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Research Article

## The Act of Grandparenting: Cross Cultural Comparisons between Zambia and The Netherlands

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### Abstract

This study, using a retrospective design, investigated grandparental involvement in child care comparing Zambia and the Netherlands. Four hypotheses were formulated using nationality, family size, social economic status, attachment security as independent variables. These hypotheses were tested on a sample of 411 undergraduate students from the University of Zambia and the University of Leiden, Netherlands. Results indicated that grandparental involvement in child care was prevalent in both Zambian and Dutch samples. As predicted Zambian grandparents provided more child care compared to their Dutch counterparts. In addition, nationality and attachment related avoidance were significant predictors of involvement of grandparents while, social economic status and family size did not predict their involvement in child care. These findings suggest that grandparental care is a great resource in offering complementary child care in both countries. Implications of the study in light of the findings are discussed.

**Keywords:** Grand Parenting; Grandparental Involvement; Complementary Care; Attachment; Child Care

### Introduction

Child care has been a long-standing source of theorizing by researchers, with much emphasis exclusively placed on the biological parents. There has been less work on non-parental care (grandparents, aunts, siblings, uncles and other relatives) in spite of overwhelming research evidence on kin involvement in child care [1]. In addition, only a few studies have compared grand parenting in a Western and non-Western context in spite of empirical evidence that grandparental investment differ substantially within and across countries and cultures [2,3]. Thus, we decided to conduct this study in Zambia and the Netherlands because the two countries differ rather drastically, socially and culturally. Putting it bluntly, Zambia represents an interdependent context where traditionally, extended family ties are important in child care, while the Netherlands represents a more independent context with emphasis on the nuclear family as a primary domain of child care [4]. Thus, the objective of this paper was to investigate the prevalence cross cultural variations of

grandparental participation in child care in Zambia and the Netherlands.

The term grandparent is not a new concept but one that is as old as humankind. Heyslip & Panek [5] in White [6] define the status of grandparents as 'a tenuous role with no clear criteria or role norm; an individual experience; a developmental task of middle or late adulthood'. Turner [7] sees grandparenthood as 'constituting a status of social position defined by a collection of rights and duties'. On the other hand, Wood & Robertson [8] have described grandparenthood as constituting two dimensions, namely the social dimension (related to meeting societal needs) and the personal dimension in which grandparenting fulfills individuals' internal needs. But what is grandparenting? Clearly the term grandparenting lacks a specific definition in most of the studies. The definitions provided by Heyslip & Panek [5], Turner [7] and Wood & Robertson [8] become problematic when trying to understand grandparenting because they list general attributes rather than define the act of grandparenting. Hence,

due to the fact that most definitions are vague, this study uses the term grandparenting in a very limited manner to mean 'the interactions and relationships of a parent of a parent with a child of this parent. It can be grandmother or grandfather who cares for a child with whom he or she has a biological tie either through the child's mother or father or both [9]'. Grandparental care might imply care giving tasks complementary to parental or sib care, or a replacement of such care because of the absence or loss of the parents or sibs. The dynamics of these different types of grandparenting might be divergent.

Grandparental care has been studied extensively both in Europe and the United States. As recorded in a recent study by Glaser & Di Dossa [10] a high percentage of grandmothers provide care across all European countries. The study found considerable rates of grandparental child care in the United Kingdom (63%), Germany (40.3%), Sweden (50.86%), Hungary (55.7%) and the Netherlands (56.9%). In the United States, an estimated 5.6 million adults are grandparents with 5.4 million children living in grandparent-headed homes [11]. On the African continent, statistics are unavailable, though it is estimated that 40% of adults (aged between 40 and 85 years) in Africa take care of their grandchildren [12]. The estimated numbers however might be far higher than the actual number due to a lack of statistics in most countries. Besides that the numbers do not include grandparents who continue to provide complementary child care even in the presence of biological parents. The situation in Zambia is not any different from the rest of Africa, as statistics on the prevalence of grandparenting are non-existent even though grandparenting seems a common feature. It is assumed though that 40% to 60% of orphans are in grandparents headed households [11,13]. Given the absence of statistics on grandparenting in Africa, one might be tempted to think that perhaps, grandparenting is a 'Western' phenomenon. It has to be noted nevertheless that, the non-availability of statistics on grandparenting does not entail a lack of grandparental involvement in child care on the African continent neither does the presence of statistics in the Western world entail more grandparenting. The difference rather is probably that there are more studies on grandparenting in the Western world hence making phenomenon visible compared to Africa.

