

## Mindfulness, the attachment between mother and infant and the ICT's role

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### Abstract

This literature review first examined the concept of attachment by examining studies on its neuroscience and the role of mindfulness in the psyche of individuals with attachment-like tendencies. More specifically, emphasis was placed on attachment between mother and infant, particularly the concept of prenatal and postnatal attachment. The aim of the present study is to establish the existence of attachment between mother and preschool children. A suitably designed questionnaire was used to conduct the study which will consist of questions answered by mothers of infants. From the results obtained, conclusions were drawn regarding the existence of attachment between the mother and the toddler. The collected data were entered into the SPSS program to test the statistical significance of the variables under consideration. Subsequently, the main objective was to inform teachers about the results and to adopt appropriate treatments to address and avoid attachment. According to the data collected it was shown that boys show greater attachment to mothers than girls. According to the data collected it was shown that boys have a greater attachment to mothers than girls. This finding needs to be taken into consideration in order to have a more direct intervention for boys. Additionally, it was found that mothers were able to influence the infant in a stressful situation as they were able to calm and comfort the infant by returning to the same room with him. Furthermore, it was found that the mother's mental state directly influenced the infants who showed agitation and anxiety by observing their mother in this particular psychological state.

**Keywords:** Attachment; Neuroscience; Mindfulness; Infant; Mother

### 1 Introduction

It can be seen that the topic of attachment neuroscience is of considerable concern to the scientific community at both the social and genetic levels. Referring to a condition that directly affects the psyche of the person experiencing it, it would be important to provide answers and adopt methods that will lead to a more effective management of the condition. In particular, when considering attachment between mother-infant, it is of great importance to know the emotions experienced by children, especially by parents and educators. There should also be special treatment during the school years so that children can develop their own personality and consciousness, in order to make a smooth transition from childhood to adulthood, without adopting attitudes of attachment and dependence on the mother. In this way the child will function autonomously, having a complete personality and personal and correct reasoning. In this study, sampling will be carried out using questionnaires given to mothers to determine the existence of attachment between mothers and preschool children. The research instrument on which the study is based is the attachment-q-set which examines child attachment to the mother (Watters, 1995). More specifically, it presents some indicative behaviours which, if adopted by the child, demonstrate the child's attachment to the mother. Subsequently, the results will be analyzed through the use of the SPSS tool to determine the existence of attachment (Watters, 1995).

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## 2 Research methodology

### 2.1 Research objective and research questions

The present research aims to detect attachment behaviours developed by preschool children towards their mothers. Our aim is to determine how children experience their relationship with their mothers and whether the relationship that has developed between them can influence the social behaviour that children exhibit towards other persons in their environment.

### 2.2 Experimental design

Before starting the research, priority was given to the design of the research. Initially, the means of data collection was selected that met the convenience of the stated objective and the defined research questions. Then the participating sample was identified and the questionnaire was distributed electronically. Finally, the responses were collected, analyzed and final findings were extracted. The Research is conducted as a quantitative analysis and in terms of variables, the independent variable is the concept of "attachment" and the independent variables are the concepts of "prenatal" and "postnatal attachment". The total duration of the survey was around two months, including the response collection stage.

### 2.3 Research sample

A total of 24 women participated in the survey. Specifically, 6 (25%) were 20-29 years old, 15 (62.5%) were 30-39 years old and 3 (12.5%) were >40 years old (N=24). These women were selected because they were the mothers of the infants attending the nursery school where the researcher interned.

It is worth mentioning that the interviewed mothers were residents of the same area (Municipality of Byron).

### 2.4 Data collection instrument

The present research is quantitative and the research instrument on which the research is based is the "Attachment q-set" which examines child attachment to the mother and was answered by the mothers in the form of a questionnaire (Watters, 1995). The questionnaire was sent electronically to the participants and all of them responded.

### 2.5 Ethical issues

Participants were given a covering letter prior to completing the questionnaire, which informed them of everything about the research, as well as ensuring their anonymity and allowing them to be informed of the results of the research. Finally, a pilot survey was not carried out in order to identify possible errors or omissions.

