

Parental stress and indifference and the parent's withdrawal from the relationship with their child: a structural approach

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Summary

Objectives. The aim of the study was to test the theoretical model assuming that parental indifference arises as a result of the parent experiencing stress in the relationship with their child. Therefore, we tested the model describing the relations among the variables of: (a) parent's experience of stress in the relationship with their child, (b) formation of a negative mental representation of the child in the parent's mind, (c) indifference towards the child, and (d) withdrawal of the parent from the relationship with their child. Subsequently, it was tested whether parental indifference was related to the development of emotional and social competences, as well as school readiness of children.

Method. The first study was carried out on a sample of 154 parents of preschool-age children (3 to 6 years old). The sample included 85 parents of boys and 69 parents of girls. The second study was conducted on 80 children between 6 and 10 years of age who were attending school and on their parents. Analyses were performed using the system of structural equations, data mining algorithms and the artificial neural network.

Results. The results demonstrated that the model fits the data accurately and the relations between the variables ranged from moderate to high. Parents with the highest level of withdrawal from the relationship with their child and of indifference were characterized primarily by negative mental representation of their child.

Conclusions. Based on the variables described in the model, it is possible to predict at a good level the degree of parental withdrawal from the relationship with their child. Parental indifference is associated with the child's lower performance in the development of emotional and social competences, as well as school readiness.

Key words: parental stress, parental indifference, parental withdrawal

Introduction

The withdrawal of a parent from the child's upbringing process can result in various negative consequences for the child's development. Today, parental indifference is even considered as one of the forms of abuse and neglect of the child, who – when not taught the principles of proper behavior in society by the parent – must recognize the rules governing the world by itself [1]. Therefore, it is important to recognize the reasons for parental indifference and withdrawal from the relationship with a child.

Psychological theories list a reaction to stress among the causes for this phenomenon. The parent withdraws from the upbringing process in order to avoid the stress (s)he experiences in the relationship with the child [2]. According to another theory, the parent withdraws because (s)he does not care and is indifferent to the child's affairs. However, this indifference usually does not result from parental insensitivity, but it arises as a result of the parent experiencing very strong stress in the relationship with their child [2]. The parent becomes indifferent to the child and their affairs because (s)he is trying to defend him-/herself against the strong stress experienced in the relationship with the child.

The article presents the results of research devoted to testing these relationships. Two alternative models were tested using structural equations. It was checked: (a) whether withdrawal results directly from the parent's reaction to the stress experienced in the relationship with their child, and (b) whether the relation between stress and withdrawal is mediated by the parent's indifference. In other words, whether the defensive reaction of the parent experiencing stress is indifference to the child and his/her affairs, and only this indifference causes the parent to withdraw from the relationship with the child.

The study was also devoted to testing how many of the tested parents experienced severe stress, as a result of which they reacted to the child with indifference and withdrawal. Parental indifference is identified with parental mistakes and has a negative impact on the child's development [2–4]. Results of the relation between parental indifference and the development of emotional and social competence and school readiness of children will be discussed in the article.

Withdrawal of a parent from the relationship with a child

The withdrawal of a parent from the relationship with a child involves avoiding and not interacting with the child, a certain “letting go” of the relationship. It can be a manifestation of disturbances in the relationship with the child. The parent does not want contact with the child and is not involved in the child's affairs [2]. The reasons for this phenomenon may have a varied background. Psychological theories identify at least two causes.

First, the parent withdraws from the relationship with the child as a direct result of the stress experienced in that relationship [2]. According to Gurycka, in the situation of experiencing stress, the parent develops a specific mental representation of their

child and, as a result of this representation, withdraws from the relationship with the child. This suggestion is rooted in theories of psychological stress, which indicate that experiencing stress influences the mental representation of the stress-causing object. Depending on the content of this representation, a person may react by withdrawing in a stressful situation, but may also adopt other attitudes, such as: applying pressure, seeking help, gaining cognitive distance from the stressful situation, motivating oneself to overcome the stress by resolving the situation, focusing on their emotions [5–11]. Avoidance, withdrawal from stressful situations, as well as combating stress by use of pressure are the basic reactions to stress observed already in the animal world [12]. They are, therefore, primary reactions.

The character of the mental representation of the stress-causing object shaped as its result is important. Stress can have a positive, not only negative nature. Positive stress is associated, for example, with marriage, childbirth, and so forth [13]. The way stress is created can, however, condition stress responses.