Grandparents assume care of their grandchildren for several reasons. Literature attributes parents' incarceration, unemployment, divorce or death, mental illness and abuse as some of the reasons that necessitate grandparents' participation in child care [14-16]. For example in Africa, grandparental involvement in child care is linked to the weakened extended family system especially in areas where the AIDS pandemic is severer [14,17-19]. Grandparental care in the Western world has been linked to longevity due to increased life expectancy, drug abuse by parents, and mothers working outside their homes among others [17]. From the reasons cited, literature limits the debate on grandparental involvement in child care as necessitated only by a crisis such as death but does not consid-

er culture. Noteworthy, is dearth of information about grandparents who continue to provide child care even when parents are available or in the absence of a crisis. The argument that grandparents are a social safety net in times of crisis seems to imply that in the absence of such challenges there would be no grandparenting.

Previous research provides a mixed view on the importance of grandparental care. Some scholars portray grandparents as highly susceptible to stress, source of stress to a parent, unhelpful and a risk to child survival [20-23]. For example Oburu & Palmerus [15], in their study focused on the stress that Kenyan grandparents experience as a result of participating in child care. Similarly, Strassman [24] in her study among the Dogon of Mali, doubted the importance of grandparents and instead underscored the importance of the mother in child survival. Her study found that children were four times likely to die by the age of five if the mother died, but 52% percent less likely to die if paternal grandparents were dead [24,25]. Sadly, in spite of Strassman study being among a few empirical studies on grandparenting to be conducted in Africa, this study thus far has linked the involvement of grandparents to a mere fight for resources thus in turn, fails to highlight their caregiving role. Secondly, most studies on grandparenting have focused more on the health consequences rather than on the care they provide. The positive role that grandparents play is often ignored and unrecognized. However, a few studies have highlighted the benefits of grandparent involvement in child care [26-28]. Woodward [29] also identified several roles that grandparents play such as historian, role model, nurture/great parent, hero and spiritual guide to grandchildren. The positive aspect of grandparents has also been recognized by parents themselves. Jappen & Bavel [30] report that "some parents prefer grandparents for child care because they perceive them as most trustworthy, providing a safe and emotionally nurturing environment that benefits their children".

Although previous studies have examined grandparental care in Africa, these studies have concentrated on grandparents taking care of orphaned children [31-33]. For example, Reijer [13] found that, in Zambia, studies on grandparenting limited their attention on grandparental headed households. In the Netherlands, the picture is different. A number of studies have confirmed the importance of grandparental involvement in child care. For example, Thomese & Liefbroer [34] found that grandparental care increased the probability of parents to have additional children. In the same vein, Kaptijn et al. [16] used evolutionary theory to show that child care support from grandparents in the Netherlands increased the probability of parents to have additional children. Though there may be no research evidence supporting the fact in Africa, HIV and AIDS research suggest the same for Africans (e.g Mhaka-Mutepfa, Cumming, & Mpofu [35], Oburu [36] Schatz & Seeley [19]) have shown that grandparents are involved in child care.

## Attachment and Caregiving

Attachment is a very important component of caregiving. In the past few decades, empirical research has made known the crucial role caregivers play in attachment formation and supported the universality of attachment theory [37]. Ainsworth in [38] contends that “infants are biologically predisposed to use their caregivers as havens of safety to provide comfort and protection when they are distressed and as a secure base from which to explore the world”. Research has shown that caregiving is not just restricted to biological parents but includes significant others [39]. Similarly, Cassidy [40] observes that “in most cultures biological parents, older siblings, grandparents, aunts and uncles are likely to serve as attachment figures” (p.14). This assertion highlights the crucial role that significant others such as grandparents might play in attachment formation. According to Bowlby [41] children form multiple attachments but some attachment relationships are more important than others. Over the past few decades, non-parental care has raised questions about child attachment outcomes [42-44]. Vermeer & Bakermans- Kranenburg [39] suggest that child care experiences matter more in some contexts and that the impact of child care and attachment on non-maternal caregivers may be larger for children who live in less optimal family environments. Whereas child’s parents are usually the main objects of attachment, children can also become attached to grandparents. Thus, this study uses attachment theory to find out if one’s attachment to the grandparent predicts grandparental care.

In the current study we extend the investigation on grandparenting by testing four hypothesis. Firstly, it is hypothesized that Zambian grandparents provide more care for their grandchildren compared to their Dutch counterparts. Secondly, it is hypothesized that social variables are strong predictors of grandparental care in both countries. Thirdly, family size large number of grandchildren is associated with increased involvement of grandparents in child care. Finally, it is hypothesized that attachment security is associated with increased grandparental involvement in child care.

## Method

### Research Design

An explorative retrospective research design was employed which incorporated quantitative methods. The research design could be described as retrospective in that participants had to look back at events that happened when they were growing up. It was quantitative in that it sought to explore the prevalence of grandparental involvement in child care. According to Yoshikawa, Weisner, Kalil & Way [45] quantitative methods are best suited to understand prevalence of particular practices and behavior.

