

Original Article

## Fathers' Attachment Status to their Infants

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### Abstract

**Background:** The father might play an active role in their babies psychosocial and mental development as far as mother does.

**Aims:** The aim of this study was to determine fathers' attachment to their babies between 4-12 weeks old.

**Methods:** The study was conducted in a cross-sectional and descriptive design. The study was carried out in new born and child polyclinics of a public teaching and research hospital in Istanbul between January-February 2015. Totally, 301 fathers selected with simple random sampling and agreed to participate were interviewed. Data were collected using an interview form questioning the socio-demographic characteristics and Paternal Infant Attachment.

**Results:** The average age of the fathers was  $32.59 \pm 5.64$  and the average duration of marriage was  $6.83 \pm 5.66$ . The average subscale scores of Paternal Infant Attachment Scale were  $31.19 \pm 3.80$  in patience and tolerance subscale,  $26.31 \pm 4.54$  in pleasure in interaction subscale and  $13.32 \pm 2.10$  in love and pride subscale. The average of total scale score was  $70.81 \pm 8.22$ . Subscale scores and total scale score were found to be significantly higher in fathers who were younger age, officer, having first baby, friendly to baby, happy in marriage, healthy baby and attended birth. On the other hand there was no significant relationship between scale scores and father's education level, working status, economic status, duration of marriage, family size, body mass index and spouses' occupation and education level.

**Conclusions:** The study concluded that fathers' attachment levels to their infants were high, socio-demographic characteristics were not related to the attachment directly, however fathers' young age, having first baby, friendly to baby and attendance at the birth had a positive effect on the attachment.

**Keywords:** Father, baby, paternal attachment, scale

### Introduction

Attachment is a mutual relationship whose emotional aspect overweighs and whose development seen important (Bowlby 1969). According to attachment theorists, attachment pattern determined in infancy shows very little variability in the future (Holmes 1997; Bowlby 2012). One of the most effective structure of father's attachment suggesting a conceptual model of father's attachment was created by

Lamp and et al. According to Lamp and et al. there are three characteristics of father-infant attachment. These characteristics are interaction-father directly cares about his infant, availability-father is available for his infant physical and/or mental, responsibility-father takes responsibility for the infant's care and comfort (Lamb et al. 1985; Kochanska & Kim 2012).

The most important condition that determines the father-infant attachment is communication

between father and mother. Significant relationship has been found between spouses' perceptions related to marriage, the degree of satisfaction they receive from their relationship and being sensitive parents. Consistency between spouses in a relationship is also important in terms of infant's grasping relationship patterns. Tension between the father and mother leads to negative affect on father-infant relationship (Donley 1993).

Although the role of mother in the psychological development of infant is a widely searched subject, the number of studies on the father's role is limited (Yalın 1977; Habip 1996). Fathers supported for attachment process in infancy and through their presence in the delivery room have increased possibility of developing secure attachment between themselves and their babies (Biller 1993, Sapountzi-Krepia et al, 2010, He et al, 2015,). How he perceives himself as a father and how he feels close to this role is important for his contribution to child care (Levy-Shiff & Israelashvili 1988; Doherty et al. 1998; Zeybekoglu 2013).

The findings underline that the father might play an active role in their children's psychosocial and mental development as far as mother does (Cagdas 2003). When today's father-child relationship in family structures, the father figure has been seen very effective on many aspects especially child's intelligence, personality and sexual development. Thus, studies on paternity and father figure are increased as well as maternity (Gungormus 2010). When Biller examined friendly and researcher children's relationship with their father, he found that communication between father and child is appropriate to the child's cognitive development and supports researcher behaviours (Biller 1993).

Father's participation in care, fathers, supported by their wives, taking responsibility of their children, spending quality time with their children on leisure times, playing games together and attending activities supports their attachment with their babies (Woodworth et al. 1996).

A strong father–infant attachment after childbirth serves as a good starting point for such a role. Even though fathers contribute in their own way to their children's social and emotional relationships, the research on father–infant attachment is limited.