### 2.6 Generalization of results

The results of this quantitative survey cannot be generalised due to the small sample size and the purposive selection of the sample. They could be generalised if the sample number was representative and if the participants had been selected by random sampling. (Table 1-6, Figure 1-3)

## 3 Results

**Table 1** Age of pregnancy

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | >40   | 3         | 12.5    | 12.5          | 12.5               |
|       | 20-29 | 6         | 25.0    | 25.0          | 37.5               |
|       | 30-39 | 15        | 62.5    | 62.5          | 100.0              |
|       | Total | 24        | 100.0   | 100.0         |                    |

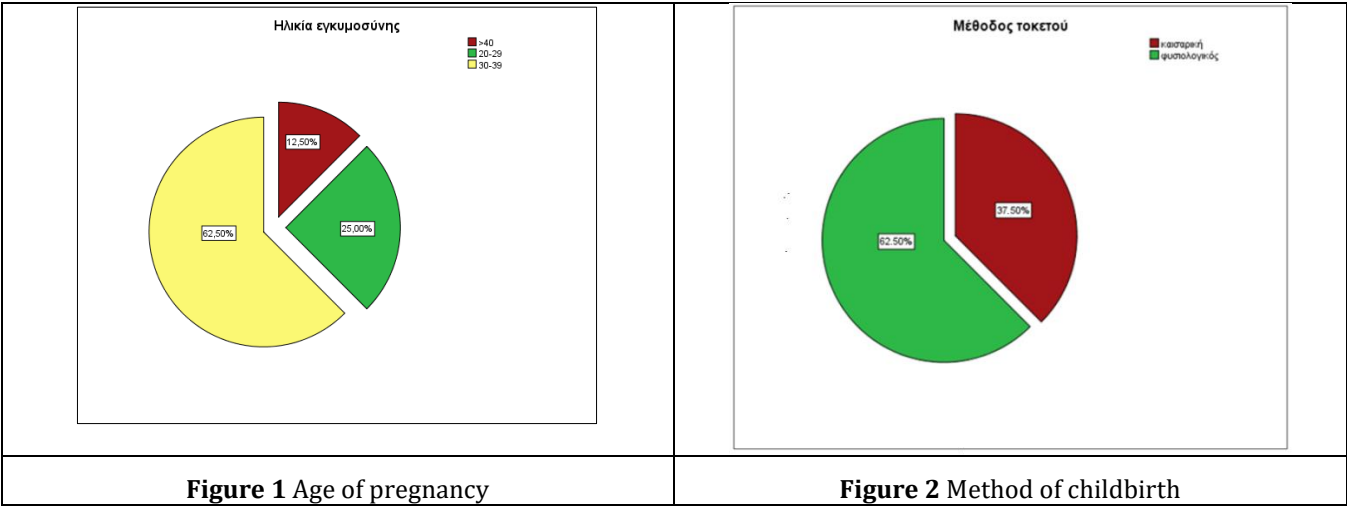


Table 2 Method of childbirth

|       |               | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|---------------|-----------|---------|---------------|--------------------|
| Valid | C-section     | 9         | 37.5    | 37.5          | 37.5               |
|       | physiological | 15        | 62.5    | 62.5          | 100.0              |
|       | Total         | 24        | 100.0   | 100.0         |                    |

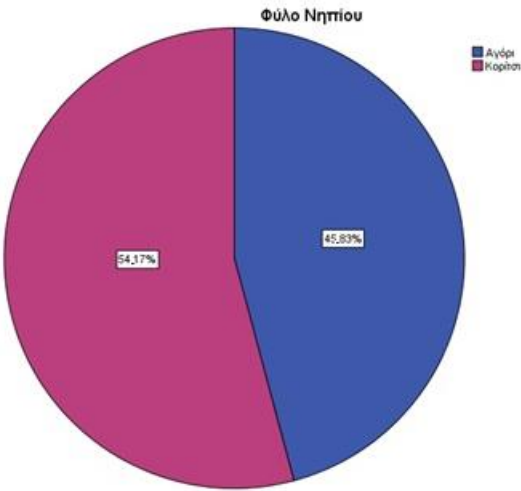


Figure 3 Infant gender

Table 3 Infant gender

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | Boy   | 11        | 45.8    | 45.8          | 45.8               |
|       | Gitl  | 13        | 54.2    | 54.2          | 100.0              |
|       | Total | 24        | 100.0   | 100.0         |                    |

