Selected Predictors of Parents' Anxiety Levels When Entrusting the Care of a Child to a Nursery

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Abstract

The article addresses the parents' anxiety during the separation from their child in the first days of stay in a nursery. For a parent, who is the first attachment figure for a child, separation is extremely difficult and stressful. The aim of presented research was to verify whether and to what extent, on the basis of such factors as the level of trait anxiety, gender, age of the parent or the number of children in the family, it is possible to predict the level of parents' anxiety when entrusting children to nursery care. The study was done using State-Trait Anxiety Inventory [STAI] scale and short questionnaire regarding the age and family conditions. Results indicate that the factors predicting the level of state anxiety of the parents who entrust the care of their children to nurseries, were the parent's gender and the level of their trait anxiety. Mothers had significantly higher levels of anxiety than fathers, and the level of anxiety as a state was higher in parents who generally experienced higher anxiety measured as trait anxiety.

Key words: *nurseries, day care, toddlers care, parents' anxiety*

Introduction

In most European countries nurseries – institutions devoted to children under three are existing and developing to improve the quality of early child education and care (CR, 2019). Some working parents, after a parental leave which lasts about a year in Poland, decide to entrust the care of their children to nurseries for the

duration of their working hours. Attending a nursery by a child is a huge change in the life of a young child and their parent. The child who has so far mostly stayed in the home environment, faces the task of coping with the crisis related to the separation from their parents, and adapting to the new environment (Świdrak, 2020). It is also a difficult moment in life for parents, as it forces changes in their current lifestyle. In this situation, both parents and children may be affected by stress and the anxiety stemming therefrom

Methodology of Research

General Background of Research

The first years of life are the period in which the primary attachment to a human being is formed and the child chooses one person with whom they create a prototype bond which serves as a model for later bonds and relationships (Bowlby, 1982).

Nurseries, which are day-care institutions for children up to the age of three, force the separation of a young child from a parent for several hours a day. The first moments of a child alone in an institution are reminiscent of M. Ainsworth's experiments in which a toddler was left alone in a room with a stranger, while the mother left for a few minutes. Children with a secure, i.e., normal attachment pattern, reacted by crying to being separated from their mother and welcomed her happily upon her return to the room (Ainsworth, 1978). A similar situation takes place in a nursery, but the situation of entrusting the care of a child to a specialized institution is more complex. On the one hand, it is a fact that young children left in a new environment feel enormous stress when being separated from their mother, on the other hand, it is possible that a secondary attachment figure is created. Research using cortisol shows that separation from the attachment figure is probably the most stressful experience in a young child's life (Dettling, 1999, 2001; Watamura, 2003; Watamura, Kryzer & Robertson, 2009). For example the level of cortisol in the research by A. Dettling (1999) among three and four-year-old children who spent the entire day away from their attachment figures in nurseries was very high. On the other hand, it is possible to develop attachment to more than one caregiver and moreover it is not only the time spent with the child that is crucial, but also its quality. In further research, Dettling (2000) focused on children staying with caregivers by examining the level of cortisol. The children remaining in the care of people who responded to their needs had normal levels of cortisol. The differences between Ainsworth's experiment and the real-life

situation of entrusting a child to a nursery is the fact that it involves additional factors which may prevent separation from being necessarily traumatic for the child. Entrusting a child to the care provided by a nursery takes place in natural conditions, in which the „stranger” is a qualified caregiver, and the child is left in a safe environment with a group of other children. The children's stay is longer than a few minutes, which may be described as entry into a new environment, and not a temporary situation. Polish nurseries are staffed by people with degrees in pedagogy or secondary vocational education following the completion of a special training course for caregivers. EU recommendations on increasing the quality of care for children up to three years of age are being implemented. Nevertheless, it is worth taking a closer look at the issue of anxiety that may accompany parents in the first days of their children's stay at a nursery.