Theories of upbringing list the parents' inability to achieve parental goals among the causes of stress [14]. These parental goals are personal traits that parents want to shape in their child [15–19]. According to psychological theories, when a person cannot achieve their goals, they experience a difficult situation [20,21]. It is about the discrepancy between the desired state and the achieved state that creates a difficult, stressful situation for a person [9, 20, 22]. When a parent cannot achieve the goal of shaping the desired personal qualities in their child, they experience difficulties and stress [14]. Contemporary research reveals that this correlation is high and exceeds 0.700 [18, 19, 23]. As a result of stress, a negative representation of the child is formed (here the relationship is also high and exceeds $\beta = 0.700$), and the parent's defensive reaction to stress is withdrawing from the relationship with the child.

The second mechanism of the parent's withdrawal from parenting situations is not only a direct reaction to stress but also takes into account other factors that precede it. One such factor may be the indifference of the parent towards their child. As a result of stress, a parent may develop a mental representation of the child consisting in perceiving it as: (a) not important or too burdensome, which facilitates defensive reactions and (b) not requiring parental activity and involvement [3].

The parent ceases to be interested in the child, its affairs and upbringing, and, consequently, becomes indifferent towards the child and withdraws from the child's upbringing process. Indifference is thus a variable mediating the relation between the mental representation of the child and parental withdrawal from the relationship with the child.

This withdrawal can, unfortunately, have very serious consequences for raising a child. The child's upbringing process unfolds without control. In such a situation, the parent no longer influences the child's development and does not use parental control, that is, does not teach the child the principles of correct behavior. The child has to raise him or herself, that is, singlehandedly learn the rules of proper behavior, discover the rules governing the world, and how to participate in it. It is a very burdensome task for

a child, who usually is unable to cope with it alone. Szymańska showed that parents whose children do not display externalizing and internalizing behavioral problems and were described as exceptionally well-behaved by kindergarten teachers, strengthened parental control in reaction to stress and experienced difficulties [1]. They taught their children the rules of correct behavior with even greater effort. Thus, these parents used other methods of coping with stress. The fact is, however, that at the same time they experienced much lesser difficulties in relationships with their children than parents whose children exhibited externalizing and internalizing behavioral problems [1].

Theoretical Model

The current study tested the correctness of two models, theoretical and alternative. The methodological status of both models was similar, as both of them were drawn from Gurycka's theory [2, 3]. The correctness of the models was tested, and an attempt was made to determine which one was more accurate.

In both models, the exogenous variable from which the analysis of the entire process begins is discrepancy. When a parent cannot achieve parental goals, that is, develop those personal qualities in their child that they want to, then they encounter difficulty, or experience parental stress. This was the first research hypothesis tested in both models. Figure 1 presents the models' graphs, where this first hypothesis is marked by H1.

As a result of stress experienced by the parent, a negative mental representation of the child is formed, which consists of perceiving the child as not important personally to the parent or too burdensome for the parent, by which the parent reacts by distancing himself/herself. A parent can also shape the mental representation of the child and its activity as not requiring parental commitment. This is the second research hypothesis in both models, marked with H2.

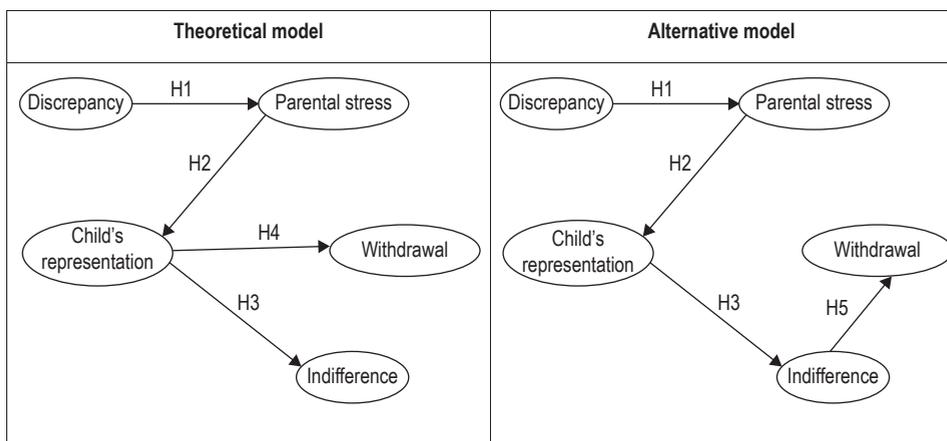


Figure 1. The theoretical and alternative model

A parent who holds such a mental representation of their child can react with indifference in the relationship. This is the third research hypothesis, marked with H3 in both models in Figure 1. As a consequence of this mental representation, the parent can also withdraw from the child's upbringing process. This is the fourth hypothesis (Fig. 1, H4) in the theoretical model. In the theoretical model, parental withdrawal and indifference towards the child are not interrelated variables.

