PB096190

Standardization of the Adjustment to Motherhood Questionnaire (AMQ)

Glenda Cleaver • *Ailke Botha*

Co-operative Research Programme on Marriage and Family Life
Human Sciences Research Council
134 Pretorius Street
0002 Pretoria

1995

HG/MF-26

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The Co-operative Research Programme on Marriage and Family Life is centred within the Group: Social Dynamics of the Human Research Council. The emphasis in the programme is on the structure and dynamics of family life, the nature of family disorganization and disintegration, and the nature of the changes taking place with regard to family structure and family processes in society. In this report the emphasis is on discovering the essential elements in an existing measuring instrument and then developing a short form of it (AMQ-S).

The opinions expressed in the report are those of the authors (at the Department of Psychology, University of Pretoria) and should not necessarily be viewed as those of the HSRC.

CO-OPERATIVE RESEARCH PROGRAMME ON MARRIAGE AND FAMILY LIFE

Series editor: *Ina Snyman*, HSRC

ISBN 0 7969 1686 1

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HSRC Publishers
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0001 PRETORIA
Tel.: (012) 202 2004 / 2014 / 2523 / 2912
Fax: (012) 202 2891

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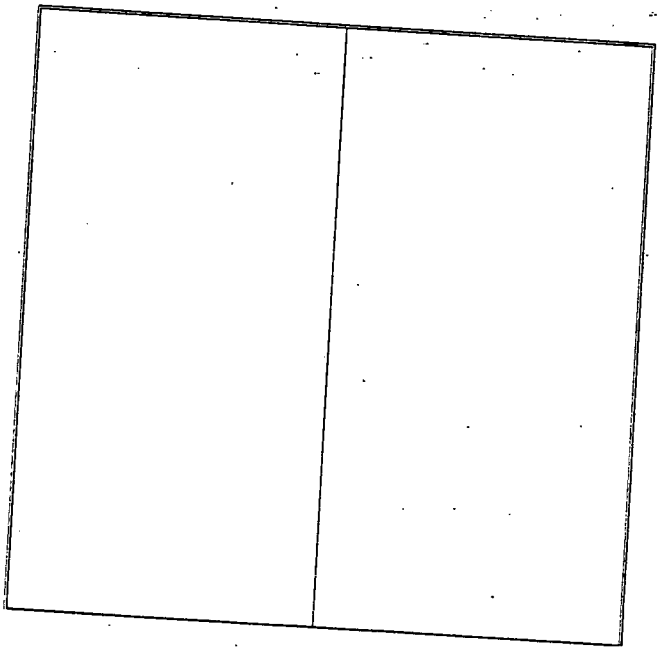

Ekserp

Die doel van die studie was om die faktorstruktuur van die "Adjustment to Motherhood Questionnaire" (AMQ) (Bylae C) te bepaal, en dit dan in 'n verkorte vorm te standaardiseer (AMQ-S).

Die steekproef het bestaan uit 838 moeders (Afrikaans-, Engels-, Tswana-, en Noord-Sothosprekend) met voorskoolse kinders tussen twee en ses jaar. Dit was 'n gerieflikheidsteekproef; al die moeders kom uit die Pretoriagebied.

Die oorspronklike ses velde van die AMQ is onderverdeel in 11 subtoetse waarop faktorontledings gedoen is om 'n aanduiding te kry van die konstrukte wat deur die onderskeie subtoetse gemeet word. Die Iteratiewe Hoof-Faktor Ontledingsmetode is gebruik, waarna 'n Varimaxrotasie, 'n ortogonale rotasiemetode, uitgevoer is.

Die AMQ-S wat daarna ontwikkel is, bestaan uit 'n biografiese afdeling en sewe subtoetse. Die subtoetse handel oor die moeder se emosionele aanpassing, die vader-kindverhouding, die emosionele toestand van die moeder, moeder-kindbetrokkenheid, die verhouding tussen die ouers, sosio-ekonomiese aspekte en die fisiese welstand van die moeder en die kind. Die betroubaarheidskoëffisiënte van die onderskeie subtoetse van die AMQ-S het gewissel van 0,45 tot 0,86.

Huwelikstatus is geselekteer as 'n veranderlike vir die ontwikkeling van norme. Die rou-tellings in elke veld is omgeskep in stanegeskale. 'n Lae stanege (1 tot 3) dui swak aanpassing by moederskap aan, teenoor 'n hoë stanegetelling (7 tot 9) wat goeie aanpassing by moederskap aandui.

Die AMQ-S kan as 'n keuringstoets gebruik word, byvoorbeeld in klinieke, om moeders uit te wys wat beraad of verwante hulp nodig het.

Abstract

The aims of the study were to investigate the factor structure of the Adjustment to Motherhood Questionnaire (AMQ) (see Appendix C) and then to develop a standardized short form of it (AMQ-S).

The sample consisted of 838 mothers (Afrikaaans-, English-, Tswana- and Northern Sotho-speakers) with pre-school children aged between two and six years. It was a sample of convenience; all the mothers lived in the Pretoria area.

The original six fields of the AMQ were subdivided into 11 subtests, and these were factor analyzed to get an indication of the constructs measured by the various subtests. The Iterated Principal Factor Analysis method was used, after which Varimax rotation, an orthogonal rotation method, was performed.

The Adjustment to Motherhood Questionnaire-Short Form (AMQ-S) was developed and it consists of a biographical section and seven subtests, namely those relating to the mother's emotional adjustment, the father-child relationship, the emotional state of the mother, mother-child involvement, the parental relationship, socio-economic aspects and the physical well-being of the mother and child. The reliability coefficients of the various subtests of the AMQ-S varied from 0,45 to 0,86.

Marital status was selected as a variable for the development of norms. The raw scores in each field were transformed to stanine scales. A low stanine (1 to 3) indicates poor adjustment to motherhood and a high stanine (7 to 9) indicates good adjustment to motherhood. The AMQ-S can be used as a screening test, for example, in clinics, to identify mothers in need of counselling or related assistance.

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1. INTRODUCTION AND BACKGROUND

The birth of a child is an important developmental stage in the life cycle of a family (Haley, 1980). All family members undergo change when a child is born into the family but the mother of the child invariably has to make more adjustments than other members of the family. The popular view is that motherhood is a satisfying and fulfilling experience, but although this is to some extent true, Boulton's (1983) findings are that many women find child care a predominantly frustrating experience. The many demands, both physical and emotional, that offspring make on their mothers contribute to the frustrations. In addition, the disintegration or breakdown of family life in the modern era affects mothering. In South Africa black mothers in particular have been affected by the rapid pace of urbanisation and by the political ideology of the past. There is, according to Cock, Emdon and Klugman (1986), no single pattern of urban African family life. Disorganisation exists which demands qualities of resilience and strength from black mothers in South Africa. It is surprising therefore that mothering is such an underresearched topic.

1.1 Involvement of mothers with their children

Baumrind's (1967) study on the effects of different parenting styles on a child's development highlights the positive emotional growth in children whose parents are encouraging, positive and realistic in their expectations of their children. Many theorists (Erikson, 1980; Piaget, 1965) stress the importance of interaction with significant others and play in the development of cognitive skills and personality integration. Bronfenbrenner (1974) in an analysis of programmes which are aimed at stimulating cognitive development in early childhood, emphasises the importance of the involvement of the parent in the development of certain cognitive skills. Stimulating experiences accumulate and they serve to encourage the cognitive structure of the child. A number of studies indicate that children's pro-social behaviour can be predicted by the mother's involvement with the child and by her nurturant behaviour (Magwaza & Edwards,1991).

1.2 Socio-economic status

Children who grow up in low-income families have a greater chance of suffering from stress-related difficulties in their emotional, social and intellectual growth than children in middle-income families (Masitsa, 1988). Zuvarin (1989) points out that low-income families may well evidence negative emotions as a result of the stress related to low socio-economic status. The interactions within the family and the settings in which people live also have a profound effect on the nature of the

mother-child relationship (Bronfenbrenner, 1974). Orford (1992), who favours the ecological approach, regards the behaviour setting as an important mediator in interactions between people. Richman (1974) pinpoints housing as having an effect on the type of involvement and interaction that occurs between mothers and their offspring. In addition high density living and overcrowding affect social outcome and "high density tends to correlate with poverty and lower socio-economic status" (Orford, 1992:21).

Single parents often have to contend with reduced incomes. The single parent role may be one of the most difficult and complex roles in our society (Cornelius, 1990). Society has no clear models or established cultural patterns to follow on single parenting, possibly creating prejudices and ambivalent attitudes by relatives, friends, or neighbours towards single parents (Nadenichek, 1990; Pasley & Gecas, 1982). Many households which are headed by a mother are exposed to excessive stresses with minimal support systems (Cornelius, 1990). The confusing, overdemanding role of single parents often presses the parents into a restrictive, authoritarian style of parenting (Pasley & Gecas, 1982).

1.3 Physical aspects

Isolation, lack of a confidant or social support and lack of socio-medical resources have been cited in the development of unhappiness or even of postpartum depression in mothers (Crowell, George, Blazer & Landerman, 1986; Norbeck & Sheiner, 1982; O'Hara, 1986; O'Hara, Rehm & Campbell, 1983; Stern & Kruckman, 1983). The physical health of a child can effect mother-child interaction; and so can, for various reasons, the age of the mother (Philliber & Graham, 1981).

An underresearched factor is the effects of prolonged separation between mother and child. In South Africa, where a mother often works in an area which is geographically separate from the area in which her home is situated, it is important to assess the effects of such practices.

Marital status exerts an influence on the mother's relationship with her child. Zuravin (1989) suggested that it may be marital status which affects aggressive behaviour between mother and child since the presence of the father may mediate in the aggressive interaction, albeit indirectly, by being supportive to the mother and helping her gain perspective. Zuravin found, among low-income single mothers, a link between moderate depression in the mothers and physical and verbal abuse of their children.

1.4 Emotional factors

Crowell *et al.* (1992) argue that interaction patterns and the status of mind of mothers are important, particularly in identifying mothers who may have negative interaction patterns with their children. These authors found that mothers who were themselves secure, warm and supportive of their children, tended to be helpful toward the children.

Various research studies have documented the fact that depressed mothers may be hostile, rejecting, inconsistent or indifferent towards their children. Cicchetti and Aber (in Blatt & Homann, 1992:61) found that depressed mothers were "less active in interaction with their children and more disorganised, unhappy, tense, inconsistent and ineffective" than were mothers who did not report feelings of depression. For Blatt and Homann depression includes feelings of helplessness, loneliness, unworthiness, failure and the inability to express anger. Unhappiness may result in physical abuse although middle- and upper-income mothers are often buffeted from violence toward the child, by protective factors such as child-rearing norms and the money to purchase child care (Lahey, *et al.*, 1984). Expectations also affect the mother's emotional behaviour. Crowell *et al.* (1992) state that children who behave negatively and in a non-compliant way with both their mothers and in their school situations are usually the offspring of mothers who have negative expectations and a negative status of mind towards their children.

1.5 Involvement of fathers and their children

In the United States a number of variations in family patterns exist. De Luccie and Davis (1990) found that fathers in the United States are on the whole involved with their children and interact with them on a nurturing and affective level. However there is a high degree of father absence in the lower socio-economic groups resulting in many homes being matriarchal rather than patriarchal. A similar trend exists in South Africa. In contrast, in urban China today there is little difference in the frequency with which men and women perform caretaking duties with their children (Jankowiak, 1992).

Burman and Pedersen (1987) found that men who have good relationships with their wives are more involved with their children than those who do not. The status of the mother appears to be enhanced by the father's participation in child rearing (Coltrane, 1988).

1.6 Employment

In the past full-time mothers were regarded as the ideal. Full-time parenting and what is known as good parenting are often seen as one and the same thing. However, according to Plionis (1990), research showed that full-time mothers actually spent much less time playing with and teaching their children than had been expected. Clarke-Stewart (in Plionis, 1990) found that although mothers may have spent a lot of time in the same room as their offspring they actually interacted with them for only short periods of time.

According to Scarr and Phillips (1989) most research carried out on working mothers pertains to low-income mothers. Many black mothers from the lower socio-economic groups enter the work-force far sooner than white mothers and this has affected family relationships and has probably undermined what was seen as male power in a nuclear family (De Luccie & Davis, 1990).