Many studies have mentioned about mother-infant attachment and father-adolescent attachment. Studies on the father-infant attachment are limited. Based on above mentioned, in this study it is aimed to determine father's attachment to their babies 4-12 weeks old.

## Methods

The study was conducted cross-sectional and descriptive. Before starting research, ethics committee permission (date:06/27/2014, No.10840098-145) and institutional permission (date:11/13/2014, No:75231446/900) was received. Data were collected from a Research and Training Hospital Paediatric Polyclinics, January-February, 2015. The fathers took their babies 4-12 weeks old to mentioned polyclinics for outpatient treatment and would like to participate in voluntarily the study were sampled. The reason why fathers, whose babies were 4-12 weeks old, were chosen was being in first interaction process in postnatal period, passing birth process and determining the attachment in early infancy.

Criteria for inclusion in the study; Fathers whose babies 4-12 weeks old, fathers took their babies polyclinics for outpatient treatment and would like to participate in voluntarily.

Criteria for exclusion from the study; Fathers who had communication problems at a level that would hinder data collection, father whose babies were hospitalized and father whose babies had congenital/chronic illness or disability, and so on.

Data collection was conducted two days a week and 430 fathers were interviewed. 85 fathers of this group was not deemed suitable for criteria for inclusion in the study and 44 fathers of this group refused the discussion by noting the lack of time due to hospital procedures. As a result, among the fathers meeting the criteria for inclusion in the study, 301 fathers chosen by simple random sampling method and agreeing to participate in the research were interviewed. Data collection was conducted in clinics in a suitable environment with face to face interviews. Forms were filled out by the fathers directly. The number of study samples during data collection phase tested with the power analysis. Through DSS research web page, in the single sample made by taking average value of Father-Infant Attachment Scale (F-IAS) of Dinc's thesis as reference, test value over the average was

calculated as 75.74, sample mean was calculated as 70.81, sample size was calculated as 301, standard deviation of the sample was calculated as 8.22 and alpha error level was calculated as 5%, so power of the study was 100% and data collecting process was stopped (Dinc 2014). (<https://www.dssresearch.com/KnowledgeCenter/toolkitcalculators/statisticalpowercalculators.aspx>)

### **Instruments**

Twenty two-item questionnaire created by researchers based on the literature was used as a data collection tool by questioning father's age, education level, occupation, economic status, length of marriage; mother's age and occupation; number of children and their gender, notion related to fatherhood, education about birth and being with his wife during childbirth. "Paternal-Infant Attachment Scale" developed by Condon et al. for assessing postnatal father-infant attachment was used (Condon et al. 2008).

### **Paternal-Infant Attachment Scale**

The scale and was translated and adapted into Turkish by Kavlak and Gulec (Gulec&Kavlak 2013). Scale is composed of three sub-dimensions; "patience and tolerance", "enjoyment in interacting" and "love and pride". While the original scale was consisted of three sub-dimensions and 19 items, by removing 16th question, three sub-dimension and 18 items was used in Turkish form. High scores indicate that the attachment is high. There is no cut-off point of the scale. Cronbach's alpha value of the scale was found 0.76.

### **Statistical Analysis**

Statistical analysis of the research was made on the program SPSS 21.0 and Kolmogorov-Smirnov test was used to determine the suitability to normal distribution of data. With data determined not to show normal distribution, percentage, number, mean, standard deviation, minimum, maximum values were obtained as descriptive statistics. The comparison of categorical variables, the comparison of chi-square and quantitative variables was made by using Mann-Whitney U, Kruskal-Wallis test and post-hoc test. The statistical significance level was taken as  $p < .05$ .