### 3.1 Other important Frequencies

**Table 4** Duration of pregnancy (Months)

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | >9    | 2         | 8.3     | 8.3           | 8.3                |
|       | 7-8   | 6         | 25.0    | 25.0          | 33.3               |
|       | 9     | 16        | 66.7    | 66.7          | 100.0              |
|       | Total | 24        | 100.0   | 100.0         |                    |

**Table 5** Day care and babysitting up to 2.5 years

|                   | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------------|-----------|---------|---------------|--------------------|
| ValidBoth         | 8         | 33.3    | 33.3          | 33.3               |
| In a kindergarten | 9         | 37.5    | 37.5          | 70.8               |
| At home           | 6         | 25.0    | 25.0          | 95.8               |
| At home. both     | 1         | 4.2     | 4.2           | 100.0              |
| Total             | 24        | 100.0   | 100.0         |                    |

**Table 6** Age of entry to pre-school (years)

|       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-----------|---------|---------------|--------------------|
| Valid | <4        | 6       | 25.0          | 25.0               |
|       | >5        | 4       | 16.7          | 41.7               |
|       | 0         | 1       | 4.2           | 45.8               |
|       | 4-5       | 13      | 54.2          | 100.0              |
|       | Total     | 24      | 100.0         |                    |

## 4 Data analysis

Statistical significance tests

Criteria for our statistical tests are the following assumptions:

### General,

- if  $p > 0.05$  (p-value = Sig.) we cannot reject  $H_0$  (Hypothesis 0)
- if  $p < 0.05$  (p-value = Sig.) we reject  $H_0$  (Hypothesis 0) and accept  $H_1$  (Hypothesis 1)

In our case:

Where indicated in orange = Reject the null hypothesis, then

$p$  = very small, i.e.  $p < 0.05$  and therefore we reject  $H_0$  and accept  $H_1$ .

Answer: the correlation [by the method we used (cell = Test)] is dependent.

## T-test hypothesis testing

In essence it is a test of means.

- Conditions
- 1.Two variables: one quantitative and one qualitative with only two categories(we analyze the quantitative variable based on the qualitative variable, which is simply define groups).
- 2.Normality of the quantitative variable for each value of the qualitative variable variable (normal distribution).
- If normality exists we continue the T-Test.
- If there is no normality we do Non-ParametricStatistics tests as an alternative to the T-Test. (Table 7-11)

## 4.1 Non parametric Tests

Table 7 Hypothesis Test Summary

| Hypothesis Test Summary |   |                            |                        |                             |
|-------------------------|---|----------------------------|------------------------|-----------------------------|
|                         | Null Hypothesis   | Test                       | Sig.                   | Decision                    |
| 1                       | The categories of Ηλικία εγκυμοσύνης occur with equal probabilities.  | One-Sample Chi-Square Test | 0.200 <sup>2,3</sup>   | Reject the null hypothesis. |
| 2                       | The categories of Διάρκεια κύησης (μήνες) occur with equal probabilities.   | One-Sample Chi-Square Test | 0.200 <sup>2,3</sup>   | Reject the null hypothesis. |
| 3                       | The categories defined by Μέθοδος τοκετού = καισαρική and φυσιολογικός occur with probabilities 0,5 and 0,5.  | One-Sample Binomial Test   | 0.200 <sup>2,3,1</sup> | Retain the null hypothesis. |
| 4                       | The categories defined by Φύλο Νηπίου = Κορίτσι and Αγόρι occur with probabilities 0,5 and 0,5.   | One-Sample Binomial Test   | 0.200 <sup>2,3,1</sup> | Retain the null hypothesis. |
| 5                       | The categories of Ημερήσια φροντίδα και φύλαξη μέχρι τα 2,5 έτη occur with equal probabilities.   | One-Sample Chi-Square Test | 0.200 <sup>2,3</sup>   | Retain the null hypothesis. |
| 6                       | The categories of Ηλικία εισόδου στον βρεφονηπιακό σταθμό (μήνες) occur with equal probabilities.   | One-Sample Chi-Square Test | 0.200 <sup>2,3</sup>   | Retain the null hypothesis. |
| 7                       | The categories of Ηλικία εισόδου στο προνήπιο (έτη) occur with equal probabilities.   | One-Sample Chi-Square Test | 0.200 <sup>2,3</sup>   | Reject the null hypothesis. |
| 8                       | The categories of Ερώτηση 1: Το παιδί αντιμετωπίζει πρόβλημα στην περίπτωση που χρειαστεί να μείνει σε ένα χώρο με ένα ξένο άνθρωπο χωρίς εσάς; occur with equal probabilities.       | One-Sample Chi-Square Test | 0.200 <sup>2,3</sup>   | Retain the null hypothesis. |
| 9                       | The categories of Ερώτηση 2: Το παιδί έχει την δυνατότητα να επικοινωνήσει με ένα ξένο, χωρίς να υπάρχει η παρουσία σας στον ίδιο χώρο; occur with equal probabilities.               | One-Sample Chi-Square Test | 0.200 <sup>2,3</sup>   | Retain the null hypothesis. |
| 10                      | The categories of Ερώτηση 3: Το παιδί είναι σε θέση να δείξει τα παιχνίδια του σε ένα ξένο και να παίξει με χαρά, χωρίς να βρίσκεστε στον ίδιο χώρο ; occur with equal probabilities. | One-Sample Chi-Square Test | 0.200 <sup>2,3</sup>   | Retain the null hypothesis. |
| 11                      | The categories of Ερώτηση 4: Η απουσία σας από το χώρο αφήνει αδιάφορο το παιδί; occur with equal probabilities.  | One-Sample Chi-Square Test | 0.200 <sup>2,3</sup>   | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is ,05.