1.7 Conclusion

As can be seen a number of factors affect a mother's life and her quality as a mother. The type of interaction and involvement that she has with the child is of prime importance. This in turn is influenced by the setting in which she lives, her well-being and her emotional state and adjustment. Her marital status, her relationship with the child's father and the father's relationship with the child, her socio-economic status, her expectations and her support systems are among the factors which influence her adjustment to motherhood and her performance as a mother. It would appear that it would be helpful to help women to become more aware of the problems and difficulties related to motherhood and to offer them emotional support or counselling when they become mothers. However there is a paucity of measuring instruments which would help evaluate such input. The Adjustment to Motherhood Questionnaire (AMQ) (see Appendix C) was aimed at meeting this need.

The term adjustment in the AMQ refers to a harmonious relationship between the mother and her physical and social environment, that is to a situation in which most of the mother's needs are satisfied and where she complies with most of the demands of her environment (Gouws *et al.*, 1981). Adjustment comprises cognitive, emotional and behavioural facets. The social environment refers to the mother-child relationship, the mother-father relationship, the mother's relationships with friends and socio-economic aspects.

2. AIMS OF THE STUDY

The main aims of the study were firstly to investigate

- The factor structure of the Adjustment to Motherhood Questionnaire (AMQ);
- age trends on all the subtests;
- language differences on all the subtests;
- differences in marital status of the mother on al the subtests;
- the effect of the type of father involvement on all the subtests;
- differences in the mother's type of work on all the subtests; and
- the effect of the number of days the mother is employed.

The second aim was to develop a short form of the AMQ.

3. METHOD

3.1 Measuring instrument

A questionnaire, the *Adjustment to Motherhood Questionnaire* (AMQ), was used in this study and is included as Appendix C. The AMQ consists of a biographical section and 11 subtests which are grouped in six fields. The questions in the AMQ were based on a literature study, discussions with peers, clinical impressions and the results of an exploratory study in which 86 mothers had been interviewed about their experiences of motherhood (Cleaver & Botha, 1990). The interviews comprised structured questions. The protocols obtained were subjected to a content analysis as set out by Miles and Huberman (1984).

3.1.1 Biographical section of the AMQ

The biographical section contains questions on the following themes:

- *Age*: Age of the mother, the father and their children.
- *Qualifications*: Highest educational qualifications of the parents.
- *Marital status of the mother*: Current marital status of the mother.
- *Type of work*: Occupations of the parents.

3.1.2 Fields and subtests of the AMQ

The six fields of the AMQ relate to: socio-economic status, physical aspects, emotional adjustment, mother-child interaction, father involvement and employment of mothers.

3.1.2.1 *Field 1: Socio-economic status*

Field 1 refers to Subtest 8. See Table A19 in Appendix A for the items in Subtest 8. Mothers are asked about the estimated annual family income, number of adults and children living in the dwelling-place, number of rooms used as bedrooms and the degree of satisfaction with different aspects of the dwelling-place.

3.1.2.2 *Field 2: Physical aspects*

Field 2 consists of Subtests 6, 9 and 10. See Table A14, A22 and A25 in Appendix A for the items in these subtests. Questions are asked about the child's sleeping pattern, the mother's absence from the child and possible reasons for this (such as illness or work), the mother's support systems, the physical health of both mother and child, premature birth or not and whether the child was born as a result of a planned or unplanned pregnancy.

3.1.2.3 *Field 3: Emotional adjustment*

Subtests 1, 2 and 4 are included in Field 3. See Table A1, A4 and A10 in Appendix A for the items in these subtests. This field focuses on the mother's state of mind, her expectations of motherhood and the realisation of these expectations, manifestations of aggression and depression, and her self-image.

3.1.2.4 *Field 4: Mother-child interaction*

Field 4 consists of Subtest 5. See Table A12 in Appendix A for the items in Subtest 5. Mothers are asked how often they engage in different activities with their children, how much they and their children enjoy them, and how much time they usually devote to these activities every day. Further questions centre around how the mother experiences her child and whether the child attends a nursery school or play group.

3.1.2.5 *Field 5: Father involvement*

Subtests 3 and 7 are included in Field 5. (See Table A7 and A17 in Appendix A for the items in these subtests.) Field 5 focuses on the category into which the father falls, that is, whether he is the biological, step- or surrogate father, the extent to which the father supports the mother, the mother's perception of the importance of the father's role, the amount of time the father spends with the child, the child's reaction to the father, the child's involvement in the father's activities, and the mother's perception of the father-child relationship.

3.1.2.6 *Field 6: Employment of mothers*

Field 6 is based on Subtest 11. (See Table A28 in Appendix A for the items in Subtest 11.) This section focuses on reasons why the mother entered employment away from home, the child's age when the mother started work, difficulties the mother experiences with regard to the fact that she is employed, substitute care for the child, the mother's degree of satisfaction with her work, the amount of time the mother spends at work, and the child's reaction to the fact that the mother works away from home.

3.2 The sample

The sample consisted of 838 mothers with pre-school children aged between two and six years. The sample was one of convenience, and all respondents lived in the Pretoria area. In cases where the mother had more than one pre-school child, the eldest child was referred to in the study. The mothers were interviewed by one of 19 fieldworkers trained to conduct the interviews and use the AMQ. Most mothers were interviewed in their homes and some at a clinic. Trained fieldworkers conducted the interviews. Interviewers had to report back whenever they had completed interviewing 20 mothers. Problems experienced during the interviews, and with the completion of the AMQ, were discussed during each report-back session and solutions were offered. The interviews were conducted in the mothers' own language.

The means, standard deviations, and the minimum and maximum values of the following variables for the 838 respondents are reflected in Table 1: age of mother, age of father, age of children, number of children, number of adults and children living in the dwelling-place and the number of rooms used as bedrooms.

Table 1: Biographical information of respondents

Variable	Mean	Standard deviation	Minimum	Maximum
Mother's age	29,9	6,4	17,0	51,0
Father's age	34,1	6,9	20,0	59,0
Children's age (years)	4,2	1,2	2,0	6,9
Number of children	1,9	1,0	1,0	6,0
Number of adults in dwelling-place	2,7	1,2	1,0	8,0
Number of children in dwelling-place	2,2	1,1	1,0	8,0
Number of rooms used as bedrooms	2,9	0,9	1,0	6,0

The home language of the mother, her marital status and the number of children are reflected in Table 2. The Ns may differ in subsequent tables due to missing data for some of the respondents. Approximately half of the mothers interviewed were either Afrikaans- or English-speaking (50,3 %) and the other half Tswana- or Northern Sotho-speaking (49,4 %). Most of the mothers (91,4 %) had between one and three children.

Table 2: Mother's home language and marital status and number of children (N=838)

Mother's home language	Marital status of mother	Number of children						Total[b]
		1	2	3	4	5	6	
Afri-kaans	Married	8,9[a]	10,1	3,3	1,0	0,1	0,2	23,6
	Living together	0,6	0,1	0,0	0,0	0,0	0,0	0,7
	Single	1,0	0,0	0,0	0,0	0,0	0,0	1,0
	Divorced/estranged/ widowed	1,2	0,5	0,0	0,0	0,1	0,0	1,8
	Total	11,7	10,7	3,3	1,0	0,2	0,2	27,1
English	Married	3,7	10,6	4,3	1,3	0,0	0,0	19,9
	Living together	0,4	0,4	0,1	0,0	0,0	0,0	0,9
	Single	1,3	0,1	0,0	0,0	0,0	0,0	1,4
	Divorced/estranged/ widowed	0,4	0,6	0,0	0,0	0,0	0,0	1,0
	Total	5,8	11,7	4,4	1,3	0,0	0,0	23,2
Tswana	Married	2,7	2,9	2,5	1,1	0,5	0,1	9,8
	Living together	2,1	0,8	0,1	0,1	0,0	0,0	3,1
	Single	8,5	1,3	0,7	0,2	0,0	0,0	10,7
	Divorced/estranged/ widowed	1,2	0,6	0,6	0,6	0,0	0,0	3,0
	Total	14,5	5,6	3,9	2,0	0,5	0,1	26,6
Northern Sotho	Married	2,9	3,0	1,7	1,2	0,6	0,2	9,6
	Living together	1,9	0,8	0,1	0,0	0,0	0,0	2,8
	Single	5,8	0,8	0,5	0,4	0,0	0,0	7,5
	Divorced/estranged/ widowed	1,2	0,4	0,7	0,4	0,2	0,0	2,9
	Total	11,8	5,0	3,0	2,0	0,8	0,2	22,8

[a] Percentage.
[b] Final total does not add up to 100 %, because of rounding errors.

The home language of the mothers in relation to the occupations of both parents are indicated in Table 3. Of the mothers 37,5 % were housewives or unemployed, 33,8 % were engaged in clerical positions, 17,3 % had a professional occupation, 8,1 % were labourers and 3,9 % were domestic assistants. Of the fathers 45 % had a

professional occupation, 25,9 % were labourers, 22,8 % held clerical posts and 5,6 % were unemployed.

Table 3: Mother's home language and occupation of parents (N = 734)[a]

Mother's home language	Mother's occupation	Father's occupation				
		Labourer	Clerical	Professional	Unemployed	Total[b]
Afrikaans	H	0,0	0,0	0,0	0,0	0,0
	Labourer	0,1	0,0	0,1	0,0	0,2
	Clerical	3,3	4,9	5,2	0,2	13,6
	Professional	0,2	0,6	3,3	0,0	3,1
	Unemployed	0,0	0,3	0,0	0,0	0,3
	Housewife	1,8	3,0	5,8	0,4	11,0
	Total	5,4	8,8	14,4	0,6	29,2
English	H	0,0	0,0	0,4	0,1	0,5
	Labourer	0,0	0,0	0,2	0,0	0,2
	Clerical	1,3	2,1	5,1	0,3	8,8
	Professional	0,1	0,4	2,3	0,0	2,8
	Unemployed	0,0	0,0	0,0	0,0	0,0
	Housewife	0,6	1,8	11,4	0,0	13,8
	Total	2,0	4,3	19,4	0,4	26,1
Tswana	H	0,5	0,4	0,0	0,1	1,0
	Labourer	2,9	1,1	0,4	0,2	4,6
	Clerical	2,9	1,3	1,2	0,1	5,5
	Professional	1,0	1,1	2,7	0,5	5,3
	Unemployed	1,5	1,1	0,7	1,1	4,4
	Housewife	1,4	0,4	0,3	1,0	3,1
	Total	8,3	4,3	6,2	1,6	20,4
Northern Sotho	H	1,6	0,4	0,0	0,4	2,4
	Labourer	1,6	0,5	0,9	0,1	3,1
	Clerical	1,8	1,2	1,8	0,1	4,9
	Professional	0,9	1,4	2,7	0,1	5,1
	Unemployed	2,3	0,8	0,7	0,9	4,7
	Housewife	0,1	0,0	0,1	0,0	0,2
	Total	10,2	5,4	5,3	3,0	23,9

[a] The occupation of 104 of the fathers is unknown.
[b] Final total does not add up to 100 %, because of rounding errors.

The qualifications of the mothers and fathers in the different language groups are indicated in Table 4. Of the mothers 16,4 % had passed Stds 6 to 8, 48,3 % Stds 9 to 10, 22,2 % had passed matric and had a postmatric diploma or certificate, and 13,2 % had a degree or postgraduate qualification. Of the fathers 13,9 % had passed Stds 6 to 8, 45,4 % Stds 9 to 10, 18,7 % had passed matric and obtained a postmatric

diploma or certificate, and 22,1 % had obtained a degree or postgraduate qualification.