Sample of Research

Numerous studies show that parents' fears are passed on to their children in various situations. For example, Murray (2008) investigated the anxious responses of 79 mothers with social phobia, 77 non-anxious mothers and their 10 and 14-month-old infants to an unfamiliar adult. As expected from the social referencing paradigm, maternal anxiety during mother-stranger and infant-stranger interaction and maternal encouragement during infant-stranger interaction predicted a change in the behaviour for infants aged from 10 to 14 months.

The longitudinal studies of personality generally indicate that women are characterized by having higher levels of anxiety and neuroticism; they report their anxiety more often than men; they are more susceptible to anxiety disorders, and additionally, the level of neuroticism in adulthood increases with age (e.g. Mandal, 2005; McLean & Anderson, 2009). A higher level of women's maternal anxiety is also surfaced in a relationship with the youngest children. For example, as Dutch studies have demonstrated, fussy eating in young children is more related to the maternal anxiety during the prenatal development, than to the anxiety in fathers (de Barse, 2016). Numerous studies show that the anxiety in motherhood manifests itself in difficult, stressful situations (e.g., a child's performance in front of an audience), in case of an illness or developmental disorders of a child, and has a negative impact on the development and behaviour of the children, e.g., on feeding and eating disorders (e.g., Zerkowicz, 2011, Kafali, 2020; Taborelli, 2013; Becker & Ginsburg, 2011).

The age of the parents and the number of children brought up in the family also seem to have an impact on the separation from the child. It seems that the most difficult experience for parents is to entrust their first child to the care provided by

a nursery, and in the case of subsequent children, parting with them may be easier. The research by Richardson (1999) demonstrates that in the case of the first child, women most commonly pay more attention to their health and mental well-being during pregnancy, and once the baby is born, parents are more often concerned about whether it develops well. However, the more recent studies concerning the functioning of the only children and their parents are ambiguous. Chinese studies show that parents of the only children apply different parenting styles to their children, and parental attitude as well as upbringing depends more on the cultural context than on the number of children in the family (Weiping 2017).

Therefore, the aim of the research is to verify whether and to what extent, on the basis of such factors as the level of trait anxiety, gender, age of the parent or the number of children in the family, it is possible to predict the level of parents' anxiety when entrusting children to nursery care. The main problem was formulated as follows: What factors are significantly related to the level of anxiety experienced by parents when entrusting a child to nursery care?

The dependent variable in the research is the level of anxiety as a state measured at the moment of the child's separation from the parent in the first days of the child's stay in the nursery, the independent variables are the age of the parents, the number of children brought up in the child's family, the gender of the parents and the level of trait anxiety in the parents.

Based on the theoretical assumptions presented above, the following hypotheses were formulated:

- H1: Mothers show a higher level of anxiety as a state than fathers when entrusting a child to nursery care.
- H2. There is a relationship between the parents' trait anxiety, parent's gender, age and the number of children in the family, and parents' anxiety at the time of entrusting the child to nursery care.

Instrument and Procedures

To assess the parents' anxiety during the first days after separation from children the State-Trait Anxiety Inventory STAI scale by C.D. Spielberger, R.L. Gorsuch, R.E. Lushene, in the Polish adaptation of C.D. Spielberger, J. Strelau, M. Tysarczyk, K. Wrześniewski (1983) was employed. The STAI consists of two sub-scales, one (X-1) measuring state anxiety and the other (X-2) measuring trait anxiety. According to Spielberger (1985) state anxiety is characterised by subjective, consciously perceived feelings of anxiety and tension, accompanied by associated stimulation of the nervous system. The trait characteristic of this type of anxiety is its high variability under the influence of various types of threatening factors. The state

anxiety scale was applied with reference to the situation of parents' entrusting their child to a nursery. Trait anxiety denotes an individual's acquired susceptibility to perceive objectively harmless situations as threatening and then to react to them with strong anxiety disproportionate to the danger. Thus, trait anxiety denotes a constant disposition towards an anxious way of responding (Spielberg 1985). In addition, parents were asked to complete a short questionnaire regarding the age and family conditions (number of children in the family, type of family).