<sup>1</sup>Exact significance is displayed for this test.

<sup>2</sup>Lilliefors Corrected

<sup>3</sup>This is a lower bound of the true significance.

#### 4.2 (T-Test One-Sample)

**Table 8** One-Sample Statistics

| One-Sample Statistics        |             |                   |                  |
|------------------------------|-------------|-------------------|------------------|
| N                            | Mean        | Std. Deviation    | Std. Error Mean  |
| Date of birth of the infancy | 02-SEP-2016 | 1543 04:52:44.579 | 315 00:07:16.601 |
| Date of birth of mother      | 03-OCT-1985 | 1832 03:04:26.179 | 373 23:33:28.377 |

**Table 8.a** One-Sample Test

| One-Sample Test  | Test Value = 0 |       |                        |                 |   |
|--|----------------|-------|------------------------|-----------------|---|
|  | t              | df    | Sig. (2-tailed)        | Mean Difference | 95% Confidence Interval of the Difference |
|  |                |       |                        | Lower           | Upper                                     |
| Date of birth of the infancy<br>Date of birth of mother<br>503,087 | 23             | 0.000 | 158474<br>20:00:00.000 | 21-NOV-2014     | 16-JUN-2018                               |
| 393,554  | 23             | 0.000 | 147182<br>00:00:00.000 | 21-AUG-1983     | 15-NOV-1987                               |

p = 0.000 (not exactly zero but very small), i.e.  $p < 0.05$  and therefore we reject  $H_0$  and accept  $H_1$ .

Answer: Infant's date of birth and Mother's date of birth are dependent.

Sample Correlation of Means of the first 3 questions with Infant Gender

**Table 9** Lilliefors Significance Correction

| Lilliefors Significance Correction   |                  |       |         |       |
|--|------------------|-------|---------|-------|
| In the Output (from SPSS) we are interested in the above table "Testsofnormality".   |                  |       |         |       |
| ☑ we are looking at Shapiro-Wilk for $N \leq 50$ (in our work $N=24$ ).  |                  |       |         |       |
| ☑ N is shown by the df column  |                  |       |         |       |
| ☑ in both of these tests for both categories of our qualitative variable we are interested in Significance = p-value.                  |                  |       |         |       |
| ☑ if $p > 0.05$ we cannot reject $H_0$   |                  |       |         |       |
| ☑ if $p < 0.05$ we reject $H_0$ and accept $H_1$   |                  |       |         |       |
| If there is normality we continue the T-Test. If there is no normality we do Non-ParametricStatistics as an alternative to the T-Test. |                  |       |         |       |
| In our case:   |                  |       |         |       |
| ☑ For question 1 (regardless of gender), we have in Shapiro-WilkTest $p > 0.05$ so we accept $H_0$ (there is normality).               |                  |       |         |       |
| ☑ For questions 2-3 (regardless of gender), in Shapiro-WilkTest $p < 0.05$ so we reject $H_0$ and accept $H_1$ (no normality).         |                  |       |         |       |
| Case Processing Summary  |                  |       |         |       |
|  | Age of pregnancy | Cases |         |       |
|  |                  | Valid | Missing | Total |