## Study Sample

The study sample consisted of 411 undergraduate students (age range 17 to 37 years;  $M = 20.21$ ,  $SD = 1.70$ ) from the University of Zambia and University of Leiden. Of the 411 respondents, a total of 174 were Dutch students from the Centre of Child and Family Studies, 160 females and 14 males. Two hundred and thirty-seven Zambian students were included, of whom 158 were female and seventy-eight males. The minimum age for Dutch students was seventeen years and the maximum age was thirty-seven years, while for the Zambian sample, the minimum age was eighteen and maximum age was thirty years. The mean age was not significantly different across the two nationalities: mean age of the Zambian sample was  $M = 20.30$  ( $SD = 1.66$ ) and of the Dutch sample ( $M = 20.10$ ;  $SD = 1.75$ ). Table 1 shows participants demographic information.

	Zambian		Dutch		t	df	P
	N	%	N	%			
Mother	184	79.00	171	99.40	-7.47	253.66	<.01
Father	157	67.70	164	94.80	-7.72	349.10	<.01
Mother Working	142	61.20	142	81.00	-4.53	401.95	<.01
Father Working	193	82.20	172	98.90	-6.05	279.45	<.01
Contact G.P	170	73.00	146	84.40	-6.83	402.91	<.01
G.P Alive					-4.19	398	<.01
0	30	13.20	14	8.10			
1	64	28.20	26	15.00			
2	73	32.20	49	28.30			
3	27	11.90	49	28.30			
4	33	14.50	35	20.20			
# G.P growing-up					-4.92	405	<.01
0	7	3.00	2	1.10			
1	84	36.10	19	10.90			
2	109	46.80	116	66.70			
3	18	7.70	14	8.00			
4	15	6.40	23	13.20			

NOTE: G.P= GRANDPARENTS

## Procedure

For the Zambian sample, questionnaires were distributed to students during tutorials. A cover letter was attached to the

questionnaire explaining the purpose of the study. For the Dutch sample the questionnaire was completed by second year students of child and family studies at Leiden University. The Zambian sample completed the English version of the questionnaire while the Dutch sample completed an equivalent version of the questionnaire translated into Dutch. The Dutch questionnaire was translated from English into Dutch, and then back-translated and checked for accuracy. After handing out the questionnaire, the researcher reminded the students not to fill in their names to ensure their anonymity. In both groups, the questionnaire took between twenty to twenty-five minutes to complete

## Measures

The questionnaires had four sections which included questions on grandparental care activities, family composition and the *Experiences in Close Relationships – Relationship Structures* (ECR-RS) adopted from Fraley, Heffernan, Vicary, & Brumbaugh [46].

**Demographic data:** was collected using items on the questionnaire that asked about their *age; gender; nationality*, and number of *grandparents* who were alive, number of *grandparents* while growing up and family Composition.

**Socio-economic status (SES):** for the Zambian sample was assessed using the *Home Possessions Index* (HPI). SES for the Dutch sample was assessed using parental educational level. A global SES measure was computed by standardizing, averaging and merging both the items on the Zambian and the Dutch SES measures, cronbach's  $\alpha = .83$

**Grandparent care-giving** was assessed using Grandparent-care checklist. The checklist asked participants whether or not their grandparents participated in a range of child-care-giving activities including *feeding, playing with, bathing, comforting, transporting, carrying the baby, toilet training, protection, setting limits and discipline*. A total caregiving scale was developed from the items of the scale. The coefficient alpha reliability was cronbach's  $\alpha = .77$ .

**Attachment style** was assessed by having participants complete the *Experiences in Close Relationships – Relationship Structures* (ECR-RS) questionnaire [46]. The ECR-RS is a self-report instrument designed to assess individual differences with respect to attachment related anxiety and attachment related avoidance in a variety of close relationships. Based on the ECR-RS eight sub-scales were created ECR mother anxiety scale (cronbach's  $\alpha = .71$ ); ECR mother avoidance scale (cronbach's  $\alpha = .76$ ); ECR father anxiety scale (cronbach's  $\alpha = .82$ ); ECR mother avoidance scale (cronbach's  $\alpha = .84$ ); ECR grandmother anxiety scale (cronbach's  $\alpha = .73$ ); ECR grandmother avoidance scale (cronbach's  $\alpha = .79$ ); ECR grandfather anxiety scale (cronbach's  $\alpha = .79$ ); and ECR grandfather avoidance

scale (cronbach's  $\alpha = .60$ ).

## Ethics

The study was conducted in accordance with ethical standards as approved (IBR 00006464 and IORG: 000376) by the University of Zambia, School of Humanities Research Ethics committee.