The second model, alternative to the first one, assumes that the child's representation, consisting of perceiving the child as irrelevant to the parent, not requiring parental involvement, and also burdensome for the parent, is associated with indifference towards the child. The hypothesis is marked with H3 in Figure 1. However, it is only as a result of parental indifference towards the child that a parent withdraws from the relationship. This is the fifth hypothesis of the described research (Fig. 1, H5).

In the study, the following hypotheses were put forward:

H1: The discrepancy between personality traits that parents want to develop in their children and the level of their actual development in children is associated with the formation of parental stress.

H2: Parental stress is associated with the formation of a negative mental representation of the child consisting of perceiving the child as not requiring parental activity and involvement and as not important to the parent or too burdensome for the parent, against whom the parent must defend himself/herself.

H3: When parents develop a mental representation of their children consisting of perceiving them as not requiring parental activity and involvement and as not important personally to the parents or too burdensome for the parents, the parents react with indifference towards the child.

H4 and H5: The mental representation of the child consisting of perceiving the child as not requiring parental activity and involvement and as not important personally to the parent or too burdensome, as well as parental indifference, is related with the withdrawal of the parent from the upbringing process.

Method

Purpose of the research

The aim of the current research was to test the correctness of the theoretical models presented in Figure 1. To test the models, answers were sought for the following general research questions, resulting from the assumptions of these models:

- (1) Is indifference and withdrawal of the parent from the relationship with the child related to the parent's reaction to the experienced stress (difficulties) and to the formation of the negative mental representation of the child?
- (2) Additionally, it was tested how many clusters of research participants similar to each other with regard to the variables described in the model could be distinguished. The second question was:

- (3) How many parents react with indifference and withdrawal in a situation of stress and difficulties in the relationship with their child?
- (4) Finally, the study tried to determine to what extent the variables described in the model are good predictors of parental withdrawal from the relationship with the child. The third and fourth research questions were thus:
- (5) Can parental withdrawal from the relationship with the child be predicted based on the variables of discrepancy, parental stress, the mental representation of the child, and indifference?
- (6) Are there any relations between the parent's indifference and the child's development of emotional and social competences and school readiness?

Research sample and procedure

Study 1. The first study was carried out on the Internet. The research sample consisted of parents of preschool children aged 3 to 6 years. Participants were recruited online. The parents were asked to respond only with their kindergarten-age child in mind. This procedure protected against crisscrossing of answers when the parent had more than one child.

One hundred and fifty-four people were in the research sample. The sample was composed of 119 mothers (77.2%) and 35 fathers (22.7%). Only one parent of the child participated in the research: mother or father. Among the study participants, 94 people had higher education (61.4%), 32 – undergraduate education (20.9%), and 27 – secondary education (17.6%).

The sample included 85 parents of boys (55.2%) and 69 parents of girls (44.8%). Children aged 3 years constituted 39.2% of the sample (45 children), children aged 4 – 16.2% (25 children), children aged 5 years – 24% (37 children), and children aged 6 years – 36.5% (47 children).

In the research sample, 64 children (41.6%) did not have siblings, 75 children (48.7%) had one sibling, 14 children (9.1%) had two siblings, and only one child (0.6%) had three siblings.

Eighty-seven children (56.5%) attended state kindergartens, 26 children (16.9%) – private kindergartens, and 41 children (26.6%) – other kindergartens (Catholic, Montessori, etc.).

Study 2. The research sample included 80 parents and 80 children aged 6 to 10 years. Only one parent of the child participated in the research: mother or father. The sample was composed of 45 girls and 35 boys, and 70 mothers and 10 fathers. Participation in the study was voluntary. All participants were acquainted with the purpose of the study and provided their consent (parents consented to their children's participation in the study). Participants were assured of the confidentiality of the research results and were acquainted with the instructions on how to fill out the questionnaires.

