functioning: A longitudinal study from infancy to middle childhood. *Social Development, 9*, 24-39.

- Booth, C.L., Rose-Krasnor, L., & Rubin, K.H. (1991). Relating pre-schoolers' social competence and their mothers' parenting behaviors to early attachment, security and high-risk status. *Journal of Social and Personal Relationships*, 8, 363-382.
- Bowers, B.F., & Myers, B.J. (1999). Grandmothers providing care for grandchildren: Consequences of various levels of caregiving. *Family Relations*, 48, 303-311.
- Bowlby, J. (1969/1982). *Attachment and loss: Volume 1. Attachment*. New York: Basic Books.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. New York: Basic Books.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22, 723-742.
- Bronfenbrenner, U. (1992). Ecological systems theory. In R. Vasta, (Ed.), *Six theories of child development: Revised formulations and current issues* (pp. 187-249). Bristol, PA: Jessica Kingsley Publishers.
- Brouard, A., & Joslin, D. (1991). Grandparents as parents of last resort: A survey of three departments of health clinics. New York: New York City Departments of Health and Aging.
- Burton, L.M. (1992). Black grandparents rearing children of drug-addicted parents: Stressors, outcomes, and social service needs. *The Gerontologist*, 32, 744-751.
- Burton, L.M., & DeVries, C. (1992). Challenges and rewards: African American grandparents as surrogate parents. *Generations*, 16, 51-54.
- Buss, A.H., & Plomin, H. (1984). Temperament: The early developing personality. *Psychological Review*, 90, 105-126.
- Catell, M.G. (1993). Caring for the elderly in sub-Saharan Africa. *Ageing International*, 20(2), 13-19.



Central Bureau of Statistics (1999), *1999 Census Report*. Government printers: Republic of Kenya.

Cherlin, A.J., & Fustenberg, Jr., F.F. (1986). *The new American grandparent: A place in the family, a life apart*. New York: Basic.

Colleta, N. (1979). Support Systems after divorce: Incidence and Impact. *Journal of Marriage and the Family*, *41*, 837-846.

Cowan, C.P. & Cowan, P.A. (1987). A preventive intervention for couples becoming parents. In Boukydis, C.F.Z. (Ed.) *Research on support for parents and infants in postnatal period*. Ablex. (pp. 225-251).

Crittenden, P.M. (1996). Research on maltreating families: Implications for intervention. In J. Briere & L. Berliner (Eds.) *The APSAC handbook on child maltreatment* (pp. 158-174). Thousand Oaks, CA: Sage.

Crnic, K.A., & Greenberg, M.T. (1990). Minor parenting stress with young children. *Child Development*, *61*, 1628-1637.

Deater-Deckard, K. & Scarr, S. (1996). Parenting stress among dual-earner mothers and fathers: Are there gender differences? *Journal of Family Psychology*, *10*(1), 45-59.

Desfoss'es, E., & Bouchard,C. (1987 April). *Using Coercive behaviours with children; Stresses, conflictual relationships and lack of support in the life of mothers*. Paper presented at the Biennial Convention of the Society for Research in Child Development, Baltimore.

Dubowitz, H., Feigelman,S., Harrington, D., Starr, R., Zuravin, S., & Sawyer, R. (1994). Children in kinship care: How do they fare? *Children and Youth Services Review*, *16*, 85-106.

Dunn, J., Deater-Deckard, K., Pickering, K., O'Connor, T.G., & Golding, J. (1998). Children adjustment and prosocial behavior in step-, single-parent, and non-step family settings: Findings from community study. *Journal of Child Psychology and Psychiatry*, *39*, 1083-1095.