Table 4: Mother's home language and qualification of parents (N = 752)[a]

Mother's home language	Mother's qualifications	Father's qualifications					
		Stds 6-8	Stds 9-10	Std 10 & Diploma/ Cert.	Degree	Post-graduate	Total[c]
Afrikaans	Stds 6-8	1,3[b]	2,4	0,9	0,3	0,0	4,9
	Stds 9-10	1,6	6,1	3,2	1,1	0,2	12,2
	Std 10 and Diploma/ Certificate	0,3	1,9	2,3	1,6	0,5	6,6
	Degree	0,0	0,4	0,5	1,3	2,9	5,1
	Postgraduate	0,0	0,0	0,1	0,3	1,0	1,4
	Total	3,2	10,8	6,0	4,6	4,6	29,2
English	Stds 6-8	0,3	0,7	0,0	0,3	0,0	1,3
	Stds 9-10	0,8	3,6	3,2	1,9	0,2	9,7
	Std 10 and Diploma/ Certificate	0,0	2,8	2,8	4,1	1,5	11,2
	Degree	0,0	0,7	0,0	0,8	0,0	1,5
	Postgraduate	0,0	0,3	0,4	0,2	0,7	1,6
	Total	1,1	8,1	6,4	7,3	2,4	25,3
Tswana	Stds 6-8	1,9	2,5	0,1	0,0	0,0	4,5
	Stds 9-10	2,9	11,4	1,2	0,7	0,0	16,3
	Std 10 and Diploma/ Certificate	0,1	0,9	0,5	0,4	0,0	1,9
	Degree	0,0	0,3	0,3	0,3	0,3	1,2
	Postgraduate	0,0	0,4	0,0	0,0	0,0	0,4
	Total	4,9	15,5	2,1	1,4	0,3	24,3
Northern Sotho	Stds 6-8	2,7	2,9	0,1	0,0	0,0	5,7
	Stds 9-10	2,0	7,0	1,7	0,4	0,1	11,2
	Std 10 and Diploma/ Certificate	0,0	1,3	0,9	0,3	0,0	2,5
	Degree	0,0	0,5	0,5	0,4	0,1	1,5
	Postgraduate	0,0	0,3	0,0	0,1	0,1	0,5
	Total	4,7	12,0	3,2	1,2	0,3	21,4

[a] Eighty-six of the fathers' ages are unknown.
[b] Percentage.
[c] The total does not add up to 100 % because of rounding errors.

The ages of the mothers and fathers of the different language groups are shown in Table 5. Of the mothers 24,4 % were in the age group 17 to 25, 29,2 % in the age group 26 to 30, 23,6 % in the age group 31 to 35, and 22,8 % were 36 years or older. Of the fathers 10,8 % were in the age group 17 to 25, 23,2 % in the age group 26 to 30, 25,7 % in the age group 31 to 35, and 40,3 % were 36 years or older.

Table 5: Mother's home language and age of parents (N = 759)[a]

Mother's home language	Mother's age	Father's age				
		17-25	26-30	31-35	36 +	Total[b]
Afrikaans	17-25	4,0[b]	2,5	0,1	0,4	7,0
	26-30	0,7	4,3	4,2	1,2	10,4
	31-35	0,0	0,1	4,1	3,2	7,4
	36 +	0,0	0,0	0,3	3,8	4,1
	Total	4,7	6,9	8,7	8,6	28,9
English	17-25	0,8	1,4	0,4	0,1	2,7
	26-30	0,0	1,8	3,8	1,4	7,0
	31-35	0,0	0,3	3,7	4,2	8,2
	36 +	0,0	0,3	0,5	6,2	7,0
	Total	0,8	3,8	8,4	11,9	24,9
Tswana	17-25	2,8	5,1	0,5	0,0	8,4
	26-30	0,0	1,7	2,4	1,2	5,3
	31-35	0,0	0,0	0,8	4,5	5,3
	36 +	0,0	0,0	0,0	5,3	5,3
	Total	2,8	6,8	3,7	11,0	24,3
Northern Sotho	17-25	2,4	3,3	0,5	0,1	6,3
	26-30	0,1	2,4	3,2	0,8	6,5
	31-35	0,0	0,0	0,9	1,8	2,7
	36 +	0,0	0,0	0,3	6,1	6,4
	Total	2,5	5,7	4,9	8,8	21,9

[a] The ages of 79 of the fathers are unknown.
[b] Percentage.

Table 6 summarizes the distribution of the sample according to the monthly family income and the different language groups. The monthly income of the families of the Afrikaans- and the English-speaking mothers was significantly higher than that of the Tswana- and the Northern Sotho-speaking mothers ($p < 0,000$). The monthly income of 15,9 % of the families of the Afrikaans- and the English-speaking mothers was R4 000 or less whereas the monthly income of 47,8 % of the families of the Tswana- and the Northern Sotho-speaking mothers was R4 000 or less.

Table 6: Mother's home language and monthly income of family (N = 831)[a]

Mother's home language	Family's monthly income						
	≤ R200	R201-R500	R501-R1 000	R1 001-R2 000	R2 001-R3 000	R3 001-R4 000	R4 001 +
Afrikaans	0,1	0,1	0,5	2,4	3,5	4,3	16,4
English	0,0	0,0	0,1	0,8	1,8	2,3	18,4
Tswana	0,5	0,5	4,8	9,4	7,6	2,9	0,7
Northern Sotho	0,4	0,8	5,5	6,9	6,1	2,4	0,7
Total[b]	1,0	1,4	10,9	19,5	19,0	11,9	36,2

[a] Seven families' monthly income is unknown.
[b] The total does not add up to 100 % because of rounding errors.

The number of days per week that the mothers (from the different language groups) worked away from home, is indicated in Table 7. Of all the mothers 32 % were unemployed and 15,5 % were employed for six or seven days a week. Significantly more Tswana- or Northern Sotho-speaking mothers than Afrikaans- or English-speaking mothers worked six or seven days a week ($p < 0{,}000$).

Table 7: Mother's home language and number of days mother works per week (N = 838)

Mother's home language	Number of days			
	0	1-4	5	6-7
Afrikaans	11,0[a]	1,7	13,0	1,6
English	9,2	3,6	9,3	1,2
Tswana	7,2	0,1	12,5	6,9
Northern Sotho	4,9	0,4	11,7	5,8
Total[b]	32,3	5,8	46,5	15,5

[a] Percentage.
[b] The total does not add up to 100 % because of rounding errors.

3.3 Statistical procedures

3.3.1 Factor analyses

Factor analyses were used as a means of detecting groups of linearly related variables. Factor analysis is based on the premise that a small set of hypothetical

variables or factors could explain all correlations between observed variables. The factor loadings are standardized regression weights of the observed variables on the factors. These are interpreted as measures of the dependence of the observed variables on the factors. If the factors are uncorrelated, these standardized regression weights, or factor loadings, are also correlation coefficients. This is no longer the case when factors are correlated. The Iterated Principal Factor analysis method was used (Du Toit *et al.*, 1982).

The factor loadings can be transformed by a process of rotation to obtain a set of factor loadings that is more readily interpreted, with many factor loadings close to zero and a few large loadings. The Varimax method, an orthogonal rotation method, was used for this purpose. In orthogonal rotation the factors remain uncorrelated so that factor loadings are both regression weights and correlation coefficients. For subsequently deciding on the number of factors, factor matrices — with a series of factors straddling Kaiser's criterion — were rotated orthogonally and the number of factors which yielded the clearest interpretations were selected.

Large samples are a prerequisite for data which are to be factor analysed. Although authors differ on the ideal subject to item ratio, opinions range between 3:1 and 10:1. In this study 101 items were factor analysed and the subject to item ratio is 8:1.

3.3.2 Processing of variables

The density of the people living in a dwelling-place (Appendix B, Section A10 to A12) was calculated as follows:

$$\frac{A10 + A11}{A12}$$

Meaning of symbols used in equation:

A10: Number of adults (over 18) living in dwelling-place.
A11: Number of children (18 and under) living in dwelling-place.
A12: Number of rooms in dwelling-place used as bedrooms by the above mentioned people.

The variable "Separations between the mother and her child" (Appendix B, Section B4.1 to 4.2) was coded as follows:

B4.1 to 4.2 = 3 if B4.1 = 0 and B4.2 = 0

B4.1 to 4.2 = 2 if B4.1 = 1 and B4.2 = 0

B4.1 to 4.2 = 1 if B4.2 = 1

Meaning of symbols used above:

B4.1 to 4.2 = 3: Mother had never been separated from her child for longer than a week.

B4.1 to 4.2 = 2: Mother had, at least once, been separated from her child for longer than a week, but less than a month.

B4.1 to 4.2 = 1: Mother had been separated at least once from her child for longer than a month.

The variable "Reasons for absence of mother" (Appendix B, Section B5.1 to 5.4), was calculated as follows:

B5.1 to 5.4 = 3 if B5.1 to B5.4 = 0

B5.1 to 5.4 = 2 if B5.1 = 1

B5.1 to 5.4 = 1 if B5.2 = 1, B5.3 = 1 or B5.4 = 1

Meaning of symbols used above:

B5.1 to 5.4 = 3: No previous separations between mother and child.

B5.1 to 5.4 = 2: Reason for separation: illness.

B5.1 to 5.4 = 1: Reason for separation: work, family commitments, vacation.

4. RESULTS

4.1 Factor analyses

Factor analyses were conducted to get an indication of the constructs measured by the various subtests used in the AMQ. It was not possible to apply a confirmatory factor analysis to the data to determine whether the factors resembled those proposed by the theory or not, as different scales were used throughout the questionnaire. The 11 subtests in the AMQ were subjected to a factor analysis. The subtests are:-

Subtest 1: The mothers' prior perceptions
Subtest 2: The mothers' emotional adjustment
Subtest 3: Father-child relationship
Subtest 4: The emotional status of the mother
Subtest 5: Mother-child involvement
Subtest 6: Mother-child interaction
Subtest 7: The parental relationship
Subtest 8: Socio-economic aspects
Subtest 9: Physical well-being of mother and child
Subtest 10: Support systems
Subtest 11: Employment of mothers

The initial variables included in each subtest, and a description of each variable, are found in Tables A1, A4, A7, A10, A12, A14, A17, A19, A22, A25 and A28 (Appendix A). The variables listed are derived from the questions in the AMQ (Appendix C). The initial rotated factor pattern for each subtest is set out in Tables A2, A5, A8, A11, A13, A15, A18, A20, A23, A26 and A29 (Appendix A). A series of factor analyses were done after the initial factor pattern had been obtained. Variables that correlated highly with other variables, and variables that loaded on more than one factor, or that had factor loadings of less than 0,3, were excluded. The final factor pattern that best fitted each subtest is reflected in Tables A3, A6, A9, A16, A21, A24, A27 and A30. For subtests 4, 5, and 7 the initial factor structures were accepted as final factor structures (Tables A11, A13 and A18). Tables 8 to 37 are set out in Appendix A.

4.1.1 Subtest 1: Mothers' prior expectations

A single-factor structure (Table A2) explains 91,0 % of the total variance of the variables in Subtest 1. The finally selected single-factor structure explains 35,5 % of the total variance in Subtest 1 (Table A3).

4.1.2 Subtest 2: Mothers' emotional adjustment

Factor 1 in Table A5 explains 33,9 %, Factor 2, 15,0 % and Factor 3, 10,0 % of the variance of the variables in Subtest 2. A single-factor structure, comprising the same variables as the three-factor structure, explains 48,9 % of the variance in the subtest. The finally selected factor structure (Table A6) has two factors, which explains 40,1 % of the total variance. Factor 1 explains 38,2 % of the variance and Factor 2 explains 1,9 %. Factor 1 of the final-factor structure refers to the mother's feelings towards her child. Factor 2 refers to the mother's feelings towards herself. The variables in Table A6 thus measure two dimensions of emotional adjustment, namely the mother's feelings towards her child (Factor 1) and her feelings towards herself (Factor 2). For the purpose of the AMQ this subtest will be viewed as a single entity, because both factors explain the mother's emotional adjustment.

4.1.3 Subtest 3: Father-child relationship

The initial three-factor structure for Subtest 3 explains 93,9 % of the total variance in the Subtest (Table A8). Factor 1 explains 60,1 %, whereas Factor 2 and Factor 3 each explains 16,9 % of the total variance. A single-factor structure for the variables in Table A8 explains 70,8 % of the variance. The final-factor structure (Table A9) explains 86,6 % of the total variance. Factor 1 of the final-factor structure explains

75,5 % of the variance in the subtest and Factor 2 explains 11,1 %. Factor 1 refers to the father's positive experience of his child and Factor 2 refers to the absence of a negative perception of his child. As in the case of Subtest 2, Subtest 3 is viewed as an entity, as both factors refer to the father-child relationship.

4.1.4 Subtest 4: The emotional state of the mother

The initial factor structure has been accepted, since all variables load higher than 0,3 on the single factor (Table A11). This factor explains 69,8 % of the total variance in the subtest.