## Data analysis

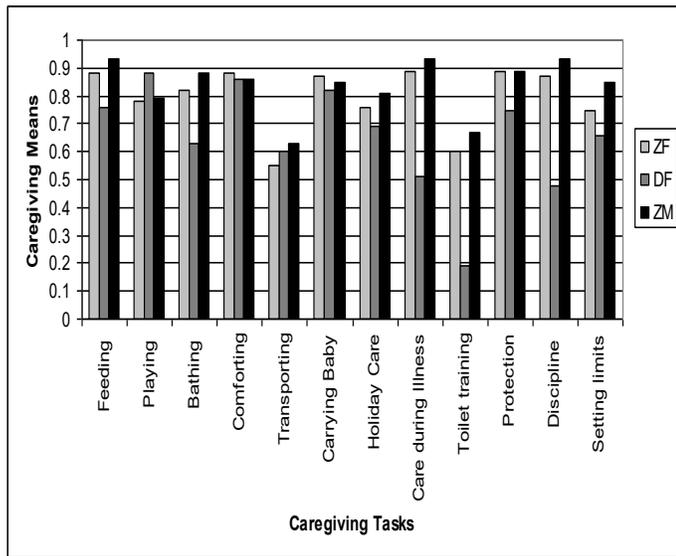
Statistical analysis were computed using the Statistical Package for social Sciences software (SPSS, version 20). Preliminary analysis of data involved examination for missing data, kurtosis, skewness and outliers. Descriptive statistics in form of means and percentages were computed on participant's responses to assess grandparental child care. Analysis of Variance (ANOVA) was used to determine the differences between the three groups (Zambian female, Zambian males, Dutch females). In addition, MANCOVA was also used to find out the overall group effect of demographic variables on grandparental involvement in child care. Finally, hierarchical regression analysis was used to examine predictors of grandparental involvement in child care. The variables included in the analysis comprised background variables (nationality, family size, number of grandparents, parental employment) and other variables such as ECR grandmother avoidance and ECR grandfather avoidance.

## Results

In order to find out the prevalence of grandparental involvement in child care in the two countries, preliminary analysis were performed using grandparental care activities as a measure. All the participants reported that their grandparents had provided some kind of care to them when they were children. The care-giving activity performed included *playing, bathing, transporting baby, toilet training, protection from accidents, discipline and setting limits*.

To test the hypothesized differences between the two cultural samples, an independent samples t-test was performed comparing nationality and the sum score of care-giving activities between Zambian and Dutch grandparents. As predicted Zambian grandparents scored a much higher mean ( $M = 9.69$ ;  $SD=2.40$ ) compared to their Dutch counterparts ( $M = 7.80$ ;  $SD=3.31$ ). The results revealed statistically significant differences between the Dutch and Zambian maternal grandparents in terms of total care-giving  $t(6.20) = 278, p < .01$  (2-tailed.)

**Figure 1.** Comparisons of Dutch versus Zambia samples on grandparent care in specific care domains.



Note: ZF=Zambian Females; DF= Dutch Female; ZM= Zambian Male

To test the differences between *gender* and grandparent sum caregiving, four groups of gender by nationality were created (*Zambian females, Zambian males, Dutch females and Dutch males*). However, the number of *Dutch males* ( $n=14$ ) was too low to warrant comparison with other groups. Thus, only three groups were created for analysis (*Zambian females, Zambian males, Dutch females*). A one way ANOVA also revealed a statistically significant difference in sum caregiving activities provided by grandparents among the three groups  $F(2,374)=21.38, p < .01$ . Tamhane’s post-hoc test showed that Zambian grandparents performed significantly more caregiving than the Dutch grandparents in specific caregiving domains like *feeding, bathing, toilet training, holiday care, caring during illness, protection and limit setting*.

We later controlled for parents being alive and tested if the differences could be a result of Zambian respondents having no parents (being orphaned). After controlling for no parents by running a MANCOVA, there was no significant effect of the covariate on the amount of care provided by grandparents,  $Wilks' \lambda = .91, F(12,360)=1.20; p = .28$ . The results suggest that grandparental involvement in child care is not dictated by the presence or absence of the parents.

It was also hypothesized that perhaps the differences between the 3 groups could have been due to the fact that parents were in employment. The MANCOVA revealed a non-significant main effect for parents working,  $Wilks' \lambda = .91, F(12,360)=1.28; p = .23$ . The covariate was not significant. However, the MANCOVA revealed a significant multivariate main effect in the three groups,  $Wilks' \lambda = .61, F(24,742) p < .01$  even after controlling for *parents being alive*. Zambian grandparents did generally

more care giving compared to their Dutch counterparts. As can be noted from Table 2 below, Zambian grandparents did more of *feeding, bathing, holiday care, caring during illness, toilet training, protection and limit setting*. However, the Dutch grandparents did more in the specific domain of playing with their grandchildren compared to their Zambian counterparts. Interestingly, there were no significant differences on *comforting, transporting child and pushing baby/carrying baby on the back*.