|                         |       | N  | Percent | N | Percent | N  | Percent |
|-------------------------|-------|----|---------|---|---------|----|---------|
| Date of birth of mother | >40   | 3  | 100.0%  | 0 | 0.0%    | 3  | 100.0%  |
|                         | 20-29 | 6  | 100.0%  | 0 | 0.0%    | 6  | 100.0%  |
|                         | 30-39 | 15 | 100.0%  | 0 | 0.0%    | 15 | 100.0%  |

## 5 Stem-and-Leaf Plots

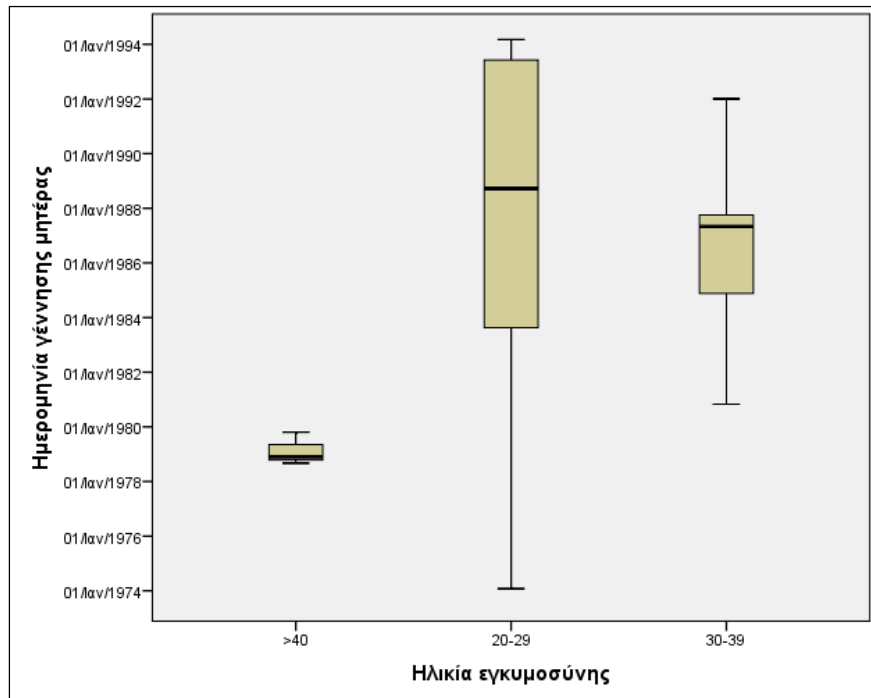


Figure 4 Age of pregnancy

### 5.1 NPar Tests

Table 10 Descriptive Statistics

| Descriptive Statistics |       |                |     |     |
|------------------------|-------|----------------|-----|-----|
| N                      | Mean  | Std. Deviation | Min | Max |
| 24                     | 3.208 | 1.2151         | 1.0 | 5.0 |
| 24                     | 3.167 | 1.5228         | 1.0 | 5.0 |
| 24                     | 3.958 | 1.3345         | 1.0 | 5.0 |
| 24                     | 3.542 | 1.2847         | 1.0 | 5.0 |
| 24                     | 3.625 | 1.2790         | 1.0 | 5.0 |
| 24                     | 4.042 | 1.2329         | 1.0 | 5.0 |
| 24                     | 3.417 | 1.4116         | 1.0 | 5.0 |
| 24                     | 3.167 | 1.5228         | 1.0 | 5.0 |
| 24                     | 3.292 | 1.4885         | 1.0 | 5.0 |
| 24                     | 3.583 | 1.2825         | 1.0 | 5.0 |
| 24                     | 3.500 | 1.3831         | 1.0 | 5.0 |