4.1.5 Subtest 5: Mother-child involvement

The initial factor structure has been accepted since all variables load higher than 0,3 on Factor 1 (see Table A13). This factor explains 57,7 % of the total variance in Subtest 5.

4.1.6 Subtest 6: Mother-child interaction

The initial two-factor structure for Subtest 6 explains 80,7 % of the total variance in the subtest, with Factor 1 explaining 51,2 % and Factor 2 29,5 % of the variance (Table A15). However, two variables loaded on both factors (higher than 0,3). The final single-factor structure (Table A16) explains 69,0 % of the total variance in Subtest 6.

4.1.7 Subtest 7: The parental relationship

The initial factor structure has been accepted since all variables load higher than 0,3 on Factor 1 (Table A18). This factor structure explains 32 % of the variance in Subtest 7. A two-factor structure for the variables in Table A18 explains 71,2 % of the total variance, since two variables load higher than 0,3 on more than one factor.

4.1.8 Subtest 8: Socio-economic aspects

A single-factor structure explains 23,8 % of the variance, a two-factor structure with the same variables explains 69,6 % of the variance, a three-factor structure explains 86,5 % of the variance (Table A20), and a five-factor structure with the same variables explains 99,2 % of the variance. The finally selected factor structure has two factors, explaining 81,8 % of the variance in this subtest (see Table A21). Factor 1 explains 49,0 % of the variance and Factor 2 explains 32,8 % of the variance. Factor 1 refers to the general socio-economic status and Factor 2 refers to specific

needs with regard to the dwelling-place. Factor 1 and Factor 2 have been regarded as an entity, since both factors comprise socio-economic status.

4.1.9 Subtest 9: Physical well-being of mother and child

A two-factor structure explains 24,7 %, and a three-factor structure (Table A23) 32,8 % of the variance in the subtest. Variables which loaded on more than one factor and variables that were highly correlated were then excluded. The final-factor structure (Table A24) comprises two factors, with Factor 1 explaining 53,5 % of the variance and Factor 2 explaining 44,7 % of the variance in the subtest (98,1 % in total). Factor 1 refers to the demanding behaviour of the child and Factor 2 to the sleeping patterns of the mother and child. Although two factors have been identified, the subtest has been regarded as an entity, since both factors refer to the well-being of the mother and the child.

4.1.10 Subtest 10: Support systems

The initial two-factor structure (Table A26) explains 43,3 % of the variance in the subtest, a single factor structure with the same variables as in Table A26 explains 21,6 % and a three-factor structure explains 57,6 % of the variance. The final-factor structure (Table A27), comprising three factors, explains 75,2 % of the variance in Subtest 10, with Factor 1 explaining 33,2 % of the variance in the subtest, Factor 2 explaining 21,3 % and Factor 3 explaining 20,7 %. Factor 1 refers to the use of a clinic as a support system, Factor 2 to the use of family and friends and Factor 3 to the use of the mother's mother. The subtest has been viewed as a unity, as all three factors refer to the support systems used by the mother.

4.1.11 Subtest 11: Employment of mothers

A single-factor structure explains 37,2 % of the variance in the subtest, a three-factor structure with the same variables 57,6 % (Table A29) and a five-factor structure 82 % of the variance. The final-factor structure (Table A30) is a two-factor structure explaining 49,8 % of the variance in the subtest. Factor 1 explains 31,4 % of the variance in the subtest and Factor 2, 18,4 % of the variance. Factor 1 refers to the mothers' attitudes towards employment and Factor 2 refers to the implications that the mothers' employment has for the child. The subtest has been viewed as an entity, as both factors refer to the implications of the mothers work.

4.2 Reliability

In order to distinguish the standardized questionnaire from the unstandardized questionnaire it was decided to name the standardized questionnaire the Adjustment to Motherhood Questionnaire-Short Form (AMQ-S).

The Cronbach alpha coefficients for the various subtests are reflected in Table 8. Subtests 2 and 4 have the highest Cronbach alphas (0,83 and 0,86 respectively) and Subtests 10 and 11 the lowest alphas (0,18 and 0,20 respectively). It was decided at this stage to remove Subtest 1 from the rest of the analysis, because of the low percentage of variance explained (35,5 %), combined with a low alpha (0,34).

Table 8: Percentage variance explained by final factor structures and the Cronbach coefficient alphas for the final variables (standardised) for each subtest

	Subtest	Number of variables	Percentage of variance explained	Alpha
1	Mothers' prior expectations	4	35,5%	0,34
2	Mothers' emotional adjustment	14	40,1%	0,83
3	Fathers' support of the mothers	8	86,6%	0,72
4	Current emotional state of the mothers	6	57,7%	0,86
5	Mother-child involvement	4	69,8%	0,54
6	Mother-child interaction	3	69,0%	0,55
7	Mother-father relationship	7	31,7%	0,81
8	Socio-economic aspects	7	86,5%	0,45
9	Physical well-being of mother and child	8	98,1%	0,49
10	Support systems	6	75,2%	0,18
11	Working mothers	7	49,7%	0,20

4.3 Validity

Apart from the factor analysis, which provides an indication of the constructs measured, it is necessary to get an indication of the validity of the AMQ-S. Content validity seeks to establish if the items are a well-balanced sample of the content domain to be measured. Content validity is a non-statistical type of validity. The

AMQ-S should be administered with another test such as the Hereford Parent Attitude Scale to determine how well the test correlates with other tests. The Hereford Parent Attitude Scale has five subsections: self-confidence as a parent, trust between parent and child, acceptance of the child, understanding of child behaviour and causation of child behaviour. The ability of the seven subtests to discriminate between poor and good adjustment to motherhood should be tested.

The predictive validity of the AMQ-S should be determined in order to obtain an indication of the extent to which the test can forecast a criterion such as emotional problems experienced by the mother and child.

4.4 Final questionnaire

Using the Cronbach alpha coefficient of each subtest and the percentage of the variance in each subtest explained by the factor structures, it was decided that Subtests 2, 3, 4, 5, 7, 8 and 9 should be used in the short form of the AMQ.

The number of respondents, mean, standard deviation, and the minimum and maximum score for each subtest of the AMQ-S are reflected in Table 9. See Table 10 for the Pearson correlation coefficients and the number of observations for the various subtests of the AMQ-S. The correlation coefficients vary from 0,17 (between Subtests 5 and 8) to 0,49 (between Subtests 2 and 5 and between Subtests 2 and 8).

Table 9: Number of respondents, mean, standard deviation, and minimum and maximum scores for each subtest

Subtest	N	Mean	SD	Minimum	Maximum
2	825	54,6	9,0	18,0	70,0
3	695	32,8	5,0	13,5	39,5
4	820	21,5	5,7	6,0	30,0
5	809	15,0	3,2	4,0	20,0
7	657	23,0	5,6	7,0	35,0
8	824	8,5	2,1	2,0	11,0
9	818	9,2	2,1	1,0	12,0

Table 10: Pearson correlation coefficients and number of observations for the various subtests

Subtest	Subtest 2	Subtest 3	Subtest 4	Subtest 5	Subtest 7	Subtest 8	Subtest 9
Subtest 2	1,00*** 825	0,41** 685	0,49** 809	0,42** 798	0,44** 825	0,49** 811	0,23** 805
Subtest 3		1,00*** 695	0,27** 678	0,31** 673	0,49** 644	0,33** 686	0,05 679
Subtest 4			1,00** 820	0,21** 792	0,33** 643	0,36** 807	0,27** 800
Subtest 5				1,00*** 809	0,20** 636	0,17** 795	-0,00 789
Subtest 7					1,00*** 657	0,34** 648	0,14 641
Subtest 8						1,00*** 824	0,22** 805
Subtest 9							1,00*** 818

* p = 0,0005
** p = 0,0001
*** p = 0,0000

4.5 Norms

A sample of convenience was used in this study since it is extremely difficult to use a random sample when conducting surveys in black towns. Firstly, as the majority of people do not have telephones, a list of residents is not available. Secondly, as residential blocks are not set out as they are in white towns it is difficult to choose, say, every fourth house. Thirdly, it is well known that owing to the lack of trust relating to research which arose during the apartheid years, many black people refuse to take part in research projects. The fieldworker therefore must locate subjects willing to take part in the investigation. Fourthly, the use of a random sample is more costly than the use of a sample of convenience. A sample of convenience is not appropriate for norms, therefore the limitations of a sample of convenience should be borne in mind when using the norms.

The following variables were selected for possible use in establishing norms for the short form of the AMQ (AMQ-S) (Appendix C): age of the mother (A1), home language (A0), marital status (A6), type of father (E1), number of days the mother works (F5) and the occupation of the mother (A7). The results of the Kruskal-Wallis non-parametric rank sum test are reflected in Table 11. (A non-parametric test was used to dispense with the assumption that the populations were normally distributed.) The results indicate significant differences for a number of selected variables.

Table 11: Selected variables tested for norms, number of respondents, the Kruskal-Wallis test statistic, level of significance and degrees of freedom for the various subtests

Subtest	Variables	N	Kruskal-Wallis test statistics	Degrees of freedom
Mother's emotional adjustment	Mother's age	823	42,98***	3
	Home language	825	68,02***	3
	Marital status	825	97,99***	3
	Type of father	825	42,00***	2
	Days working	825	2,99	2
	Type of work	806	49,33***	4
Father-child relationship	Mother's age	693	14,81*	3
	Home language	695	34,92***	3
	Marital status	695	78,28***	3
	Type of father	695	2,20	1
	Days working	695	13,80**	2
	Type of work	678	30,94***	4
Emotional state of the mother	Mother's age	818	13,24	3
	Home language	820	20,81***	3
	Marital status	820	39,59***	3
	Type of father	820	7,37	2
	Days working	820	0,22	2
	Type of work	799	23,54***	4
Mother-child involvement	Mother's age	808	43,96***	3
	Home language	809	159,90***	3
	Marital status	809	97,10***	3
	Type of father	809	18,34***	2
	Days working	809	10,23*	2
	Type of work	788	90,54***	4
Mother-child interaction	Mother's age	836	1,35	3
	Home language	838	6,93	3
	Marital status	838	1,20	3
	Type of father	838	19,79***	2
	Days working	838	4,42	2
	Type of work	817	6,82	4
Mother-father relationship	Mother's age	656	8,75	3
	Home language	657	3,68	3
	Marital status	657	46,95***	3
	Type of father	657	0,79	1
	Days working	756	0,85	2
	Type of work	640	9,43	4
Socio-economic aspects	Mother's age	822	35,36***	3
	Home language	824	32,29***	3
	Marital status	824	81,87***	3
	Type of father	824	51,80***	2
	Days working	824	1,86	2
	Type of work	806	49,69***	4
Well-being of mother and child	Mother's age	816	4,97	3
	Home language	818	1,22	3
	Marital status	818	6,49	3
	Type of father	818	3,33	2
	Days working	818	0,23	2
	Type of work	798	7,56	4
Support systems	Mother's age	833	20,87***	3
	Home language	835	8,80	3
	Marital status	835	14,99*	3
	Type of father	835	56,87***	2
	Days working	835	21,58***	2
	Type of work	814	13,73*	4
Working mothers	Mother's age	529	1,94	3
	Home language	531	21,23***	3
	Marital status	531	20,46***	3
	Type of father	531	1,08	2
	Days working	531	5,44	1
	Type of work	526	20,18*	4

* $p \leq 0,01$
** $p \leq 0,001$
*** $p \leq 0,0001$

It was decided to use the same variable consistently for establishing norms for all the subtests, so as to increase the user-friendliness of the questionnaire and of the norms. Marital status (A6) was selected as a variable for the development of norms, as the variable gave significant results for eight of the ten subtests. After inspection of the results of a General Linear Model procedure, with marital status as an independent variable and the various subtests as dependent variables, it was decided to recode the variable marital status (A6) to a binary variable (AA6) of, (1) married or living together, and (2) unmarried, divorced, estranged or widowed.

The Wilcoxon scores (NPar1way procedure) for each subtest classified by the binary variable, marital status (AA6), are listed in Table 12. The two marital status groups differed significantly with regard to all subtests, except for Subtest 6 (mother-child interaction) and Subtest 9 (well-being of the mother and the child).