- Eisenberg, N., & Fabes, R.A. (1992). Emotion, regulation and the development of social competence. In M.S. Clark (Ed.), *Emotion and Social Behaviour*, (Vol. 14, pp. 119-150). Newbury Park, CA: Sage.
- Emick, M.A., & Hayslip, B. (1996). Custodial grandparenting: New roles for middle-aged and older adults. *International Journal of Aging and Human Development*, 43, 135-154.
- Ferketich, S., Philips, L. & Verran, J. (1993). Focus on psychometrics, development and administration of a survey instrument for cross-cultural research. *Research in Nursing & Health*, 16, 227-230.
- Flaherty, J.A., Gaviria, F.M., Pathak, D., Mitchell, T., Wintrob, R., Richman, J.A. & Birz, S. (1988). Developing instruments for cross-cultural psychiatric research. *Journal of Nervous and Mental Disease*, 176, 257-263.
- Forehand, R., Pelton, J., Chance, M., Armistead, L., Morse, E., Morse, P.S. & Stock, M. (1999). Orphans of the AIDS epidemic in the United States: transition-related characteristics and psychosocial adjustment at 6 months after mother's death. *Aids Care*, 11(6), 715-722.
- Foster, G., Makuta, C., Drew, R., Mashumba, S. & Kambeu, S. (1997). Perceptions of children and community members concerning circumstances of orphans in rural Zimbabwe. *Aids Care*, 9, 391-405.
- Forsythe, S., & Rau, B. (Eds.) (1996). *AIDS in Kenya: Socio-economic impact and policy implications*. Arlington: Family Health International/AIDSCAP.
- Fuller-Thomson, E., Minkler, M., & Driver, D. (1997). A profile of grandparents raising grandchildren in the United States. *Gerontologist*, 27, 406-411.
- Gatz, M., Bengtson, V.L., & Blum, M.J. (1990). Caregiving families. In J.E. Birren & K.W. Schaie (Eds.). *Handbook of the psychology of aging* (3<sup>rd</sup> ed., pp.404-426). San Diego, CA: Academic Press.
- Gelles, R.J., & Cornell, C.P. (1985). *Intimate violence in families*. Beverly Hills, CA: Sage.

Goodman, R., (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, 38, 581–586.

Goodman, R., Meltzer, H., & Bailey, V. (2003). The Strengths and Difficulties Questionnaire: a pilot study of the validity of the self-report version. *International Review of Psychiatry*, 15, 173-177.

Goodman, R., Simmons, H., Gatward, R., & Meltzer, H. (2003). Using the Strengths and Difficulties Questionnaire to screen psychiatric disorders in a community sample. *International Review of Psychiatry*, 15, 166-172.

Greenberg, M.T. (1999). Attachment and psychopathology in childhood. In J. Cassidy & P.R. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical applications* (pp. 469-496). New York: Guilford.

Greenberg, M., Siegel, J., Leitch, C. (1983). The nature and importance of attachment relationships to parents and peers during adolescence. *Journal of Youth and Adolescence*, 12, 373-386.

Grigorenko, E.L., Geissler, P.W., Prince, R., Okatcha, F., Nokes, C., Kenny, D.A., Bundy, D.A., & Sternberg, R.J. (2001). The organisation of Luo conceptions of intelligence: A study of implicit theories in a Kenyan village. *International Journal of Behavioural Development*, 25 (4), 367-378.

Hareven, T.K. (1994). Aging and generational relations: A historical and life course perspective. *Annual Review of Sociology*, 20, 437-461.

Harris, J.R. (1998). *The nurture assumption: Why children turn out the way they do*. New York: Free Press.

- Harrison, K.A., Richman, G.S., & Vittimberga, G.L. (2001). Parental stress in grand parents versus parents raising children with behavior problems. *Journal of Family Issues*, 21(2), 262-270.
- Hayslip, B., Shore, R.J., Henderson, C.E., & Lambert, P.L. (1998). Custodial grandparenting and the impact of grandchildren with problems on role satisfaction and role meaning. *Journal of Gerontology: Social Sciences*, 53B, 164-173.
- Heywood, E.M. (1999). Custodial grandparents and their grandchildren. *The Family Journal and Therapy for Couples and Families*, 7(4), 367-372.
- Howe, D. (1995). Adoption and attachment. *Adoption & Fostering*, 19, 7-15.
- Howes, C. (1999). Attachment relationships in the context of multiple caregivers. In J. Cassidy & P.R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 671-687). New York: Guilford.
- Human Rights Watch (2001). *Kenya in the shadow of death: HIV/AIDS and Children's Rights in Kenya*, June (Vol. 13, No. 4a). New York: Author
- Hunter, S., (1990). Orphans as a window on the AIDS epidemic in sub-Saharan Africa: Initial results and implications of a study in Uganda. *Social Science & Medicine*, 31(6), pp. 681-690.
- Håkanson, N.H. & LeVine, R.A. (1997). Gender and life-course strategies among the Gusii. In T.S. Weisner, C. Bradley, P.L. Kilbride (Eds.), *African families and the crisis of social change* (pp.253-267). Bergin & Garvey: London.
- Jendrek, M.P. (1994). Grandparents who parent their grandchildren: Circumstances and decisions. *The Gerontologist*, 34, 206-216.
- Jones, M.R. (1992). *Intergenerational conflict and adjustment of children reared by their grandparents*. Unpublished dissertation, University of California at San Diego, La Jolla, CA.