### **Results**

The average age of the fathers was found  $32.59 \pm 5.64$ , marriage age was found  $25.86 \pm 4.34$  and the duration of marriage was found

$6.83 \pm 5.66$ . Of the fathers, education level of the 44.9% ( $n=135$ ) was primary school education level, occupation of 43.9% ( $n=132$ ) was reported workers. It was reported that 87.7% of respondents ( $n=264$ ) were still working and economic level of the 89% ( $n=268$ ) was good and moderate. Father's body mass index with  $25.86 \pm 3.69$  was in the first-degree obese group on average. 70.8% ( $n=213$ ) of the fathers had nuclear family. 85.4% ( $n=257$ ) of the spouses were housewives and education level of the 61.1% ( $n=184$ ) of the mothers was primary school education level. Marriage styles of 57.8% ( $n=174$ ) were "companionate marriage and getting permission from families".

A 38.2% ( $n=115$ ) of respondents had children first time. It was seen that 92.4% of fathers did not matter the gender of the baby.

A 12.6% ( $n=38$ ) of the fathers attended childbirth education, 6.6% ( $n=20$ ) of the fathers were with his wife during childbirth.

Paternal-Infant Attachment Scale, "patience and tolerance" sub-dimension score was  $31.19 \pm 3.80$ , "enjoyment in interaction" sub-dimension score was  $26.31 \pm 4.54$ , "love and pride" sub-dimension score was  $13.32 \pm 2.10$  and total scale score was  $70.81 \pm 8.22$ . The distribution of the scale items were given in separate tables based on each sub dimension (Table 1,2,3).

Some characteristics affecting father's attachment are shown in the Table 4.

When father's age group and scale scores were compared, "love and pride" sub-dimension showed a significant difference among the groups. The reason of the difference due to 39 years and older group compared to the 19-28 age group (adj.sig=.047) and 39 years and older group compared to the 29-38 age group (adj.sig=.010) receiving lower scores was seen in the post-hoc test.

Father's profession and scale scores significantly differed from "enjoyment in interacting" and total score. In post-hoc test the difference in "enjoyment in interacting" sub-dimension was due to officers scores higher than self-employed fathers (adj.sig=.040) scores. Difference in the total score was due to self-employed fathers' scores lower than officers (adj.sig=.015) and workers (adj.sig=.030). "Patience and tolerance" sub-dimension score ( $p=.012$ ) and total scale scores ( $p=.006$ ) of fathers having child for the

first time was significantly higher than fathers having more children.

For their paternal role, 51.2% (n=154) of the fathers inspired from their fathers and 38.5% (n=116) of the fathers preferred to be "friendly" father. All subscales and total numbers except "love and pride" subscale of fathers preferring being "friendly" rather than "unpermissive, authoritarian" were higher and the difference in all was statistically highly significant. Significance in advanced analysis done was due to the score differences between unpermissive, authoritative with friendly (adj.sig=.002) and unpermissive, authoritative with both (adj.sig=.003).

14.3% of fathers reported their attachment was affected by marital problems and 12.6% of fathers reported their attachment was affected by infant's health problems. "Patience and tolerance" subscale scores and total scale score of the fathers having no marital problems were higher than the fathers having marital problems, and

there was statistically significant difference between the groups.

All subscales except "love and pride" subscale and total score were lower in the effect of infant's health problems to attachment and the difference in all was statistically significant.

.Although scale sub-dimension and total scores of fathers taking childbirth education were higher, the difference was not statistically significant ( $p>.05$ ). "Patience and tolerance", "enjoyment in interacting" sub-dimensions and total scores of fathers were attending the birth higher than fathers not being with their wives during childbirth and the difference was statistically significant. There was not statistically significant relation between Father-Infant Attachment Scale sub-dimension, total scores and father's education level, working status, economic status, duration of marriage, marriage style, family type, body mass index, influenced from his father about attachment, his wife's profession and his wife's education level ( $p>.05$ ).