**Table 2.** Summary descriptive statistics and MANCOVA statistics table showing grandparent caregiving activities

	Zambian (Females)	Dutch (Females)	Zambian (Male)	
Activity	M (SD)	M (SD)	M (SD)	F(df)
Feeding	.88 (.32) <sup>a</sup>	.76 (.43) <sup>b</sup>	.93 (.26) <sup>a</sup>	<b>6.48 (2.4)**</b>
Playing	.78 (.41) <sup>a</sup>	.88 (.33) <sup>b</sup>	.79 (.41) <sup>a</sup>	<b>3.83 (2.4)**</b>
Bathing	.82 (.39) <sup>a</sup>	.63 (.48) <sup>b</sup>	.88 (.33) <sup>a</sup>	<b>8.43 (2.4)**</b>
Comforting	.88 (.33)	.86 (.35)	.86 (.35)	.34 (2.4)
Transporting	.55 (.49)	.60 (.49)	.63 (.49)	.65 (2.4)
Carrying baby	.87 (.38)	.82 (.43)	.85 (.46)	.49 (2.4)
Holiday care	.76 (.43)	.69 (.46)	.81 (.40)	1.53 (2.4)
Caring during illness	.89 (.31) <sup>a</sup>	.51 (.50) <sup>b</sup>	.93 (.26) <sup>a</sup>	<b>39.66 (2.4)**</b>
Toilet training	.60(.49) <sup>a</sup>	.19 (.39) <sup>b</sup>	.67 (.47) <sup>a</sup>	<b>31.92 (2.4)**</b>
Protection	.89(.31) <sup>a</sup>	.75 (.43) <sup>b</sup>	.89 (.31) <sup>a</sup>	<b>5.98 (2.4)**</b>
Discipline	.87(.33) <sup>a</sup>	.48 (.50) <sup>b</sup>	.93 (.26) <sup>a</sup>	<b>29.60 (2.4)</b>
Setting Limits	.75(.44) <sup>a</sup>	.66 (.47) <sup>b</sup>	.85 (.36) <sup>c</sup>	<b>3.13 (2.4)*</b>

Note: \*\* p <.01; \* p <.05; 372 < n <394

To test the differences between 3 groups (*Zambian female, Zambian males, Dutch females*) on attachment to grandparent, a one way ANOVA was conducted. The results as evident in the table above revealed significant differences between the three groups on attachment. The three groups showed significant differences on the ECR Mother avoidance  $F(2,385) = 13.44, p < .01$ ; ECR Father Avoidance  $F(2,386) = 10.32, p < .01$ , and the ECR grandfather Anxiety  $F(2,371) = 3.77, p < .05$ .

We conducted post hoc tests to see where the overall difference among the three groups was coming from. Post hoc tests showed no significant differences on ECR Father avoidance between Zambian males and Zambian females as shown in Table 3. However, there was a significant difference between Zambian females and Dutch females on ECR father avoidance  $t(305) = 3.25, p < .01$ . Similarly, on ECR mother avoidance, no significant difference was found between Zambian females and Dutch females. However, there was a significant difference between Zambian females and Zambian males  $t(385) = -3.42,$

$p < .01$ . On the ECR anxiety scale for grandfather, post hoc. On the ECR anxiety scale for grandfather, post hoc results revealed a significant difference between Zambian males and Dutch females  $t(371) = -2.64, p < .01$ .

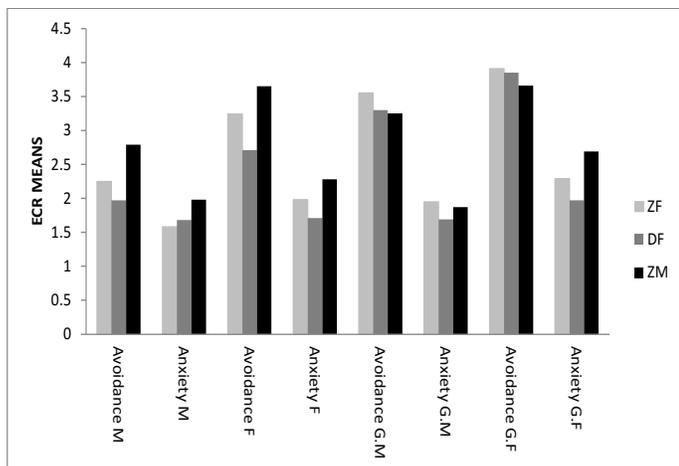
**Table 3.** ANOVA table showing the differences in Anxiety and Avoidance to Parents and Grandparents on the ECR Scale.