Table 12: Number of observations, mean, standard deviation and Wilcoxon scores (Npar-1-way procedure) for each subtest classified by the variable marital status (AA6)

Subtest	Marital* status	N	Mean	SD	z	p
2	1 2	585 240	56,49 50,00	7,85 9,78	-9,03	0,0001
3	1 2	576 119	33,54 29,11	4,45 5,73	-7,80	0,0001
4	1 2	577 243	22,24 19,67	5,29 6,07	-5,68	0,0001
5	1 2	574 235	15,61 15,60	2,91 3,45	-7,63	0,0001
6	1 2	593 245	4,50 4,42	0,88 0,98	-0,79	0,4300
7	1 2	563 94	23,75 18,80	4,97 7,18	-6,44	0,0001
8	1 2	586 238	8,89 7,53	2,00 2,05	-8,63	0,0001
9	1 2	584 234	9,22 9,18	2,22 1,82	-1,19	0,2359
10	1 2	591 244	2,50 2,80	1,22 1,04	-3,70	0,0002
11	1 2	367 164	6,15 5,89	0,99 0,95	-3,42	0,0006

* 1 = Married; living together.
2 = Unmarried; divorced; estranged; widowed.

As far as skewness is concerned, it seemed that few of the distributions were normal: they were mainly negatively skewed. Most mothers therefore adjusted quite well to motherhood. It was, however, decided to transform the raw scores in each subtest to a stanine scale ($\bar{X}$ = 5; SD = 1,96), to enable the scale to be widely used and easily interpreted. The norms for the various subtests are depicted in Tables 13 to 19.

Table 13: Norms for Subtest 2 for married mothers (or mothers living with a male partner) and for single mothers

Raw score: Married/Living together (N = 585)	Stanine	Raw score: Single mothers (N = 240)
18-40	1	18-31
41-45	2	32-37
46-50	3	38-42
51-55	4	43-47
56-59	5	48-53
60-62	6	54-57
63-65	7	58-60
66-68	8	61-65
69-70	9	66-70

Table 14: Norms for Subtest 3 for married mothers (or mothers living with a male partner) and for single mothers

Raw score: Married/Living together (N = 576)	Stanine	Raw score: Single mothers (N = 126)
9-23	1	9-18
24-27	2	19-20
28-29	3	21-23
30-32	4	24-26
33-34	5	27-30
35-36	6	31-33
37	7	34-35
38	8	36-37
39	9	39

Table 15: Norms for Subtest 4 for married mothers (or mothers living with a male partner) and for single mothers

Raw score: Married/Living together (N = 577)	Stanine	Raw score: Single mothers (N = 243)
6-11	1	6-8
12-15	2	9-11
16-18	3	12-14
19-20	4	15-17
21-23	5	18-21
24-25	6	22-24
26-27	7	25-26
28-29	8	27-28
30	9	29-30

Table 16: Norms for Subtest 5 for married mothers (or mothers living with a male partner) and for single mothers

Raw score: Married/Living together (N = 574)	Stanine	Raw score: Single mothers (N = 235)
5-9	1	5-6
10-11	2	7-9
12-13	3	10-11
14-15	4	12
16	5	13
17	6	14-15
18	7	16-17
19	8	18
20	9	19-20

Table 17: Norms for Subtest 7 for married mothers (or mothers living with a male partner) and for single mothers

Raw score: Married/Living together (N = 563)	Stanine	Raw score: Single mothers (N = 151)
7-13	1	7
14-17	2	8-9
18-20	3	10-12
21-22	4	13-16
23-24	5	17-20
25-27	6	21-25
28-29	7	26-28
30-32	8	29-31
33-35	9	33-35

Table 18: Norms for Subtest 8 for married mothers (or mothers living with a male partner) and for single mothers

Raw score: Married/Living together (N = 586)	Stanine	Raw score: Single mothers (N = 238)
2-3	1	2-3
4	2	4
5	3	5
6	4	6
7	5	7
8	6	8
9	7	9
10	8	10
11	9	11

Table 19: Norms for Subtest 9 for married mothers (or mothers living with a male partner) and for single mothers

Raw score: Married/Living together (N = 584)	Stanine	Raw score: Single mothers (N = 234)
1-4	1	1-4
5	2	5
6	3	6
7	4	7
8	5	8
9	6	9
10	7	10
11	8	11
12	9	12

The reader is referred to Table A31 in Appendix A which lists the reduced number of questions in the Adjustment to Motherhood Questionnaire-Short Form (AMQ-S) with reference to the original Adjustment to Motherhood Questionnaire (AMQ).

5. DISCUSSION AND RECOMMENDATIONS

The AMQ-S (see Appendix C), with its biographical section and seven subtests, can be used to identify mothers in need of counselling or other forms of assistance, such as may be obtained from joining a support group. It can be used as a screening test, for example in clinics, and to evaluate the effectiveness of interventions. A stanine of 1 to 3 indicates that, with regard to the specific subtest, the mother has not adjusted to motherhood very well and that she needs special attention. A stanine of 4 to 6

indicates that the mother is potentially at risk and that she may experience more serious adjustment problems in future. A stanine of 7 to 9 indicates that the mother has adjusted very well to the particular aspect of motherhood. The greater the number of low scores the mother has, the greater will be her need for support, and the greater the number of high stanines the mother has, the less support she will need.

The factor analyses were conducted on the total sample. Although the factor structures for blacks and whites are not necessarily the same, factors such as income, education level and marital status are more likely to distinquish one group from another than are language or cultural differences between blacks and whites (Mwamwenda, 1995; Cleaver, 1994). The household income of the mothers in this study is far greater among the white than among the black groups. At the time of writing 2 % of the white population as opposed to 28 % of the black population live below the poverty line. Whites have eight times the wealth of the blacks (Nel, 1994). The educational standard of whites has also been higher than that of blacks, due largely to the apartheid system. The new dispensation in South Africa will presumably change this status of affairs in the future.

Many authors agree that a single mother experiences far more stress than a mother who has the support of the child's father, which in turn affects the quality of her relationship with her child and her adjustment to motherhood. According to Naran (1991) parenting and child care responsibilities, financial difficulties and social relationships are problematic for single mothers. In addition, father absence increases the responsibility of the mother who then finds it extremely difficult to find enough time to attend to her child's needs (Colletta, 1983; Lamb, 1982). A single mother also encounters difficulties in the areas of household management, home and employment coordination, and home maintenance (Colletta, 1983; Cornelius, 1990). Most single mothers have to rely on relatives and other networks in order to cope. As can be seen many variables affect the quality of mothering for single parents. In addition significant results were obtained on most of the subtests for single mothers as compared to those who were not single. It was therefore decided that norms should be based on whether or not the mothers were single.

The relatively low reliability coefficients of some of the subtests may be partially explained by the fact that the AMQ-S was not standardized for different language groups. Although black and white respondents tend to respond differently to the same items on scales, the researchers decided to assess black and white mothers by means of the same questionnaire because of the lack of clarity on this phenomenon. From a political viewpoint this decision is desirable. As discussed above, the researchers decided that it would be preferable to forfeit some reliability, and to

develop a questionnaire and norms which could be used for more than one language group. It is expected that some factors which may influence the reliability of the AMQ-S, for example the fact that fewer facilities are available in black urban areas than in white urban areas, may, to some extent, be eliminated in future, owing to political change. There will also possibly be greater parity in salaries with increased job opportunities. It is thus recommended that the psychometric features of the AMQ-S be re-evaluated every five years.

Many factors impinge upon the interactions and involvement between mother and child. In South Africa, for example, because of geographical separations brought about by past ideologies, many black women have to travel great distances to reach their place of work while many domestic workers live at their places of work. This status of affairs affects the amount of time during which a black mother can interact with her child.

The relationship between the father and the child and the parental relationship are included in the AMQ-S, as the mother's relationship with the father and his relationship with the child should be part of the focus of interventions which could assist the mothers. Mothers usually feel more fulfilled when the father is involved (Boulton, 1983; Martin & Baenen, 1987). Coltrane (1988) has pointed out that the father's participation in child rearing improves the mother's self-esteem. Burman and Pedersen (1987) suggest that the couple's relationship affects the degree of involvement between father and child.

Although the AMQ-S has been developed to be completed in an interview situation, it may be completed by mothers themselves. It is recommended that the AMQ-S be tested for use on other black, Indian and coloured groups, and for mothers younger than 17 years.

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APPENDIX: A

Table A1 Subtest 1: Mothers' prior expectations: initial variables and description of the variables

Variables	Description of the variables
B12	Was your baby a planned baby?
C2.4	Did you expect that it would affect your leisure time with the child's father?
C2.5	Did you expect that it would improve your relationship with the child's father?
C2.7	Did you expect that you would feel a more fulfilled person?
C2.9	Did you expect that it would make your life more meaningful?
D17	Was your child of the opposite sex than you had wished for?

Table A2 Subtest 1: Mothers' prior expectations: rotated factor pattern for initial variables

Variable	Factor 1
C2.7	0,7937
C2.9	0,7851
B12	0,4904
C2.8	0,3928
C2.5	0,3027
D18	-0,0391
C2.4	-0,4189

Table A3 Subtest 1: Mothers' prior expectations: rotated factor pattern for final variables

Variable	Factor 1
C2.9	0,7087
C2.8	0,5762
B12	0,5127
C2.5	0,5082

Table A4 Subtest 2: Mothers' emotional adjustment: initial variables and description of the variables

Variables	Description of the variables
C5	How often have you felt that you may cause grief or harm to your child?
C6	How often do you feel out of control so that you shout at your child?
C7	How often do you feel out of control so that you become angry with your child?
C8	How often do you feel out of control so that you hit the child (more than just a normal hiding)?
C11	How often do you feel isolated from other people?
C12	To what extent did you lose interest in the things you liked to do during the pre-school period?
C13	To what extent does the child provide you with a purpose in life?
C14	To what extent did you stop taking an interest in your personal appearance during the pre-school period?
C15	To what extent would you describe yourself as an assertive person i.e. able to stand up for yourself?
C16	To what extent do you feel positive about yourself and your abilities as a mother?
C19	To what extent do you experience your child provide happiness for you?
D10	To what extent do you experience your child as intelligent?
D11	To what extent do you experience your child as having a pleasant personality?
D12	To what extent do you experience your child as difficult to get along with?

Table A5 Subtest 2: Mothers' emotional adjustment: rotated factor pattern for initial variables

Variable	Factor 1	Factor 2	Factor 3
C7	0,8305	0,0812	0,1010
C6	0,8100	0,0665	0,0956
C5	0,7641	0,1633	-0,0563
C8	0,6897	0,0586	0,1718
C11	0,6129	0,2325	0,1563
C12	0,5834	0,1507	0,1913
C13	0,1953	0,8169	-0,0393
C19	0,2158	0,8004	0,1440
C16	0,0914	0,6046	0,4116
C10	0,1232	0,3750	0,3402
C14	0,0624	0,0689	0,8025
C11	0,2020	-0,0319	0,6432
C15	-0,0551	0,3965	0,5817
C12	0,2480	0,2342	0,5316

Table A6 Subtest 2: Mothers' emotional adjustment: rotated factor pattern for final variables

Variable	Factor 1	Factor 2
C7	0,8291	0,1190
C6	0,8080	0,1052
C5	0,7745	0,0602
C8	0,6844	0,1573
D11	0,6193	0,2651
D12	0,5834	0,2355
C16	0,1120	0,7117
C15	-0,0541	0,6968
C19	0,2593	0,6470
C14	0,0336	0,6347
C12	0,2401	0,5460
C13	0,2474	0,5239
D10	0,1323	0,5028
C11	0,1731	0,4476

Table A7 Subtest 3: Father-child relationship: initial variables and description of the variables

Variables	Description of the variables
E1	Type of father: biological, stepfather or surrogate.
E2.5	To what extent has the child's father supported you in the pre-school period? Taking the child on outings?
E3	How important do you think the father's presence in the home is for the development of your child?
E7	Does the child respond favourably/positively to the father?
E11	Did the father wish for a child of the opposite sex?
E13	To what extent does the father understand the child's needs?
E14	To what extent is the father patient with the child?
E15	To what extent does the father talk to the child?
E16	To what extent does the father play with the child?
E17	To what extent does the father place realistic demands on the child?
E18	To what extent does the father use excessive physical punishment on the child?