**Table 1. The Distribution of the Items Comprises Father-Infant Attachment Scale "Patience and Tolerance" Sub-Dimension (N=301)**

<b>Patience and tolerance sub-dimension</b>	<b>Always / often n (%)</b>	<b>Sometimes n (%)</b>	<b>Hardly ever / never n (%)</b>
Feel resentment or anger when engaged in the baby	7 (2.4)	41 (13.6)	253 (84)
Feel baby' fussy when it is engaged in	8 (2.6)	40 (13.4)	253 (84)
Feel bored with baby	7 (2.3)	65 (21.6)	229 (76.1)
Enjoy with baby	269 (89.4)	22 (7.3)	10 (3.3)
	<b>Prolong</b>	<b>Shorten</b>	<b>None</b>
Time with baby	225 (74.8)	31 (10.2)	45 (15)
	<b>Very angry</b>	<b>Moderate angry</b>	<b>Little angry / not angry</b>
Think about things given up due to baby	6 (2)	16 (5.3)	279 (92.7)
Father's feeling cannot separate time for himself	58 (19.2)	148 (49.2)	95 (31.6)
	<b>Very impatient / slightly impatient</b>	<b>Very patient / little patience</b>	
Being patient when with baby	70 (23.3)	231 (76.7)	

n= number

**Table 2. Distribution of Items of Father-Infant Attachment Scale "Enjoyment in Interacting" Sub-Dimension**

<b>Enjoyment in interacting sub-dimension</b>	<b>Always / often n (%)</b>	<b>Sometimes n (%)</b>	<b>Hardly ever / never n (%)</b>
Ability to understand what baby needs to	166 (55.2)	97 (32.2)	38 (12.6)
	<b>I am very interested in compared to many fathers / more interested in</b>	<b>I am interested in at the same level like many fathers</b>	<b>I am less interested in than many fathers/ much less interested in</b>
I believe that my level of interaction with the baby as	222 (73.7)	64 (21.3)	15 (5)
Participation in baby care as possible	<b>Correct</b> 265 (88)		<b>Not correct</b> 36 (12)
	<b>Once a day</b>	<b>Several times a day</b>	<b>Many times a day</b>
Talking about baby people nearby	183 (60.8)	69 (22.9)	49 (16.3)
	<b>Always / often sad</b>	<b>Both sadness and relief / sometimes</b>	<b>Often / always relief</b>
When it is necessary to leave baby	191 (63.4)	92 (30.6)	18 (6)
Thinking of baby when staying distant	195 (64.8)	93 (30.8)	13 (4.4)
Find yourself observing sleeping baby	85 (28.2)	149 (49.5)	67 (22.3)

**Table 3. Distribution of Items of Father-Infant Attachment Scale "Love and Pride" Sub-Dimension**

<b>"Love and pride" sub-dimension</b>	<b>Intense love</b>	<b>Moderate love</b>	<b>Poor love / no strong feelings / dislike</b>
Identify feelings about baby in the last two weeks	259 (86)	31 (10.3)	5 (3.7)
	<b>Always / often</b>	<b>Sometimes</b>	<b>Never</b>
Feel proud of baby when with other people	243 (80.7)	36 (12)	22 (7.3)
	<b>Intense enjoyment</b>	<b>Moderate enjoyment</b>	<b>Little enjoyment / feel nothing / feel negative</b>
When I stay away from baby for a while, I often feel like to be with him again	189 (63)	58 (19.3)	54 (17.7)