Jones, M.R. (1996). Adjustment of children reared by grandparents. Poster session presented at the annual meeting of the American Psychological Association, Division of Child, Youth and Family Services, Toronto, Canada, August 12.

Jones, M.R. & Hansen, B. A. (1996). Caregiving behaviors which predict adjustment of children raised by grandparents. Paper presented at the 104<sup>th</sup> Annual Meeting of the American Psychological Association, Division of Child, Youth and Family Services, Toronto, Canada, August 12.

Jutengren, G., & Palmérus, K. (2002). A comparison of Swedish and US fathers' self-reported use of parental discipline. *Children & Society, 16*, 246-259.

Kelley, S.J. (1993). Caregiver stress in grandparents raising grandchildren. *Image: Journal of Nursing Scholarship, 25*, 331-337.

Kelley, S.J., & Damato, E.G. (1995). Grandparents as primary caregivers. *MCN: The American Journal of Maternal Child Nursing, 20*, 326-332.

Kilbride, P. L. (1985). Cultural persistence and socio-economic change among the Abaluyia: Some modern problems in patterns of childcare. *Seminar Paper No. 170*, Institute of African Studies, University of Nairobi.

Klebanov, P., Brooks-Gunn, J., & Duncan, G. (1994). Does neighborhood and family poverty affect mothers' parenting, mental health, and social support? *Journal of Marriage and the Family, 56*, 441-455.

Last, M. (2000). Children and the experience of violence: contrasting cultures of punishment in Northern Nigeria. *Africa, 70* (3), 359-393.

Marshall, N.L., & Barnettt, R.C. (1993). Work-family strains and gains among two-earner couples. *Journal of Community Psychology, 21* (81), 64-78.

- Makoni, S. & Ferreira, M. (2002). Old age and close relationships in Africa: Snapshots and emergent perspectives. In J.G. Miller & X. Chen (Eds.), *Aging and close relationships. International Society for the Study of Behavioral Development Newsletter, 1(41)*, 11-14.
- McCubbin, H.I., & Patterson, J.M. (1982). Family adaptation to crises. In H.I. McCubbin, A.E. Cauble, & J.M. Patterson (Eds.), *Family stress, coping and social support*. Springfield, IL: Thomas.
- Mboya, P. (1965). *Luo customs and beliefs*. Kendu Bay: African Herald Publishing House.
- Milner, J.S. (1993). Social information processing and physical child abuse. *Clinical Psychology Review, 13*, 275-294.
- Minkler, M., & Fuller-Thomson, E. (2001). Physical and mental health status of American grandparents providing extensive child care to their grandchildren. *Journal of American Women's Medical Association, 56(4)*, 199-205.
- Minkler, M., Roe, K.M., & Price, M. (1992). The physical and emotional health of grandmothers raising grandchildren of crack cocaine epidemic. *The Gerontologist, 32*, 752-761.
- Minkler, M., & Roe, K.M. (1993). *Grandmothers as caregivers: Raising children of the crack cocaine epidemic*. Newbury Park, CA: Sage.
- Minuchin, P. (2002). Cross-cultural perspectives: Implications for attachment and family therapy. *Family Process, 41 (3)*, 546-551.
- Moen, P., Robinson, J., & Dempster-McClain, D. (1995). Caregiving and women's well-being: A life course approach. *Journal of Health and Social Behavior, 36*, 259-273.
- Mukwaya, J. (1999). The AIDS Emergency. *The Progress of Nations*: New York: UNICEF.
- Musil, C.M. (1998). Health, stress, coping and social support in grandmother caregivers. *Health Care for Women International, 19*, 441-455.