Table A8 Subtest 3: Father-child relationship: rotated factor pattern for initial variables

Variable	Factor 1	Factor 2	Factor 3
E15	0,8121	0,0343	0,1818
E16	0,7800	-0,0674	0,2854
E13	0,7586	0,2909	-0,1065
E7	0,7251	0,0874	-0,0792
E17	0,7018	0,2664	-0,1376
E3	0,6187	-0,1871	0,0326
E14	0,5104	0,4986	-0,2542
E18	0,1766	0,5179	-0,0195
E1	0,1964	-0,6112	-0,2625
E2.5	0,1435	-0,1219	0,7083
E11	-0,0735	0,2452	0,6176

Table A9 Subtest 3: Father-child relationship: rotated factor pattern for final variables

Variable	Factor 1	Factor 2
E13	0,7689	0,0843
E7	0,7305	-0,0300
E17	0,7125	0,0641
E3	0,6062	-0,0580
E16	0,6001	0,2728
E14	0,5800	0,0845
E11	-0,1288	0,8087
E18	0,2057	0,5999

Table A10 Subtest 4: The emotional state of the mother: initial variables and description of the variables

Variables	Description of the variables
	How would you describe your state of mind during your child's pre-school period?
C1.1	Very depressed? Not at all depressed?
C1.2	Very tense? Not tense at all?
C1.3	Very tearful? Not at all tearful?
C1.4	Very unhappy? Very happy?
C1.5	Very irritable? Calm?
C1.6	Very frustrated? Not frustrated at all?

Table A11 Subtest 4: The emotional state of the mother: rotated factor pattern for initial and final variables

Variable	Factor 1
C1.2	0,8487
C1.1	0,8421
C1.6	0,7990
C1.5	0,7482
C1.3	0,7051
C1.4	0,6724

Table A12 Subtest 5: Mother-child involvement: initial variables and description of the variables

Variables	Description of the variables
D8	How often do you take your child on outings?
D13	To what extent is your child involved with your activities (eg. cooking, house cleaning)?
D14	Does your child eat meals with you?
D15	Does your child watch TV with you?

Table A13 Subtest 5: Mother-child involvement: rotated factor pattern for initial and final variables

Variables	Factor 1
D13	0,6916
D14	0,6916
D15	0,6674
D8	0,5439

Table A14 Subtest 6: Mother-child interaction: initial variables and description of the variables

Variables	Description of the variables
B4.1-2	Were you ever away from your child for his/her pre-school year for: more than a week/month?
B5.2-4	Reason for absence: work, family commitments, vacation.
B5.1	Reason for absence: illness.
D7	How often do you cuddle your child?

Table A15 Subtest 6: Mother-child interaction: rotated factor pattern for initial variables

Variable	Factor 1	Factor 2
B5.1	0,8865	-0,3134
B4.1-2	0,8145	0,4797
B5.2-4	0,2211	0,9004
D7	-0,1168	0,3943

Table A16 Subtest 6: Mother-child interaction: rotated factor pattern for final variables

Variable	Factor 1
B4.1-2	0,9435
B5.2-4	0,6856
B5.1	0,5607

Table A17 Subtest 7: The mother-father relationship: initial variables and description of the variables

Variables	Description of the variables
C9	How often do you shout at the child's father?
C10	How often do you feel angry with your child?
E8.1	In what way has your relationship with the child's father changed: Time spent together?
E8.2	In what way has your relationship with the child's father changed: Intimacy (emotional)?
E8.3	In what way has your relationship with the child's father changed: Intimacy (physical)?
E8.4	In what way has your relationship with the child's father changed: Disagreements?
E10	To what extent are you content with your marriage (or relationship with the child's father) on an emotional level?

Table A18 Subtest 7: The mother-father relationship: rotated factor pattern for initial and final variables

Variable	Factor 1
E8.2	0,8000
E8.3	0,7563
E10	0,7388
E8.1	0,6851
E8.4	0,6651
C10	0,6488
C9	0,4757

Table A19 Subtest 8: Socio-economic aspects: initial variables and description of the variables

Variables	Description of the variables
A9	What is your family's annual estimated income?
A10	How many adults (over eighteen) live in your dwelling-place (including yourself)?
A11	How many children (under eighteen) in your dwelling?
A12	How many rooms in your dwelling are used as bedrooms by the above mentioned people?
A13	To what extent are you satisfied with your dwelling-place?
	What would have to change for you to be more satisfied with you dwelling-place:
A14.1	Number of rooms?
A14.2	Size of rooms?
A14.3	Having a dwelling-place of your own?
A14.4	Improved appearance of your dwelling place?
A14.5	Having a garden/lawn?
A14.6	Having your dwelling-place situated near to town?
A14.7	Better heating in winter time?
A14.8	Tarred roads in the neighbourhood?
C4	To what extent are you worried about finances?

Table A20 Subtest 8: Socio-economic aspects: rotated factor pattern for initial variables

Variable	Factor 1	Factor 2	Factor 3
A13	0,7731	0,0297	-0,0868
A10-12	0,7542	0,0062	-0,0188
A9	0,6206	-0,1051	0,1262
A14.1	0,4236	0,3767	0,1242
C4	0,3957	0,3544	-0,0372
A14.5	-0,1565	0,6133	-0,1964
A14.2	0,1221	0,6094	0,0887
A14.4	-0,0225	0,5788	0,1928
A14.8	0,0778	0,0514	0,7162
A14.7	0,1520	0,1588	0,5441
A14.6	-0,0263	-0,0063	0,2940
A14.3	0,4253	0,0803	-0,5575

Table A21 Subtest 8: Socio-economic aspects: rotated factor pattern for final variables

Variable	Factor 1	Factor 2
A13	0,7398	-0,0152
A9	0,7125	-0,0043
C4	0,6034	0,1610
A14.7	0,0528	0,6631
A14.10	-0,0378	0,6389
A14.4	0,0371	0,5697
A14.2	0,2565	0,3595

Table A22 Subtest 9: Physical well-being of mother and child: initial variables and description of the variables

Variables	Description of the variables
B11	Was your baby a premature baby?
B1	Did you get enough sleep during the child's pre-school years?
B3	How many times, on average, did you get up nightly for your child before he/she began to sleep through the night?
	With which of the following did your child experience problems:
B9.1	Stomach cramps?
B9.2	Feeding problems?
B9.3	Excessive crying?
B9.4	Sleeping problems?
B9.6	Tantrums?
B9.7	Hyperactivity?
B9.8	Very demanding?
B9.9	High temperature?
B9.11	Influenza, problems with breathing, coughing, or ears?
B9.13	Common child illnesses?
B10	How would you describe your physical health during your child's pre-school period? Perfectly healthy? Ill?

Table A23 Subtest 9: Physical well-being of mother and child: rotated factor pattern for initial variables

Variable	Factor 1	Factor 2	Factor 3
B9.4	0,6386	0,1704	-0,0677
B1	0,5617	0,0091	0,4439
B3	0,5163	0,0730	-0,0891
B9.3	0,5143	0,1927	0,1182
B9.2	0,4294	-0,0784	0,1141
B11	0,2370	0,0198	-0,0786
B9.9	0,2017	-0,0602	0,0627
B9.6	0,0822	0,7328	0,2110
B9.7	-0,0738	0,7049	0,1127
B9.8	0,1619	0,5710	0,2436
B10	0,3355	-0,0354	0,6898
B9.11	-0,1548	0,1171	0,2376
B9.13	0,0736	-0,0743	-0,3846
B9.1	0,3376	0,2472	-0,4355

Table A24 Subtest 9: Physical well-being of mother and child: rotated factor pattern for final variables

Variable	Factor 1	Factor 2
B9.6	0,7487	-0,0243
B9.7	0,6875	-0,1052
B9.8	0,5615	0,2068
B9.1	0,3618	0,1677
B1	0,0266	0,6644
B9.34	0,2161	0,6147
B3	0,0834	0,5569
B9.2	-0,0302	0,4846

Table A25 Subtest 10: Support systems: initial variables and description of the variables

Variables	Description of the variables
	From whom did you get help and advice for problems you experienced with your child?
B7.1	Mother/Mother-in-law?
B7.2	Other family members?
B7.3	Clinic sister?
B7.4	Friend(s)/neighbours?
B7.5	Magazines/books?
B7.6	Medical doctor/homeopath/specialist?
B8	Did you take your child to the clinic regularly?

Table A26 Subtest 10: Support systems: rotated factor pattern for initial variables

Variable	Factor 1	Factor 2
B7.4	0,7388	0,0019
B7.5	0,7220	-0,0067
B7.2	0,5447	-0,3544
B7.6	0,3216	0,0877
B8	0,0753	0,7853
B7.3	0,1745	0,7447
B7.1	-0,0917	0,1682

Table A27 Subtest 10: Support systems: rotated factor pattern for final variables

Variable	Factor 1	Factor 2	Factor 3
B8	0,7896	-0,0314	0,1412
B7.3	0,7707	0,0078	-0,1451
B7.4	0,1705	0,7783	-0,0567
B7.2	-0,2021	0,7685	0,0189
B7.1	0,1473	0,0686	0,7889
B7.6	0,1496	0,1049	-0,7349

Table A28 Subtest 11: Employment: initial variables and description of the variables

Variables	Description of the variables
F1	How old was the child when you started to work?
	For what reasons did you go back to work?
F2.1	Boredom?
F2.2	Frustration?
	With which aspects did you have difficulty after you started working?
F3.2	Problems with childminder?
F3.3	Not enough support from father of child?
F3.4	No support group (or friends)?
F4.1	Who cares for your child while you work: Self?
F5.1	For how many days of the week do you work?
F8	How much do you enjoy your work?
F10	How does your child react to the fact that you work?

Table A29 Subtest 11: Employment: rotated factor pattern for initial variables

Variable	Factor 1	Factor 2	Factor 3
F2.2	0,5887	-0,0229	0,1453
F3.3	0,5439	0,1611	-0,0259
F3.4	0,4276	0,2460	-0,0230
F1	-0,4887	0,4095	0,3721
F5	0,0195	0,6895	0,0035
F8	0,2517	0,6502	-0,1196
F3.2	-0,1540	0,0072	0,7035
F10	0,1700	0,0990	0,5781
F2.1	0,0051	-0,0920	0,1476
F4.1	-0,3590	0,1956	-0,3738

Table A30 Subtest 11: Employment: rotated factor pattern for final variables

Variable	Factor 1	Factor 2
F2.2	0,5869	-0,0363
F3.4	0,5665	-0,0022
F3.3	0,5325	-0,1172
F8.1	0,4966	0,0162
F3.2	-0,0616	0,6736
F1	-0,1874	0,6436
F10	-0,2826	0,5481

Table A31 Question numbers which appear in the standardized AMQ-S and the corresponding question numbers which appear in AMQ

AMQ Question number	AMQ Question number	AMQ Question number	AMQ Question number
1	C5	28	C1.6
2	C6	29	D8
3	C7	30	D13
4	C8	31	D14
5	C11	32	D15
6	C12	33	C9
7	C14	34	C10
8	C13	35	E10
9	C18	36	E8.1
10	C15	37	E8.2
11	C16	38	E8.3
12	D10	39	E8.4
13	D11	40	C4
14	D12	41	A13
15	E3	42	A14.2
16	E7	43	A14.4
17	E11	44	A14.7
18	E13	45	A14.8
19	E14	46	A9
20	E16	47	B1
21	E17	48	B3
22	E18	49	B9.1
23	C1.1	50	B9.2
24	C1.2	51	B9.3
25	C1.3	52	B9.6
26	C1.4	53	B9.7
27	C1.5	54	B9.8

APPENDIX B

ADJUSTMENT TO MOTHERHOOD QUESTIONNAIRE (AMQ) (1994)

Enquiries: G. Cleaver & A. Botha TEL: (012) 420-2930/420-2913
Dept of Psychology
University of Pretoria
Pretoria
0001

This questionnaire is designed to evaluate mothers' adaptation to motherhood.

This questionnaire consists of 6 sections (A-F).

Section A: Biographical details
Section B: Physical aspects
Section C: Emotional aspects
Section D: Interactional aspects
Section E: Involvement of father
Section F: Working mothers

The user should utilize only those sections of the questionnaire relevant to the investigation being carried out.