|    |       |        |     |     |
|----|-------|--------|-----|-----|
| 24 | 3.458 | 1.3825 | 1.0 | 5.0 |
| 24 | 3.542 | 1.2504 | 1.0 | 5.0 |
| 24 | 3.583 | 1.3805 | 1.0 | 5.0 |
| 24 | 3.542 | 1.3825 | 1.0 | 5.0 |
| 24 | 3.625 | 1.4084 | 1.0 | 5.0 |
| 24 | 3.625 | 1.4084 | 1.0 | 5.0 |
| 24 | 3.833 | 1.2039 | 1.0 | 5.0 |
| 24 | 3.833 | 1.1293 | 1.0 | 5.0 |
| 24 | 3.458 | 1.4136 | 1.0 | 5.0 |
| 24 | 3.417 | 1.2825 | 1.0 | 5.0 |
| 24 | 3.542 | 1.3825 | 1.0 | 5.0 |
| 24 | 3.500 | 1.1421 | 1.0 | 5.0 |
| 24 | 3.208 | 1.5874 | 1.0 | 5.0 |
| 24 | 3.125 | 1.5411 | 1.0 | 5.0 |
| 24 | 3.375 | 1.4390 | 1.0 | 5.0 |
| 24 | 3.458 | 1.5317 | 1.0 | 5.0 |
| 24 | 3.500 | 1.4446 | 1.0 | 5.0 |

**Table 11** Ranks

| Ranks  | Mean Rank |
|--|-----------|
| Question 1: Does the child have a problem if he/she has to stay in a room with a stranger without you?<br>Question 2:<br>Does the child have the ability to communicate with a stranger without your presence in the same room?<br>Question 3:<br>Is the child able to show his/her toys to a stranger and play happily without you being in the same space?<br>Question 4:<br>Does your absence from the space leave the child indifferent?<br>Question 5: Does the child feel more secure when, while you were absent from a space, you return?<br>Question 6:<br>Does the child become anxious when you were to leave the space?<br>Question 7:<br>Does the child become overcome with feelings of fear or cry when you leave the space?<br>Question 8:<br>Is the child easily comforted when you return?<br>Question 9:<br>Does the child make nervous movements when you are about to leave the room?<br>Question 11: When the child realizes that you are about to leave the room, does the child on one hand want to cry and on the other hand try to hold it together?<br>Question 12:<br>Is the child afraid when you return after a short absence?<br>Question 13:<br>When the child finds something new, does he want to play it on his own, without you? | 15.60     |

|   |       |
|---|-------|
| Question 14:<br>When the child finds something new, does he or she want to play with you alone?<br>Question 15: Does the child know when you are upset and tries to calm you down by asking if you are okay?  |       |
|   | 15.71 |
| Question 16:<br>Does the child know when you are upset and continues to play as he/she does not recognize any expression, treating you as if everything is fine?<br>Question 17: Does your child quickly greet you while you were absent with a big smile?<br>Question 18: Does the child not greet you while you were absent unless you greet him/her first?<br>Question 19: Does the child often hug you first?<br>Question 20: Does the child constantly seek physical contact with you?<br>Question 21:<br>Does the child use your expressions as a source of information (to understand what is happening) when something seems risky or scary?<br>Question 22: If you confirm that the child is not in danger, does the child approach objects that previously may have frightened him/her?<br>Question 23:<br>Does the child want to know where you are when playing at home and notices if you have changed rooms?<br>Question 24:<br>Does the child not care where you are when playing?<br>Question 25:<br>Does the child prefer to play only near you?<br>Question 26:<br>Does the child do whatever you tell him/her to do directly, without having to give commands?<br>Question 27: Does the child react by crying when he sees you crying, even if he does not know why?<br>Question 28: Does the child show indifference to your crying?<br>Question 29: Where you are present, does the child wish to associate only with you?<br>Question 30:<br>Does the child feel feelings of jealousy, are you involved with other people? Question 31:<br>Does the child feel feelings of jealousy when you are only concerned with other people and not with him/her? | 16.25 |
|   | 16.21 |
|   | 16.81 |

| Test Statistics <sup>a</sup> |        |
|------------------------------|--------|
| N                            | 24     |
| Chi-Square                   | 39.615 |
| df                           | 29     |
| Asymp. Sig.                  | 0.090  |

## 6 Friedman Test

Based on the FriedmanTest, we observe that with 29 degrees of freedom (df=29, in the total of 30 questions) Asymp. Sig. = 0.09 > 0.05, therefore we reject H0. However, we observe that it is very close. In short, if we do the same test again with Rank, we observe that the new p-value < 0.05, so they are statistically significant with  $\alpha=0.05$ . (Table 12-13).