- Myers, B.J., Jarvis, P.A., & Creasey, G.L. (1987). Infants' behavior with their mothers and grandmothers. *Infant Behavior and Development*, 10, 245-259.
- Neugarten, B.L., & Hagestad, G.O. (1976). Age and life course. In R.H. Binstock & E. Shanas (Eds.), *Handbook of Aging and Social sciences* (pp. 35-57). New York: Van Nostrand.
- Ntozi, J.P. (1997). Effect of AIDS on children: The problem of orphans in Uganda. *Health Transitions Review*, 7, 23-40.
- Ntozi, J.P.M., Ahimbishwe, F.E., Odwee, J.O., Ayiga, N. & Okurnut, F.N. (1999). Orphan care: the role of the extended family in Northern Uganda. *Health Transition Review*, 8, 225–236.
- Nyambedha, E.O., Wandibba, S., & Aagaard-Hansen, J. (2001). Policy implications of the inadequate systems for orphans in Western Kenya. *Health Policy*, 58, 83-96.
- Nyambedha, E.O., Wandibba, S., & Aagaard-Hansen, J. (2003a). Changing patterns of orphan care due to HIV epidemic in Western Kenya. *Social Science and Medicine*, 57(2), 301-311.
- Nyambedha, E. O., Wandibba, S., & Aagaard-Hansen, J. (2003b). Retirement lost—The new role of the elderly as caretakers for orphans in western Kenya. *Journal of Cross-Cultural Gerontology*, 18, 33-52.
- Oburu, P.O., & Palmérus, K. (2002). Self-reported discipline strategies of Kenyan grandmothers taking care of their orphaned grandchildren. Manuscript under review.
- Ocholla-Ayayo, A.B.C. (1976). *Traditional ideology and ethics among the Southern Luo*. Uppsala, Sweden: Scandinavian Institute of African Studies.
- Ocholla-Ayayo, A.B.C. (1997). The African family between tradition and modernity. In A. Adepoju (Ed.), *Family, Population, & Development*. London & New York: Zed Books Ltd.
- Palmérus, K. (1999). Self reported discipline among Swedish parents of preschool children. *Infant and Child Development*, 8, 155-171.

- Perlin, L.I., Turner, H., & Semple, S. (1989). Coping and mediation of caregiver stress. In E. Light & B.D. Lebowitz (Eds.), *Alzheimer's disease treatment and family stress: Directions for research*. Washington, DC: National Institute of Mental Health (DHHS Publication No. ADM 89-1569).
- Petterson, S.M., & Albers, A.B. (2001). Effects of poverty and maternal depression on early childhood development. *Child Development*, 72(6), 1794-1813.
- Pinderhughes, E.E. (1998). Short-term placement outcomes for children adopted after age five. *Children and Youth Services Review*, 20(3), 223-249.
- Poe, L.M. (1998). Connecting the bridges: Grandparenting grandchildren. *Parenthood in America*. Berkeley, CA: University of Wisconsin Madison.
- Poehlmann, J. (2003). An attachment perspective on grandparents raising their very young grandchildren: Implications for intervention and research. *Infant Mental Health Journal*, 24(2), 149-173.
- Poehlmann, J., & Kinderman, R. (April, 2001). Disrupted relationships in children of incarcerated mothers. Presented at the biennial convention of the Society for Research in Child Development in Minneapolis, MN.
- Pratt, C.C., Schmall, V.L., & Cleland, M. (1985). Burden and coping strategies to Alzheimer's patients. *Family Relations*, 34, 27-33.
- Pruchno, R.A., & McKenney, D. (2002). Psychological well-being of black and white grandmothers raising grandchildren: Examination of a two factor model. *Journal of Gerontology: Psychological Sciences*, 57B (5), 444-452.
- Rodgers, A.Y. (1998). Multiple sources of stress and parenting behaviour. *Children and Youth Services Review*, 20, 525-546.