It can be used:

1. to correlate various aspects with one another (e.g. certain biographical information with mother's interaction with child).
2. before and after skills have been taught, to measure possible changes.

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ADJUSTMENT TO MOTHERHOOD QUESTIONNAIRE (1994)

CLEAVER G & BOTHA A
UNIVERSITY OF PRETORIA
PSYCHOLOGY DEPARTMENT

FORM B
PRE-SCHOOL CHILDREN

SECTION A. BIOGRAPHICAL DETAILS

Name of interviewer: .....

Duration of interview: ..... min.

Name of mother (or number): .....

Address of mother: .....

Postal address of mother: .....

Mark with a cross where applicable, or write the answer in the appropriate space.

Home language of mother: .....

A1. Age of mother
A2. Age of father

A3. Qualifications of mother:

Highest school qualification obtained: Std: .....

Other qualifications:

- ☐ 1. Certificate
- ☐ 2. Diploma
- ☐ 3. BA/B.Sc./B.Soc. Work, etc.
- ☐ 4. Honours
- ☐ 5. M.A./M.Sc./M.Soc. Work, etc.
- ☐ 6. Ph. D.

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A4. Qualifications of father:

Highest school qualification obtained: Std: .....
Other qualifications:

- ☐ 1. Certificate
- ☐ 2. Diploma
- ☐ 3. BA/B.Sc/B.Soc. Work, etc.
- ☐ 4. Honours
- ☐ 5. M.A./M.Sc/M.Soc. Work, etc.
- ☐ 6. Ph. D.

A5. Age and sex of children (Place the child that is under discussion first):

AGE				SEX	CHILD
Years		Months		M/F	
					1.
					2.
					3.
					4.
					5.
					6.
					7.

A6. Marital state of mother:

- ☐ 1. Married
- ☐ 2. Living together
- ☐ 3. Unmarried
- ☐ 4. Divorced
- ☐ 5. Separated
- ☐ 6. Widow

A7. What type of work does the mother do?

- ☐ 1. Domestic work
- ☐ 2. Labourer
- ☐ 3. Clerical
- ☐ 4. Management
- ☐ 5. Professional
- ☐ 6. Student/Scholar
- ☐ 7. Housewife
- ☐ 8. Unemployed

A8. What type of work does the father of the child do?

- ☐ 1. Domestic work
- ☐ 2. Labourer
- ☐ 3. Clerical
- ☐ 4. Management
- ☐ 5. Professional
- ☐ 6. Scholar/Student
- ☐ 7. Unemployed

A9. What is your family's annual estimated income?

- ☐ 1. R 0-R2 400/year: (R 0-R 200/month)
- ☐ 2. R 2 401-R6 000/year: (R200,08-R500/month)
- ☐ 3. R 6 001-R12 000/year: (R500,08-R1 000/month)
- ☐ 4. R12 001-R24 000/year: (R2 000,08-R2 000/month)
- ☐ 5. R24 001-R36 000/year: (R2 000,08-R3 000/month)
- ☐ 6. R36 001-R48 000/year: (R3 000,08-R4 000/month)
- ☐ 7. R48 001-R60 000/year: (R4 000,08-R5 000/month)
- ☐ 8. R60 001-R72 000/year: (R5 000,08-R6 000/month)
- ☐ 9. R72 001+/year: (R6 000,08+/month)

A10. How many adults (over eighteen) live in your dwelling-place? (Including yourself):

.....

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A11. How many children (under eighteen) live in your dwelling-place?

.....

A12. How many rooms in your dwelling are used as bedrooms by the abovementioned adults and children?

.....

A13. To what extent are you satisfied with your dwelling-place?

Not at all satisfied +——+——+——+——+ Very satisfied
1 2 3 4 5

A14. What would have to change for you to be more satisfied with your dwelling-place?

- ☐ 1. Number of rooms
- ☐ 2. Size of rooms
- ☐ 3. Having a dwelling-place of your own
- ☐ 4. Improved appearance of dwelling-place
- ☐ 5. Having a garden/lawn
- ☐ 6. Having your dwelling-place situated nearer to town
- ☐ 7. Better heating in winter
- ☐ 8. Tarred roads in the neighbourhood

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SECTION B. PHYSICAL ASPECTS

B1. Did you get enough sleep during your child's pre-school years?

Not enough +——+——+——+——+ Enough
1 2 3 4 5

B2. At what age did your child begin sleeping through the night (without awakening)?

Months: .....

B3. How many times, on average, did you get up nightly for your child before he/she began to sleep through the night?

Times: .....

B4. Were you ever away from your child for his/her pre-school years for:

	Yes = Y No = N	Number of times
1. More than a week?		
2. More than a month?		

If you were never away from your child for more than a week or a month, please go to question B7.

B5. Reason for absence:

- ☐ 1. Illness
- ☐ 2. Work
- ☐ 3. Family commitments
- ☐ 4. Other (e.g. vacation)

B6. How did your child react immediately after your return?

- ☐ 1. He/she ignored you
- ☐ 2. He/she was pleased
- ☐ 3. He/she cried, was unhappy

B7. From whom did you seek help and advice for problems you experienced with your child?

- ☐ 1. Mother/mother-in-law
- ☐ 2. Other family members
- ☐ 3. Clinic sister
- ☐ 4. Friend(s)
- ☐ 5. Magazines/books
- ☐ 6. Medical doctor/Homeopath/Specialist
- ☐ 7. Other (e.g. psychologist, pastor, psychiatrist, traditional healer)

B8. Did you take your child to the clinic regularly?

Yes	No

B8.1 If not, give your reasons:

- ☐ 1. The child was not ill
- ☐ 2. There is no clinic in the area
- ☐ 3. Transport problems
- ☐ 4. Poor service at the clinic
- ☐ 5. Preferred to go to a doctor/hospital
- ☐ 6. Other (specify) .....

B9. With which of the following did your child experience problems?

- ☐ 1. Stomach cramps
- ☐ 2. Feeding problems
- ☐ 3. Excessive crying
- ☐ 4. Sleeping problems
- ☐ 5. Restlessness
- ☐ 6. Tantrums
- ☐ 7. Hyperactivity
- ☐ 8. Very demanding
- ☐ 9. High temperature
- ☐ 10. Teething problems

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- ☐ 11. Flu, problems with breathing, coughing or ears
- ☐ 12. Allergies
- ☐ 13. Common child illnesses eg. measels, mumps
- ☐ 14. Other (specify) .....

B10. How would you describe your physical health during your child's pre-school period?

Perfectly +——+——+——+——+ ill
healthy 1 2 3 4 5

B11. Was your baby premature?

Yes	No

B12. Was your baby planned?

Yes	No

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SECTION C. EMOTIONAL ADJUSTMENT

C1. How would you describe your state of mind *during* your child's pre-school period?

1.	Not at all depressed	1	2	3	4	5 Very depressed
2.	Not tense	1	2	3	4	5 Very tense
3.	Not tearful	1	2	3	4	5 Very tearful
4.	Unhappy	1	2	3	4	5 Very happy
5.	Calm	1	2	3	4	5 Very irritable
6.	Not frustrated	1	2	3	4	5 Very frustrated

C2. What were your expectations in respect of your child? (Mark more than one if applicable)

- ☐ 1. That it would be difficult
- ☐ 2. That it would involve a lot of your time
- ☐ 3. That it would involve a drastic change of lifestyle
- ☐ 4. That it would affect your leisure time with the child's father
- ☐ 5. That it would improve your relationship with the child's father
- ☐ 6. That it would have a negative effect on your friendships
- ☐ 7. That you would feel more fulfilled
- ☐ 8. That it would give you a better status
- ☐ 9. That it would make life more meaningful
- ☐ 10. That it would interfere with your relationship with the child's father

C3. To what extent were your expectations fulfilled?

Completely fulfilled	1	2	3	4	5	Not at all fulfilled

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C4. To what extent are you worried about finances?

A great deal +——+——+——+——+ Not at all
1 2 3 4 5

C5. How often have you felt that you may cause grief or harm to your child?

Often +——+——+——+——+ Never
1 2 3 4 5

C6. How often do you feel out of control so that you shout at your child?

Often +——+——+——+——+ Never
1 2 3 4 5

C7. How often do you feel out of control so that you become angry with your child?

Often +——+——+——+——+ Never
1 2 3 4 5

C8. How often do you feel out of control so that you hit the child (more than just a normal hiding)?

Often +——+——+——+——+ Never
1 2 3 4 5

C9. How often do you shout at the child's father?

Often +——+——+——+——+ Never
1 2 3 4 5

C10. How often do you feel angry with your child's father?

Often +——+——+——+——+ Never
1 2 3 4 5

C11. How often do you feel isolated from other people?

Often +——+——+——+——+ Never
1 2 3 4 5

C12. To what extent did you lose interest in the things you liked to do during the pre-school period?

To a large +——+——+——+——+ Not at
extent 1 2 3 4 5 all

C13. To what extent does the child provide you with a purpose in life?

Not at all +——+——+——+——+ To a large
1 2 3 4 5 extent

C14. To what extent did you stop taking an interest in your personal appearance during the pre-school period?

Not at +——+——+——+——+ To a large
all 1 2 3 4 5 extent

C15. To what extent would you describe yourself as an assertive person: i.e. able to stand up for yourself, to say what you mean?

+——+——+——+——+
1 2 3 4 5
Not assertive Assertive

C16. To what extent do you feel positive about yourself and your abilities as a mother?

+——+——+——+——+
1 2 3 4 5
Negative Positive

C17. To what extent would you describe yourself as an aggressive person?

+——+——+——+——+
1 2 3 4 5
Not aggressive Aggressive

C18. To what extent does your child provide happiness for you?

Not at all +——+——+——+——+ To a large
1 2 3 4 5 extent

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SECTION D. MOTHER-CHILD INTERACTION

How often do you:

D1. Play with your child?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

How much do you enjoy the activity?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

How much does your child enjoy it?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

D2. Talk to your child?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

How much do you enjoy the activity?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

How much does your child enjoy it?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

D3. Sing to your child?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

How much do you enjoy the activity?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

How much does your child enjoy it?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

D4. Try to teach your child?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

How much do you enjoy the activity?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

How much does your child enjoy it?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

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D5.

Give your child books, magazines, pencils, crayons, etc. to play with?	How much do you enjoy the activity?	How much does your child enjoy it?
+–+–+–+–+	+–+–+–+–+	+–+–+–+–+
1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Not at all A great deal	Not at all A great deal	Not at all A great deal

D6. How much time do you usually spend each day during the week doing the activities mentioned in questions D1-D5 above (without performing other activities simultaneously)?

Minutes per day

- ☐ Playing
- ☐ Talking
- ☐ Singing
- ☐ Teaching
- ☐ Books/crayons, etc.

D6.1 How much time do you usually spend each day during the weekend doing the activities mentioned in questions D1-D5 above (without performing other activities simultaneously)?

Minutes per day

- ☐ Playing
- ☐ Talking
- ☐ Singing
- ☐ Teaching
- ☐ Books/crayons, etc.

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D7. How often do you cuddle your child?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

How much do you enjoy the activity?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

How much does your child enjoy it?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

D8. How often do you take your child on outings?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

How much do you enjoy the activity?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

How much does your child enjoy it?

+–+–+–+–+

1 2 3 4 5

Not at all — A great deal

D9. How often does your child play with sand and/or water?

+——+——+——+——+

1 2 3 4 5

Not at all — A great deal

D10. To what extent do you experience your child as:

+——+——+——+——+

1 2 3 4 5

Not intelligent? — Intelligent?

D11. To what extent do you experience your child as:

+——+——+——+——+

1 2 3 4 5

An unpleasant personality? — A pleasant personality?

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D12. To what extent do you experience your child as:

+——+——+——+——+
1 2 3 4 5
Difficult? Easygoing?

D13. To what extent is the child involved with the mother's activities (e.g. cooking, house cleaning)?

+——+——+——+——+
1 2 3 4 5
Not at all A great deal

D14. Does your child eat meals with you?

+——+——+——+——+
1 2 3 4 5
Not at all Often

D15. Does your child watch TV with you?

+——+——+——+——+
1 2 3 4 5
Not at all Often

D16.1 Does your child attend a nursery school/play group or creche?