n= number

**Table 4. Father-Infant Attachment Scale Related To Fathers' Characteristics**

Variables	Patience and Tolerance <sup>a</sup>	Enjoyment in Interacting <sup>a</sup>	Pride and Love <sup>a</sup>	F-IAS Total Score <sup>a</sup>
Age groups				
19-28	31.25±3.60	25.71±4.77	13.49±1.87	70.46±8.17
29-38	31.13±3.92	26.69±4.39	13.42±2.12	71.25±8.07
39 and above	31.33±3.67	25.67±4.71	12.36±2.27	69.36±9.10
$\chi^2$ $p^b$	.08   .962	3.72   .156	8.73   .013	1.84   .398
Occupation				
Officer	32.04±3.23	27.43±3.69	13.83±1.73	73.30±6.37
Worker	31.44±3.65	26.66±4.63	13.52±1.97	71.62±8.13
Free-employed	30.59±4.12	25.42±4.62	12.97±2.28	68.98±8.71
$\chi^2$ $p^b$	5.60   .061	8.40   .015	5.40   .067	10.50   .005
Number of children				
One	31.93±3.30	26.80±4.52	13.63±1.80	72.37±7.45
Two and more	30.73±4.01	26.01±4.54	13.12±2.24	69.85±8.53
$z$ $p^c$	-2.505   .012	-1.435   .151	-1.570   .116	-2.723   .006
Attitude to baby				
Unpermissive/authoritative	28.73±5.93	22.93±5.91	12.07±2.55	63.73±12.53
Friendly	31.81±3.76	27.52±4.42	13.47±2.00	72.79±7.99
Both	30.98±3.49	25.79±4.26	13.32±2.09	70.09±7.48
$\chi^2$ $p^b$	9.421   .009	18.381   .000	4.796   .091	17.912   .000
The effect of marital problems to attachment				
Yes	29.47±5.10	24.60±5.53	12.72±2.44	66.79±11.30
No	31.47±3.46	26.60±5.53	13.41±2.02	71.48±7.41
$z$ $p^c$	-2.374   .018	-1.923   .055	-1.919   .055	-2.318   .020
The effect of baby's health to attachment				
Yes	28.92±4.85	24.61±3.71	12.97±2.09	66.50±8.17
No	31.49±3.53	26.54±4.60	13.36±2.10	71.40±8.07
$z$ $p^c$	-3.055   .002	-2.686   .007	-1.488   .137	-3.409   .001
The effect of father's attending the birth				
Yes	33.00±2.49	29.90±3.21	13.60±2.01	76.50±5.71
No	31.06±3.84	26.06±4.52	13.30±2.11	70.41±8.23
$z$ $p^c$	-2.175   .030	-3.683   .000	-.951   .342	-3.260   .001
<sup>a</sup> Mean ± SD	<sup>b</sup> $p$ value=Kruskal Wallis test	<sup>c</sup> $p$ value= Mann Whitney U test		

There was statistically significant relation among father's education level, occupation, his attitude to the baby and infant's health in taking care his infant and participating in infant care. While father's, whose education level were primary and high school, participation in infant care were under the value expected, father's, whose education level was university degree, participation in infant care was above the value

expected ( $\chi^2=6.199$   $p=.045$ ). Father's occupation also affects participation in infant care. While officer or worker father's participation in infant care was above the value expected, self-employed father's participation in infant care was under the value ( $\chi^2=9.287$   $p=.010$ ). While preferring to be unpermissive, authoritative fathers' participation in infant care was under the value, preferring to be friendly fathers'

participation in infant care was above the value expected ( $\chi^2=11.883$   $p=.003$ ). On the other hand father's age, economic status, duration of marriage, number of children, influenced from his father, marital problems, attending childbirth education and his wife's work status were not correlated with participation in infant care

## Discussion

Children establishing healthy relationships with their fathers in early infancy period are thought to develop secure attachment (Sahip&Turan 2007). Ramchandani examined father-infant interaction in 192 families and stated that behaviour problems that occurs in early childhood was affected by the father-infant attachment (Ramchandani et al. 2013).

In this study 12.6% of the fathers took childbirth education and 6.6% of the fathers attended the birth. Although the scale scores of the fathers taking childbirth education showed a significant difference, "patience and tolerance", "enjoyment in interacting" sub-dimension and total scores of fathers attending the birth showed statistically significant differences showing the advanced attachment. New paternal model developing in 1970's is attending the birth and caring his infant. This support of father eases the birth process and mother-infant attachment. Father's attending the birth is important for establishing the first contact with the baby. Similarly, Mercer and Ferketich (1995) reported that fathers attending the birth and taking care his postnatal infant attaches strongly their babies. Mercer and Ferketich also reported that for the best predictors of early postnatal attachment is father's attachment to the fetus (Mercer&Ferketich 1995).