## 6.1 Kendall's W Test

**Table 12** Ranks

| Ranks  | Mean Rank |
|--|-----------|
| Question 1: Does the child have a problem if he/she has to stay in a room with a stranger without you?<br>Question 2:<br>Does the child have the ability to communicate with a stranger without your presence in the same room?<br>Question 3:<br>Is the child able to show his/her toys to a stranger and play happily without you being in the same space?<br>Question 4:<br>Does your absence from the space leave the child indifferent?<br>Question 5: Does the child feel more secure when, while you were absent from a space, you return?<br>Question 6:<br>Does the child become anxious when you were to leave the space?<br>Question 7:<br>Does the child become overcome with feelings of fear or cry when you leave the space?<br>Question 8:<br>Is the child easily comforted when you return?<br>Question 9:<br>Does the child make nervous movements when you are about to leave the room?<br>Question 11: When the child realizes that you are about to leave the room, does the child on one hand want to cry and on the other hand try to hold it together?<br>Question 12:<br>Is the child afraid when you return after a short absence?<br>Question 13:<br>When the child finds something new, does he want to play it on his own, without you?<br>Question 14:<br>When the child finds something new, does he or she want to play with you alone?<br>Question 15: Does the child know when you are upset and tries to calm you down by asking if you are okay? | 15.60     |
| Question 16:<br>Does the child understand when you are upset and continues to play as he/she does not recognize any expression, treating you as if everything is fine?<br>Q17: Does the child quickly greet you while you were absent with a big smile?<br>Question 18: Does the child not greet you while you were absent unless you greet him/her first?<br>Question 19: Does the child often hug you first?<br>Question 20: Does the child constantly seek physical contact with you?<br>Question 21:<br>Does the child use your expressions as a source of information (to understand what is happening) when something seems risky or scary?<br>Question 22: If you confirm that the child is not in danger, does the child approach objects that previously may have frightened him/her?<br>Question 23:<br>Does the child want to know where you are when playing at home and notices if you have changed rooms?<br>Question 24:<br>Does the child not care where you are when playing?<br>Question 25:   | 15.71     |

|   |  |
|---|--|
| Does the child prefer to play only near you?  |  |
| Question 26:  |  |
| Does the child do whatever you tell him/her to do directly, without having to give commands?        |  |
| Question 27: Does the child react by crying when he sees you crying, even if he does not know why?  |  |
| Question 28: Does the child show indifference to your crying?                                       |  |
| Question 29: Where you are present, does the child wish to associate only with you?                 |  |
| Question 30:  |  |
| Does the child feel feelings of jealousy, are you involved with other people?                       |  |
| Question 31:  |  |
| Does the child feel feelings of jealousy when you only deal with other people and not with him/her? |  |

**Table 13** Test Statistics

| Test Statistics          |        |
|--------------------------|--------|
| N                        | 24     |
| Kendall's W <sup>a</sup> | 0.057  |
| Chi-Square               | 39.615 |
| df                       | 29     |
| Asymp. Sig.              | 0.090  |

b. Kendall's Coefficient of **Concordance**

Based on Kendall's W Test, as in the above, we observe that with 29 degrees of freedom (df=29, in the total of 30 questions) Asymp. Sig. = 0.09 > 0.05, so we reject H<sub>0</sub>. However, we observe that it is very close. In short, if we do the same test again with Rank, we observe that the new p-value < 0.05, so they are statistically significant with  $\alpha=0.05$ .

- Question 8 (Is the child easily comforted when you return? ) had the highest mean value, indicating that mothers were generally able to comfort the infant when returning to the room.
- Question 28 ( Does the child show indifference to your crying? ) had the lowest mean value. It is therefore evident from this that toddlers are directly affected by the mother's situation. Especially in this particular question, by the mother's own crying.

## 7 Results of the investigation

The results were obtained from the sample consisting of 24 mothers, 6 (25%) were 20-29 years old, 15 (62.5%) were 30-39 years old, and 3 (12.5%) were >40 years old (N=24).