		Zambian Females		Dutch Females		Zambian Males		F(df)
		M	(SD)	M	(SD)	M	(SD)	
Mother	Avoidance	2.25 <sup>a</sup>	1.22	1.97 <sup>a</sup>	0.96	2.79 <sup>b</sup>	1.25	13.44(2.4)**
	AnxietyLG	1.58	1.21	1.68	0.97	1.95	1.66	2.10(2.4)
Father	Avoidance	3.24 <sup>a</sup>	1.51	2.71 <sup>b</sup>	1.35	3.56 <sup>a</sup>	1.46	10.32(2.4)**
	AnxietyLG	1.98 <sup>a</sup>	1.67	1.71 <sup>a</sup>	1.09	2.28 <sup>a</sup>	1.92	1.63(2.4)
Grandmother	Avoidance	3.55	1.57	3.30	1.19	3.25	1.36	1.79(2.4)
	AnxietyLG	1.95	1.27	1.69	0.80	1.87	1.35	.67(2.4)
Grandfather	Avoidance	3.91	1.45	3.85	1.37	3.66	1.37	.80(2.4)
	AnxietyLG	2.29 <sup>a</sup>	1.54	1.97 <sup>a</sup>	1.02	2.69 <sup>b</sup>	1.72	3.77(2.4)**

**Note:** \*\*  $p < .01$ ; \*  $p < .05$ ;  $372 < n < 394$ ; LG = log transformed variable

Comparing Zambian females and Dutch females, means show that Zambian participants generally reported higher levels of avoidance and anxiety on the ECR compared to their Dutch peers on seven domains of the ECR. However, post hoc results revealed that Zambian males generally recorded higher means on all the ECR domains compared to Zambian females.

**Figure 2.** Graphic representation mean scores on the ECR-RS – Avoidance and Anxiety scales for the three gender by nation groups



Note: variable; M = Mother; F= Father; GM= Grandmother; GF= Grandfather ZF=Zambian Females; DF= Dutch Female; ZM= Zambian Mal

As can be noted from the table above, on the ECR scale the Dutch female participants scored lower on “avoidance mother”, “avoidance father”, “anxiety father”, “avoidance grand mother”, “anxiety grandmother”, “avoidance grandfather” and “anxiety grandfather”. In contrast the Zambian females were lower on the mother anxiety domain only.

A one way ANOVA was used to test differences among the 3 groups on the ECR Scale. The ANOVA model showed significant differences between the three groups on mother avoidance, father avoidance, father anxiety and grandfather anxiety domain of the ECR. However, there were no differences among the three groups on the mother anxiety, grandmother avoidance, grandmother anxiety and grandfather avoidance. Comparisons between Zambian males and Zambian females showed that Zambian males scored higher on the 7 domains of the ECR Scale with the exception of the “avoidance mother” scale where the Zambian females scored relatively higher.

**Predictors of Grandparental Involvement in Child Care**

A hierarchical regression analysis was used to investigate predictors of grandparental involvement in child care. In the first step of the hierarchical regression, two predictor’s gender and SES were entered. This model was statistically significant  $F(2,339) = 3.93, p < .05$  and accounted for  $R^2 = 2.3\%$  of the variation in sum caregiving. Gender contributed significantly to the regression model. After entry of background variables nationality, family size, number of grandparents and parents working in the second model the total variance in sum caregiving among grandparents predicted was 10.8%. The introduction of nationality, family size and number of grandparents explained an additional 8.5% of the variation and the change in  $F(6,335) = 6.77, p < .01$ . In the final model, only three predictors (nationality, ECR grandmother avoidance and ECR grandfather avoidance) out of the 13 were statistically significant. The addition of the ECR scales explained an additional 13.4% of the variation and this change in R2 square was significant at  $F(14,327) = 7.79, p < .01$ . Together the 14 independent variables accounted for 25% of the variation in sum caregiving with nationality recording a high beta value ( $\beta = -.36$ ) followed by ECR grandmother avoidance ( $\beta = -.31$ ) and ECR grandfather avoidance ( $\beta = -.13$ ).