Childbirth education is developed in order to prepare parents candidates for birth in a conscious way and inform about the infant's healthy development. Bradley and Lamaze childbirth preparation and the training model asserts the necessity of intense emotional support including attending of father candidate (Walker et al. 2009). Birth preparation exists in developed countries and a new service that started to be used newly in developing countries.

87.7% of participants reported that they had a job, 88% of the participants reported that they participated in infant care as possible, 63.4% of participants reported that they were sad when they had to leave the babies, 64.8% of participants reported that they think about the

babies when they were away from the babies and 74.8% of participants reported that they wanted to spend more time with the babies. In Germany, when evaluating the results of the field study, Janzen states that by the end of 19th century after industrial revolution fathers' ties with their family weakened due to working outside in industrialized countries, however, today is a new development is observed, young men scrutinize their own paternal role and they are in a longing for more effective paternity. Janzen adds that due to social, political and economic conditions father cannot fulfil their longing and in order to men can play more active role in family change in conditions aforementioned is necessary (Janzen 2010). Harrington and et al. interviewed with 1000 employed fathers for a study to compare fathers' paternal role and caregiver role. While 64% of the fathers in the study thought that fathers should participate in infant care, only 30% of the fathers reported that they effectively participated in infant care (Harrington et al. 2011). Evans found that fathers thought that physical care of the infant was mother's responsibility, providing financial facilities, supporting the child's education, developing mental skills and playing with them were their responsibilities in the study examining the attitudes and behaviours of fathers (Evans 1997). Even in marriages which father was more responsible for child than mother, in terms of engaged with child, differences between the father and the mother shows that the mother is better than the father in terms of child care quality (Lamb et al. 1985).

89.4% of respondents said that they were satisfied with baby, 76.1% of respondents said that they were not bored with baby and 92.7% of respondents said that they were not disappointed when they thought what they had to give up. Dinc found that there was a positive significant between available time spending with infant, father's enjoyment when playing with infant and Father-Infant Attachment Scale score average according to the fathers having 6 months old infant, and father's participation in infant care increased the attachment level (Dinc 2014).

38.2% of the fathers participated in the study had child for the first time. The rate of participation in infant care of fathers having first child was 90.4%, the rate of participation in infant care of fathers having 2 or more children was 86.6%. In our study despite the decreased rate of participation in infant care, there was not a

statistically significant difference. Similar to our study, Mehall and et al. examined the correlation between father's participation in infant care and being satisfied and they found that father took less care and less participate in infant care with increased number of children (Mehall et al. 2009). Another study found that fathers' participation in infant care and the rate of interaction decreased with increased number of children (Paquette et al. 2000).

Statistically significant difference was seen when examining education levels and participation in infant care of the participants in our study. While father's, whose education level were primary and high school, participation in infant care were under the value expected, father's, whose education level was university degree, participation in infant care was above the value. Supporting the study, Nkwake stressed that fathers graduated from university had an egalitarian views about childcare but fathers had a lower education level had traditional views and thought that physical care was the mother's responsibility (Nkwake 2009). Dinc found that there was a statistically highly positive significant difference between fathers' education level, occupation and financial situation and average score of F-IAS (Dinc 2014). 14.3% of participant fathers had marital problems and the problems between parents were expected to negatively affect the father-infant attachment. Feldman made a research including the findings of our study found that parents' sharing the responsibilities of home and child care was important for relationship among other-father-child and father-child, and incompatibility between couples, marital problems affect negatively paternal and maternal behaviours against the infant (Feldman 2000).

Limitations of the study are due to the limited literature on this subject using the old dated literature, data lack of community-based, participants from clinic populations, the lack of control group and not monitored.

## Conclusions

It was seen that fathers' attachment level to their babies was very high and socio-demographic characteristics did not affect the attachment in general. Being father at a young age, having child for the first time, preferring friendly attitude to their child and attending the birth affected positively the attachment. Therefore it was thought that being father at an advanced age,

having a greater number of children, having marital problems and authoritative fathers' attachment should be more supported. In this context, it is suggested that fathers should participate in childbirth education and their attending the birth should be supported.

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