In summary, based on Kendall's W Test & the Friedman Test, if the same test is done again with Rank, we observe that the new p-value < 0.05, so it is statistically significant with  $\alpha=0.05$ . Therefore, we conclude that all the questions asked in the questionnaire are statistically significant and thus are related to each other.

Final conclusion from the research: There is attachment of infants with their mothers.

From the sample taken into consideration (N=24<50), they were mothers, 6 (25%) 20-29 years old, 15 (62.5%) 30-39 years old, 3 (12.5%) >40 years old.

Who gave birth to 11 boys (45.8%) and 13 girls (54.2%), with the majority, at 9 months gestation (66.7%). It is worth noting that premature births (<8 months) were 6 (25%). Quite a high percentage.

Exclusive nursery education was started by 9 infants (37.5%), while 8 were in both (hybrid mode) (33.3%), giving us a total of 70.8%. Quite a satisfactory percentage.

The largest percentage of infants (54.2% = 13 infants) joined preschool at age 4-5.

From the partial sample correlation of the questions on pages 12-15, we observe that boys show a higher probability of attachment to their mother than girls (Sample of questions 3/29 = 10.3%).

Question 8 (Is the child easily comforted when you return? ) had the highest mean score, indicating that mothers were generally able to comfort the infant when returning to the room.

Question 28 ( Does the child show indifference to your crying? ) had the lowest mean value. It is therefore evident from this that toddlers are directly affected by the mother's situation. Especially in this particular question, by the mother's own crying.

### **7.1 The role of Digital Technologies**

Finally, we emphasize the significance of all digital technologies in the field of mindfulness and mother's infant connection, which is highly effective and productive and facilitates and improves assessment, intervention, and educational procedures via mobile devices that bring educational activities everywhere [37-40], various ICTs applications that are the main supporters of education [41-60], and AI, STEM, Games and ROBOTICS that raise educational procedures to new performance levers [61-68]. Additionally, the development and integration of ICTs with theories and models of metacognition, mindfulness, meditation, and the cultivation of emotional intelligence [69-102], accelerates and improves more than educational practices and results, especially in mindfulness training and stress reduction treating domain and its practices like assessment and intervention.

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## **8 Conclusions/discussion/limitations of the investigation**

According to the data collected it was shown that boys show ,greater attachment to mothers than girls. This finding needs to be taken into consideration in order to provide more direct intervention to boys. Additionally, it was found that mothers were able to influence the infant in a stressful situation as they were able to calm and comfort the infant by returning to the same room with him. Still, it was found that the mother's mental state directly influenced the infants who showed agitation and anxiety by observing their mother in the confused psychological state.

From the findings of the present study, it was found that attachment is a condition that exists and is of concern in modern times. The infants showed moderate to high levels of attachment to their mothers, a fact that should be taken seriously by them in order to adopt appropriate techniques to help eliminate this psychological condition in infants. According to the data collected it was shown that boys show ,greater attachment to mothers than girls. This finding should be taken into consideration in order to provide more direct intervention for boys. In addition, it was found that mothers were able to influence the infant in a stressful situation as they were able to calm and comfort the infant by returning to the same room with them. Still, it was found that the mother's mental state directly influenced the infants who showed agitation and anxiety by observing their mother in the confused psychological state.

Based on the aforementioned literature, the child with attachment tendencies towards the mother experiences a particularly stressful situation and as a result, has difficulty forming a more autonomous personality. This fact, if not limited to childhood, can accompany the person into adulthood, contributing to the creation of a mentally vulnerable personality. Mothers should be able to inform and contribute to the treatment of infants. At the same time, teachers must also be aware of the need to be able to support and guide toddlers appropriately, promoting their self-esteem and independence. Furthermore, the cultivation of children's conscientiousness is an important objective for the elimination of attachment, since through conscientiousness the child will be able to gain a deeper understanding of himself or herself and the emotions he or she experiences, and in the long term will be able to manage anything that causes stress and to detach from the mother.

A limitation of this study is that the results were formulated based on the mothers' responses, therefore the infant's behaviour was detected through the mother's personal perception and assessment. This factor may contribute to the generation of invalid results in case mothers do not have an accurate and correct perception of infant behaviors.

## Compliance with ethical standards

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### *Disclosure of conflict of interest*

The Authors proclaim no conflict of interest.

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