**Table 4.** Hierarchical multiple regression predicting grandparent caregiving with various background variables and ECR scales

Variables	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SE</i>	$\beta$	<i>B</i>	<i>SE</i>	$\beta$	<i>B</i>	<i>SE</i>	$\beta$
Gender	1.06	.40	.14*	.58	.40	.08	.34	.38	.05
SES	.30	.21	.07	.17	.21	.05	.18	.20	.05
Nationality				-1.85	.34	-.32**	-2.09	.32	-.36**
Family Size				-.01	.08	-.00	-.03	.08	-.02
Number of Grandparents				.26	.18	.08	.18	.17	.05
Parents Working				.18	.30	.03	.50	.29	.10
ECR Avoidance (M)							-.01	.15	-.00
ECR AnxietyLG (M)							.86	.82	.07
ECR Avoidance (F)							.13	.12	.07
ECR AnxietyLG (F)							-.60	.75	-.05
ECR Avoidance (GM)							-.64	.13	-.31**
ECR AnxietyLG (GM)							-.58	.80	-.04
ECR Avoidance (GF)							-.27	.12	-.13*
ECR AnxietyLG (GF)							-.03	.73	-.00
<b>R<sup>2</sup></b>		.023*			.11**			.25**	
$\Delta R^2$		.023			.09			.14	
F for change R <sup>2</sup>		3.93			8.03			7.73	

Note: \*  $p < .05$ ; \*\* $p < .01$ .  $\beta$ = standardized regression coefficient. SES = Socio-economic Status; LG = log transformed variable; M = Mother; F= Father; GM= Grandmother; GF= Grandfather

## Discussion

The main goal of this study was to investigate the prevalence and cross cultural variations of grandparent participation in child rearing in Zambia and the Netherlands. As predicted Zambian grandparents provide more care for their grandchildren compared to their Dutch counterparts. The study also revealed that attachment was a predictor of grandparent involvement in child care. Avoidance to grandmother was associated with less grandparental involvement as reported by the participants and the same was true for feelings of avoidance to the grandfather. However, social variables (parental employment, presence of parents, social economic status) did not

predict grandparent involvement in child care in both countries. Lastly, family size was not associated with grandparent involvement in child care.

## Prevalence of grandparent child care in Zambia and the Netherlands

A significant observation from the current study is that grandparenting is a prominent feature in both Zambia and the Netherlands. Almost all the participants reported having been cared for by their grandparents while young. As evident from the results, grandparents provide care in several important child care domains such as playing, bathing, feeding, protection, toi-

let training, being carried, transporting, disciplining and limit setting. In addition, these findings clearly attest to the fact that grandparenting is neither a Western nor an African but a cross-cultural phenomenon. This consolidates the findings in other studies that grandparenting is very prevalent [26,28,47]. The results of this study also support the evolutionary grandmother hypothesis [5] on the importance of kin support and the role of grandparents in child care.

However, although grandparenting was found to be a common feature in both countries, this study also confirmed differences in the type of activities performed between Zambian grandparents and Dutch grandparents. There were significant differences between the two nationalities in grandparental involvement in child care with Zambian grandparents generally performing more care than their Dutch counterparts. As can be noted from the results, Zambian grandparents did more of feeding, bathing, holiday care, caring during illness, toilet training, protection and limit setting. In contrast, the Dutch grandparents did more in the specific domain of playing with their grandchildren compared to their Zambian counterparts. These findings highlight the variations between the two countries. Similarities were also noted, as there were no significant differences in comforting, transporting the baby and pushing or carrying the baby. This finding provides clear evidence that grandparents supplement the parenting role in both countries. Thus, current results are consistent with previous research that found that grandparents play an important part in child care [48,49]. These results also challenge the findings of Strassman [24,25] that grandparents are inimical to the development of the grandchild. Clearly, the Strassman finding limits the debate on grandparenting to a struggle for very scarce resources in extreme poverty but is unable to explain why grandparenting is visible in high- and low-resource settings and in the face of resource availability as well as scarcity. It could well be that there are many sociocultural underpinnings beyond material resources that account for grandparental involvement in child care. Social cultural variables such as sense of family, cultural patterns and beliefs on child rearing may also account for grandparental involvement in child care.

Based on the literature [50,51], it was assumed that perhaps Zambian grandparents performed more tasks because many of the children may have been orphans at the time when they were growing up. After controlling for parents being alive, Zambian grandparents did generally more caregiving than their Dutch counterparts. The finding that Zambian grandparents performed more tasks in specific domains such as holiday care is consistent with the Zambian cultural attitudes that promote participation of grandparents in child care. As noted by Falola [52] "Zambian parents pressurize their children to visit their grandparents hence this helps maintain important connections to Zambian traditions, local language, culture and family heritage".