Yes ☐ No ☐

D16.2 If yes, how many days per week? ..... days

D16.3 How many hours per day? ..... hours

D17. Did you wish for a child of the opposite sex?

Yes ☐ No ☐

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SECTION E. INVOLVEMENT OF FATHER

E1. The father that is referred to in this section is:

☐ 1. The child's biological father.

☐ 2. The child's stepfather.

☐ 3. A surrogate father.

E2. To what extent has the child's father supported you in the pre-school period?

1. Financially:

Not at all +——+——+——+——+ A great deal
1 2 3 4 5

2. Emotionally:

Not at all +——+——+——+——+ A great deal
1 2 3 4 5

3. With disciplining the child:

Not at all +——+——+——+——+ A great deal
1 2 3 4 5

4. Playing with/keeping child occupied:

Not at all +——+——+——+——+ A great deal
1 2 3 4 5

5. Taking the child on outings:

Not at all +——+——+——+——+ A great deal
1 2 3 4 5

E3. How important do you think the father's presence in the home is for the development of your child?

Not at all +——+——+——+——+ Very
important 1 2 3 4 5 important

E4. How often do you think the father should play with the child?

Hardly ever +——+——+——+——+ Often
1 2 3 4 5

E5. How important do you think it is for the child's father to be involved in caring for him/her?

Not at all +——+——+——+——+ Very
important 1 2 3 4 5 important

E6. How much time does the child's father spend each day (on average) talking to, playing with, or teaching the child?

During the week: ..... minutes per day

During the weekend: ..... minutes per day

E7. Does the child respond favourably/positively to the father?

+——+——+——+——+
1 2 3 4 5
Unfavourably Positively

E8. In what way has your relationship with the child's father changed since your child's birth?

1. Time spent together: +——+——+——+——+
1 2 3 4 5
Less More

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2. Intimacy (emotional): +——+——+——+——+

1 2 3 4 5

Less More

3. Intimacy (physical): +——+——+——+——+

1 2 3 4 5

Less More

4. Disagreements: +——+——+——+——+

1 2 3 4 5

Less More

E9. To what extent is the child involved in the father's activities (e.g. fixing things in the house, washing the car, etc.)?

+——+——+——+——+

1 2 3 4 5

Not at all To a great extent

E10. To what extent are you contented with your marriage (or relationship with the child's father) on an emotional level, at the present time?

+——+——+——+——+

1 2 3 4 5

Not at all Very happy

happy

E11. To what extent had the father of the child hoped for a child of the opposite sex the child turned out to be?

Very much +——+——+——+——+ Not at all

1 2 3 4 5

E12. How often does the father work over weekends?

Never +——+——+——+——+ Very often

1 2 3 4 5

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E13. To what extent does the father understand the child's needs?

+——+——+——+——+

Not at all 1 2 3 4 5 Very much

E14. To what extent is the father patient with the child?

+——+——+——+——+

Impatient 1 2 3 4 5 Patient

E15. To what extent does the father talk to the child?

+——+——+——+——+

Not at all 1 2 3 4 5 Very much

E16. To what extent does the father play with the child?

+——+——+——+——+

Not at all 1 2 3 4 5 A great deel

E17. To what extent does the father place realistic demands on the child?

+——+——+——+——+

Unrealistic 1 2 3 4 5 Realistic

E18. To what extent does the father use excessive physical punishment on the child?

+——+——+——+——+

Excessive 1 2 3 4 5 Not at all

E19. To what extent does the father shout at the child?

To a large +——+——+——+——+

extent 1 2 3 4 5 Often

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SECTION F. EMPLOYMENT

If you are working at the present time answer the following questions:

F1. How old was the child when you started to work?

..... Years ..... Months

F2. For what reasons did you go back to work? (Mark more than one if applicable)

- ☐ 1. Boredom
- ☐ 2. Frustration
- ☐ 3. Financial
- ☐ 4. Stimulation/self-actualization/enjoyment

F3. With what aspect(s) did you have difficulty after you started working?

- ☐ 1. Not enough time to spend with child
- ☐ 2. Problems with child minder
- ☐ 3. Not enough support from father of child
- ☐ 4. No support group (e.g. friends)
- ☐ 5. Guilt feelings
- ☐ 6. Work load/type of work

F4. Who cares for your child while you work?

- ☐ 1. Self
- ☐ 2. Mother/mother-in-law
- ☐ 3. Other family
- ☐ 4. Day-care centre/Nursery school
- ☐ 5. Babysitter
- ☐ 6. Your child's father
- ☐ 7. Domestic worker

F5. For how many days of the week do you work? ..... days

F8. How much do you enjoy your work?

Very +——+——+——+——+ A great
little 1 2 3 4 5 deal

F9. If you are not satisfied with your work, what would you like to change?

- ☐ 1. Working hours
- ☐ 2. Relationship with employer
- ☐ 3. Relationship with colleagues
- ☐ 4. Creche facilities
- ☐ 5. Stress
- ☐ 6. Transport
- ☐ 7. Type of work
- ☐ 8. Spend less time at work

F10. How does your child react to the fact that you work?

+——+——+——+——+
1 2 3 4 5
Negatively Positively

APPENDIX C

ADJUSTMENT TO MOTHERHOOD QUESTIONNAIRE-SHORT FORM (AMQ-S) (1994)

BOTHA, A & CLEAVER, G

INSTRUCTIONS:

Please work with a cross where applicable, or write the answer in the appropriate space.

BIOGRAPHICAL DETAILS

Name of Interviewer: .....

Name of mother: .....Tel: (h) ..... (w) .....

Address: .....

Postal address: .....

B1. Home language of mother:
1. ☐ Afrikaans
2. ☐ English
3. ☐ Tswana
4. ☐ Northern Sotho

B2. Marital status of mother:
1. ☐ Married
2. ☐ Living together
3. ☐ Other: Unmarried, divorced, separated, widow

B.3	MOTHER OF CHILD		FATHER OF CHILD
	☐☐	Age	☐☐
B.4	☐☐ 1	Highest school qualification	☐☐ 1
		OTHER QUALIFICATIONS	
	☐ 2	Certificate	☐ 2
	☐ 3	Diploma	☐ 3
	☐ 4	BA/B.Sc./B.Soc.Work, etc.	☐ 4
	☐ 5	Honours	☐ 5
	☐ 6	MA/M.Sc./M.Soc.Work, etc.	☐ 6
	☐ 7	Ph. D.	☐ 7

B.5

	TYPE OF WORK	
☐ 1	Domestic work	☐ 1
☐ 2	Labourer	☐ 2
☐ 3	Clerical	☐ 3
☐ 4	Management	☐ 4
☐ 5	Professional	☐ 5
☐ 6	Student/Scholar	☐ 6
☐ 7	Housewife	☐ 7
☐ 8	Unemployed	☐ 8

B.6 Age and sex of children. (Place the child that is under discussion first):

CHILD	AGE				SEX
	Years		Months		M/F
1					
2					
3					
4					
5					
6					
7					

B.7 How many adults (over 18) live in your dwelling-place? (Including yourself):

☐☐

B.8 How many children (18 or under 18) live in your dwelling-place?

☐☐

B.9 How many rooms in your dwelling are used as bedrooms by the above mentioned adults and children?

☐☐

SUBTEST 2 1. How often have you felt that you may cause grief or harm to your child?	Often	1 2 3 4 5	Never
2. How often do you feel out of control so that you shout at your child?	Often	1 2 3 4 5	Never
3. How often do you feel out of control so that you become angry with your child?	Often	1 2 3 4 5	Never
4. How often do you feel out of control so that you hit the child (more than just a normal hiding)?	Often	1 2 3 4 5	Never
5. How often do you feel isolated from other people?	Often	1 2 3 4 5	Never
6. To what extent did you lose interest in the things you liked to do during the child's pre-school period?	To a large extent	1 2 3 4 5	Not at all
7. To what extent did you stop taking an interest in your personal appearance during the child's pre-school period?	To a large extent	1 2 3 4 5	Not at all
8. To what extent does your child provide you with a purpose in life?	Not at all	1 2 3 4 5	To a large extent
9. To what extent does your child provide happiness for you?	Not at all	1 2 3 4 5	To a large extent
10. To what extent would you describe yourself as an assertive person: i.e. able to stand up for yourself/to say what you mean?	Not assertive	1 2 3 4 5	Assertive
11. To what extent do you feel positive about yourself and your abilities as a mother?	Negative	1 2 3 4 5	Positive
12. To what extent do you experience your child as:	Not intelligent	1 2 3 4 5	Intelligent
13. To what extent do you experience your child as having:	An unpleasant personality	1 2 3 4 5	A pleasant personality
14. To what extent do you experience your child as:	Difficult to get along with	1 2 3 4 5	Easygoing
SUBTEST 3 15. How important do you think the father's presence in the home is for the development of your child?	Not at all important	1 2 3 4 5	Very important
16. Does your child respond favourably/positively to the father?	Unfavourably	1 2 3 4 5	Positively

17. To what extent did the father wish for a child of the opposite sex the child turned out to be?	Very much	1 2 3 4 5	Not at all
18. To what extent does the father understand the child's needs?	Not at all	1 2 3 4 5	Very much
19. To what extent is the father patient with the child?	Impatient	1 2 3 4 5	Patient
20. To what extent does the father play with the child?	Not at all	1 2 3 4 5	A great deal
21. To what extent does the father place realistic demands on the child?	Unrealistic	1 2 3 4 5	Realistic
22. To what extent does the father use excessive physical punishment on the child?	Excessive	1 2 3 4 5	Not at all
SUBTEST 4 **How would you describe your state of mind during your child's pre-school years?**	23. Very depressed	1 2 3 4 5	Not at all depressed
	24. Very tense	1 2 3 4 5	Not tense
	25. Very tearful	1 2 3 4 5	Not tearful
	26. Un-happy	1 2 3 4 5	Very happy
	27. Very irritable	1 2 3 4 5	Calm
	28. Very frustrated	1 2 3 4 5	Not frus-trated
SUBTEST 5 29. How often do you take your child on outings?	Not at all	1 2 3 4 5	Very often
30. To what extent is your child involved with your activities (e.g. cooking, house cleaning)?	Not at all	1 2 3 4 5	A great deal
31. Does you child eat meals with you?	Not at all	1 2 3 4 5	Often
32. Does your child watch TV with you?	Not at all	1 2 3 4 5	Often

SUBTEST 7 33. How often do you shout at the child's father?	Often	1 2 3 4 5	Never
34. How often do you feel angry with your child's father?	Often	1 2 3 4 5	Never
35. To what extent are you contented with your marriage (or relationship with the child's father) on an emotional level, at the present time?	Not at all happy	1 2 3 4 5	Very happy
In what way has your relationship with the child's father changed since your child's birth?			
36. Time spent together?	Less	1 2 3 4 5	More
37. Intimacy (emotional)?	Less	1 2 3 4 5	More
38. Intimacy (physical)?	Less	1 2 3 4 5	More
39. Disagreements?	More	1 2 3 4 5	Less
SUBTEST 8 40. To what extent are you worried about finances?	A great deal	1 2 3 4 5	Not at all
41. To what extent are you satisfied with your dwelling place?	A great deal	1 2 3 4 5	Not at all
What would have to change for you to be more satisfied with your dwelling place?			
42. Size of rooms?		0 Yes / 1 No	
43. Improved appearance of dwelling place?		0 Yes / 1 No	
44. Better heating in winter		0 Yes / 1 No	
45. Tarred roads in neighbourhood?		0 Yes / 1 No	
46. What is your family's annual estimated income?		0 R0-R12 000 / 1 >R12 000	

SUBTEST 9			
47. Did you get enough sleep during your child's pre-school years?	Not enough	1 2 3 4 5	Enough
48. How many times, on average, did you get up nightly for your child before he/she began to sleep through the night?	More than 3 times	0 1	0-3 times
With which of the following does your child experience problems (presently or in the past)?			
49. Stomach cramps		0 Yes / 1 No	
50. Feeding problems		0 Yes / 1 No	
51. Excessive crying		0 Yes / 1 No	
52. Tantrums		0 Yes / 1 No	
53. Hyperactivity		0 Yes / 1 No	
54. Very demanding		0 Yes / 1 No	

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