119 parents participated in the research, including 88 mothers and 31 fathers. The research was carried out right after the separation from the children during the first days spent by the children of the surveyed parents at the nursery. The average age of the respondents was 32.69 years. The great majority of the surveyed parents formed complete, unreconstructed families (110 persons), five parents raised their children alone, three families were reconstructed families. The number of children in the surveyed families varied: 32 children of the surveyed parents were the only children, 73 families had 2 children, 14 families had 3 children, and two families had 4 children. The research was conducted during the period from September to December 2019. The subjects were informed about the purpose of the study and asked for their consent to participating in the study. After obtaining a written consent, parents completed a questionnaire.

Data Analysis

The collected data was analysed using PS IMAGO PRO 5.1 (software package), which contains IBM SPSS Statistics 25. The significance level was set a priori at $p \leq 0.05$.

The first stage of data analysis was to calculate the descriptive statistics of the dependent variable (state anxiety) and independent variables (trait anxiety, number of children in the family, gender of parents, age of parents). Descriptive statistics were shown through the mean value, the maximum score, the minimum score, and the skewness. The non-parametric correlations of Spearman's Rho between ordinal and quantitative variables (trait anxiety, number of children in the family, age of parents) were also calculated. The aim of the second stage of the analyses was to verify the hypotheses. In the scope of the first hypothesis, the differences between men and women with regard to state anxiety in the event of being separated from children were calculated. The non-parametric Mann-Whitney U test was applied, and the normality of the distribution was checked earlier using the non-parametric Kolmogorov-Smirnov test. The basis for the verification of the second research hypothesis was the linear regression analysis of the highlighted variables.

Results of Research

The first stage in the analyses of the results concerned the description of the variables and the description of correlations existing between them. By analysing the descriptive statistics on state anxiety in Table 1, it can be said that the mean value for state anxiety for both genders in total was 6.55, which is still at the average level of the 10-point sten score. The mean value for trait anxiety was 3.97, which falls within the range of low scores. Additionally, the levels of state and trait anxiety were calculated in the studied groups of men and women. As can be seen in Table 2, the results are slightly different when the gender of the respondents is taken into account. In terms of state anxiety, women's score reached a high mean value ($M = 7.023$), and men's score reached a medium mean value ($M = 5.166$). The results for trait anxiety amongst the studied parents are at a low level for both women ($M = 4.28$) and men ($M = 3.033$).

Table 1. Descriptive statistics and the correlations between the variables

Variable	M	SD	Min	Max	SE	1	2	3
(1) Parent's age	32.5	3.801	18	44		X		
(2) Number of children in the family	1.09	0.391	1	4		0.363**	X	
(3) X1 – state anxiety	6.60	2.313	1	10	0.224	-0.355**	-0.264**	X
(4) X2 – trait anxiety	3.98	2.256	1	10	0.224	-0.189**	-0.089	0.427**

** $p < 0,01$

Analyzing the correlations between the variables included in Table 1, it may be stated that the level of trait anxiety is significantly correlated with the level of state anxiety in the studied group ($\rho = 0.427$). This means that the higher the level of trait anxiety in the studied group, the higher the level of anxiety was while entrusting children to nursery care. The parent's age was negatively correlated with state anxiety ($r = -0.355$). This means that along with the increase in the parent's age, anxiety for the child decreases in the studied group. The correlation was also negative in the case of the number of children ($r = -0.275$, $p = 0.003$). With the number of children in the family increasing, anxiety for the child during separation decreased.

In terms of the first hypothesis, the results for the dependent variable, that is state anxiety, were subjected to statistical inference depending on the parent's gender. The results of the inference are shown in Table 2.

Table 2. Descriptive statistics and differences between the level of parents' anxiety while entrusting children to nursery care and trait anxiety depending on gender

Variable	Men					Women						
	M	SD	Min	Max	SE	M	SD	Min	Max	SE		
X1	5.166	1.966	2	9	-0.132	7.023	2.199	1	10	-0.520	-3.885	0.001***
X2	3.033	1.401	1	5	-0.224	4.287	2.357	1	10	0.361	-2.567	0.010**

X1 – state anxiety

X2 – trait anxiety

** $p < 0,01$; *** $p < 0,001$

As can be seen in Table 2, the level of state anxiety among the surveyed mothers is higher than the level of anxiety felt by the fathers upon being separated from the child ($p > 0.001$). Additionally, differences in the level of trait anxiety were calculated depending on gender. The general fearfulness of women (measured in this case as trait anxiety) also turned out to be higher among the surveyed mothers than among the fathers, but the significance level of the differences between the genders for the variable of trait anxiety was lower and reached (0.010).