## Social factors and grandparenting

Evidence from the literature also shows that social variables such as parental employment, SES and parent presence are associated with grandparenting [53,54]. In line with this understanding, this study examined whether social variables were associated with grandparenting. However, social variables were not significant predictors of grandparenting. Thus, it was concluded based on the findings, that it does not matter whether parents are in employment or alive or (rich or poor) for grandparents to provide child care. This finding is important because it attests to the fact that grandparenting is not always predicted by a scarce resources (SES), crisis or a challenge such as death of a parent. but also traditional cultural expectations dictate grandparental involvement in child care [30,35]. These findings also suggest that socioeconomic status and demographic factors might not play a role in influencing grandparental involvement in child care. The fact that SES was not predictive of grandparenting could point to the fact that perhaps grandparenting knows no economic strata. It permeates social economic hierarchy and knows no context-both resourceful and resource deprived contexts benefit from grandparenting (e.g., the Netherlands is a rich country endowed with many child care facilities and yet grandparenting is prevalent as evident in our findings). Nevertheless, from this study it remains difficult to imply a cause-effect relationship between grandparenting and social variables. It might well be that other social factors such as traditional cultural expectations [30,35,52], mutual benefits and spirituality [35,52] dictate grandparental involvement in child care. It should be noted that Zambia, like many African countries has a collectivistic culture with strong cultural traditions that encourage involvement of extended kin relations in child care. Thus, grandparents hold a key traditional role in child care.

These results also point to the complementary nature of grandparenting. It reminds us that grandparenting does not substitute parental parenting but is rather an adjunct to it. Unfortunately, most of available literature on grandparenting in Africa ignores the complementarity of grandparental child care. Most of the studies concentrate more on grandparent headed households where a grandparent is the head of the household in the absence of a parent either through incarceration or death as is the case in HIV and AIDS research in Africa where grandparents take up or replace the parent due to death or sickness.

## Predictors of grandparental child care

In this study, it was also hypothesized that increased grandparental involvement in child care is associated with child attachment security to their grandparent. We examined the influence of different attachment and demographic dimensions on grandparenting. Gender, SES, parents being alive, nationality, parental employment and attachment as predictors for

grandparental involvement in child care were examined. The study found that besides nationality only attachment avoidance grandmother and attachment avoidance grandfather were significant. Thus, attachment was found to be a predictor of grandparent care. This means that the more avoidant participants were, the less care they received from their grandparents. It appears based on this finding that avoidant individuals may feel uncomfortable about being close to their grandparents and receiving care from them. Thus, it can be concluded that attachment avoidance to grandparents is associated with reduced amount of grandparenting. However, less caregiving might also lead to more avoidance, or to the report of more avoidance. Additional investigations on attachment patterns of grandchildren to their grandparents are needed, preferably with independent assessment of attachment and grandparental caregiving.

Another important finding is the impact of nationality as a predictor of grandparenting. Even after controlling for parents being alive, SES and family constellation, nationality still emerged as a strong predictor of grandparenting. Thus, this finding might point to cultural differences between the two countries. There is something about culture that could actually account for the systematic differences in grandparenting observed between Zambia and the Netherlands. Thus since we are not sure exactly what is within the Zambian cultures, that is not in the Dutch culture which can account for this difference, we can only speculate that the strong extended family ties in Zambian culture might be responsible for the differences observed between the two countries. In Zambia the extended family is very strong hence it is not uncommon for families to ask grandparents to help in the care of grandchildren whereas in the Netherlands the nuclear family is stronger and important. However, future research is needed to see what cultural variables may account for the differences between the two countries.

### Study Limitations

This study suffers some limitations. The first is that study participants were undergraduate students drawn from one university in both countries. Thus, the findings of the study might not be generalizable to all individuals or even to all same-age peers. However, in order to find out the prevalence and cross cultural variations in grandparenting we felt that college students were most comparable across countries. It should be noted also that many cross cultural studies have compared low status rural African communities with urban middle class populations from the developed world. Thus, to avoid this pitfall evident in previous research we felt that the student samples were a better choice.

The study is also limited in that it relied on grandchildren's retrospection on the time they were young to answer the

questions about grandparenting. Though not including grandparents was itself a limitation of the study, however since we wanted to find out the prevalence of grandparent care we felt grandchildren themselves were best suited to provide us with insight on prevalence. Moreover, this study is valuable as it gave grandchildren's views, which are complimentary to previous research studies on grandparents.

### Conclusion and future directions

In conclusion, this study makes a number of important contributions to our understanding of the prevalence and cross cultural variations of grandparenting between Zambia and the Netherlands. First of all, this study addresses a number of limitations in previous studies in the area of grandparenting by focusing on complementarity of grandparent care rather than on replacement as is the case with many studies carried out so far. Secondly, this study bridges the gap in grandparent research by bringing out caregiving tasks performed by grandparents in the course of providing care to their grandchildren. Overall these findings add to the theoretical conceptualization of grandparenting in a novel way by adding to literature data on Zambia. However, future research on grandparenting needs to differentiate complementary care from replacement care in grandparent headed households, and it needs to use other informants than the recipients of grandparental care as well as other methods of investigation such as observational approaches, to assess grandparental involvement in more detail. Future research in the field should also endeavor to explore cultural factors that might explain the differences in grandparental involvement between the two countries.

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