- Rodgers, A.Y. (1999). Parenting stress, depression, and parenting in grandmothers raising their grandchildren. *Children and Youth Services Review, 21*(5), 377-388.
- Roe, K.M., & Minkler, M. (1999). Grandparents raising grandchildren: Challenges and responses. *Generations, 22* (4), 25-34
- Rubin, K.H., Mills, R.S.L., & Rose-Krasnor, L. (1989). Maternal beliefs and children's social competence. In B.Schneider, G.Attili, J. Nadel-Brulfert, & R. Weisberg (Eds.), *Social Competence in Developmental Perspectives* (pp.313-331). Amsterdam: Kluwer.
- Sameroff, A.J., & Fiese, B.H. (2000). Models of development and developmental risk. In C.H. Zeanah (Ed.), *Handbook of infant mental health* (2nd ed., pp. 3-19). New York: The Guilford Press.
- Saoke, P., & Mutemi, R. (1996). *Needs assessment of children orphaned by AIDS*: Nairobi: UNICEF Country Office.
- Scarr, S., Pinkerton, R., & Eisenberg, M. (1994). *The Parental Discipline Interview Manual*. Charlottesville, VA: University of Virginia.
- Scarr, S., & Ricciuti, A. (1987). *The Manageability Scale*. University of Virginia.
- Thomas, J.L. (1986). Gender differences in satisfaction with grandparenting. *Psychology and Aging, 1*, 215-219.
- Stovall, K.C., & Dozier, M. (1998). Infants in foster care: An attachment theory perspective. *Adoption Quarterly, 2*, 55-85.
- Trockman, C.T., Murdaugh, C., Kadohiro, J.K., Petrovitch, H., Curb, J.D. & White, L. (1997). Adapting instruments for caregiver research in elderly Japanese American women. *Journal of Cross-Cultural Gerontology, 12*, 109-120.
- Spieker, S.J., & Booth, C.L. (1988). Maternal antecedents of attachment quality. In J. Belsky & T. Nezworsky (Eds.), *Clinical Implications of Attachment* (pp.95-135).

UNAIDS / UNICEF (2002). *Children on the Brink: A Joint Report on Orphan estimates and Program Strategies*. Author: Washington D.C.

UNAIDS / UNICEF (1999). *Children orphaned by AIDS: Frontline responses from Eastern and Southern Africa*. Author: Washington D.C.

UNAIDS: United Nations Program on HIV/AIDS. (2002). *Report on the global HIV/AIDS epidemic*. Geneva, Switzerland: Author.

UNICEF: United Nations Children's Fund (1999). *The AIDS Emergency League Table: Children Orphaned by AIDS. The Progress of Nations 1999*. New York: Author.

UNICEF: United Nations Children's Fund (2000) *The State of the World's Children 2000*. New York: Author.

Wagner, M.E, Schubert, H.J.P., & Schubert, D.S.P. (1985). Family size effects: A review. *Journal of Genetic Psychology, 146*, 65-78.

Weisner, T. S. (1997). Support for children and the African family crisis. In T.S.Weisner, C.Bradley, P.L.Kilbridge, A.B.C. Ochola-Ayayo, J.Akong'a, S.Wandibba (Eds.) *African Families and the Crisis of Social Change* (pp. 20-44). Westport, Connecticut: Bergin & Garvey.

Werner, E.E. (2000). Protective factors and individual resilience. In J.P. Shonkoff & S.J. Meisels (Eds.), *Handbook of early childhood intervention* (2nd ed., pp. 115-132). New York: Cambridge University Press.

Whiting, B.B. & Whiting, J.W. (1975). *Children of Six Cultures: A Psycho-cultural Analysis*. Cambridge, MA: Harvard University Press.

Yamba, B. (2003). *Aids orphans of Africa: Victims or vestiges of hope*. Uppsala: The Nordic African Institute (<http://www.nai.uu.se/forsk/reseng.html>).

Zur-Szprio, S., & Longfellow, C. (1981, April). Support from fathers: Implications for the well being of mothers and their children. Paper presented at the Biennial Meeting of the Society for Research on Child Development, Boston.