The second stage of data analysis was to create a model of the linear regression of variables on the basis of which one could predict changes in the level of state anxiety in parents entrusting their children to nursery care. The analysis was performed using the stepwise regression method. The first model took into account demographic variables, i.e. the gender and age of parents and the number of children in the family (Table 3).

Table 3. Models of predicting parents' state anxiety by chosen variables

Predictors	Model 1	Model 2	
	B	P	P
Gender	-0.28**	0.003	-0.201**
Parents' age	-0.161	0.100	-0.129
Number of siblings	-0.108	0.268	-0.098
X2 (trait anxiety)			0.348*
F (df)	6.845*** (3)		9.910** (4)
ΔR^2	0.162		0.274

* $p < .05$; ** $p < .001$.

Dependent variable – state anxiety

In this model, only gender turned out to be a significant predictor of the level of state anxiety in parents while entrusting a child to nursery care. On the basis of gender, 16% of variance of the dependent variable ($\Delta R^2 = 0.162$) can be predicted. In the second model, the variable of trait anxiety among the surveyed parents was added to the demographic variables. The analysis of the second model shows that the level of trait anxiety had the highest predictive power for the change in the level of state anxiety ($\beta = 1.04$, $p = .018$), the gender of the parent was slightly less important ($\beta = 0.201$, $p = 0.025$), the other variables, i.e. the parent's age and the number of children in the family, turned out to be statistically insignificant. As for the direction of the dependence, the higher the level of trait anxiety in the parent, the higher their state anxiety was. In the study, women were marked with a value of 1 and men with a value of 2. The higher the value of gender, the lower trait anxiety was in the respondents. In practice, this means that a higher value for men meant lower state anxiety ($\beta = -0.201^{**}$). Predicting the change in the level of state anxiety in the second model explained the variance of the dependent variable, i.e. state anxiety, reaching 0.27 ($\Delta R^2 = 0.274$). The second model, therefore, turned out to be more appropriate for the selected variables included in the study.

Discussion

In the study presented above, the assumed hypotheses were confirmed. In terms of the first hypothesis, the mothers showed a higher level of anxiety while separating from the child in the nursery hall than the fathers. In terms of the other one, a correlation was found between the parent's gender, the experienced trait anxiety and the parents' anxiety when the child was entrusted to nursery care.

The research indicate that parents' general fearfulness manifested itself while they were parting with the children in the nursery hall. Probably, the more fearful the parents were, the more difficult it was for them to part with their children. On the basis of gender and trait anxiety, we can predict the level of parents' anxiety while changing their children's environment from home to nursery. In addition, it can be assumed that a higher level of anxiety in mothers may affect the child during the adaptation to the facility. It is also worth noting that in the studied facilities, the majority of parents were women. They were the ones who most often brought their children and parted with them. They were also probably the first attachment figures for their children. In the context of the conducted research, one can formulate a recommendation whereby it would be worth involving fathers more in the issues of raising the youngest ones, as their anxiety for children is gen-

erally lower. Fathers, who are also attachment figures for their children, can help their children and the children's mothers to handle the difficult time of separation faster and with less stress.

Conclusions

The main finding of the research is that: based on gender and trait anxiety, one can predict the level of state anxiety in parents. Additionally, it can be claimed that the level of general fearfulness of parents turned out to be the most important one for predicting the parents' anxiety during separation from the children. The higher the level of trait anxiety in the parent, the higher state anxiety was. Research results suggest that the role of the father in caring for the youngest children may be very important. Fathers, can help their children and the children's mothers to handle the difficult time of separation, when both parents are working and a child is staying in the nursery.

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