The parents completed the parental mistakes questionnaire (version for parents) at home, while the children completed the parental mistakes questionnaire (version for

children) at school. Six – and seven-year-old children were tested individually – the researcher read the questions out loud to them and the children indicated their responses to the questions. The older children were interviewed in small groups consisting of three to four members. The researcher also read them the questions out loud and asked the children to indicate their answers.

The selected children's teachers also filled out a questionnaire measuring the children's social and emotional competences at early school age, as well as their school readiness.

Measurement tools

The following research tools were used in the study:

Discrepancy scale. This scale created by Szymańska consists of 6 items. The scale measures three traits that parents want to shape in their children and three traits that they do not want to shape in their children, [19, 24]. In addition, the scale measures the children's level of development of these features. Parents are asked to mark, on a scale from -7 to 7 , how much they want their child to develop a particular trait listed as a parental goal and to indicate how much the child has developed this trait. An example question concerning a parental goal is shown in Table 1. The remaining scale questions regarding the desired goals are identical. Questions about undesired goals are similar, they only determine to what extent the parent did not want the child to develop the trait.

If the child had developed the trait that the parent wanted, then the measure of discrepancy was equal to 0. If the child did not develop that trait, then the discrepancy was maximal, and was $7 - (-7) = 14$. A confirmatory factor analysis (CFA) confirmed the existence of two factors in the scale:

- 1) Discrepancy from positive goals: measures the distance between how much the parent wanted their child to develop a given trait and how much the child has actually developed that trait. The factor loadings of the scale were $\lambda_1 = 0.86$, $\lambda_2 = 0.82$, and $\lambda_3 = 0.75$. Reliability: CR (Construct Reliability) = 0.85, and VE (Variance Extracted) = 0.66.
- 2) Discrepancy from negative goals: measures the distance between how much the parent did not want their child to develop a given trait and the level the child has developed that trait. The factor loadings of the scale were $\lambda_4 = 0.70$, $\lambda_5 = 0.79$, and $\lambda_6 = 0.80$. Reliability: CR = 0.81, and VE = 0.59.

The CFA model had a good fit to data, $\chi^2(8) = 28.63$, $p < 0.05$, CFI = 0.97.

The scale had reliability according to the Cronbach's alpha coefficient $\alpha = 0.662$, according to the intraclass correlation RO2 = 0.246.

Table 1. First pair of questions in the discrepancy scale test on parental goals

<p>INSTRUCTIONS</p> <p>Please list three traits that are especially important to you as a parent and for which you make an effort to make sure your child develops them.</p> <p>Trait one: (enter trait name here)</p> <p>Mark how important this trait is to you as a parent, the extent to which you wish your child to be like this.</p> <p>– 7 – 6 – 5 – 4 – 3 – 2 – 1 0 1 2 3 4 5 6 7</p> <p>(-7) definitely not like this (7) definitely like this</p> <p>Mark the extent to which (write your child's name) has developed the trait in question.</p> <p>– 7 – 6 – 5 – 4 – 3 – 2 – 1 0 1 2 3 4 5 6 7</p> <p>(-7) definitely has not (7) definitely has</p>
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Experienced parental difficulties scale. This scale by Szymańska consists of 8 items. It measures the level of parental stress, that is, the difficulties the parent experiences in the relationship with the child. The scale consists of one factor explaining 74.97% of the variability of all results. The reliability of the scale is very high, $\alpha = 0.96$. Reliability calculated by means of intraclass correlation is $RO2 = 0.77$.

Coping with stress scale. This scale by Szymańska consists of 15 items measuring the parent's response to stress in a difficult parenting situation. The scale has four factors explaining 68.91% of the variability of all results:

1. The strongest factor explains 24.27% of the variability of the results and measures the withdrawal of the parent from the upbringing situation. This factor is correlated with the *Avoidance – Oriented Coping* scale in the *Coping Inventory for Stressful Situations* (CISS) questionnaire [6-8, 10] at the level $r = 0.34, p < 0.05$, and with the *Distraction* subscale, $r = 0.51, p < 0.05$. Its reliability is $\alpha = 0.89$ and $RO2 = 0.58$.
2. The second factor explains 16.43% of the variability of the results and measures parental coping with stress through the use of pressure. Its reliability is $\alpha = 0.92$ and $RO2 = 0.79$.
3. The third factor explains 15.52% of the variability of the results. It is a factor measuring coping through distancing oneself from the upbringing situation and maintaining a positive attitude towards this situation. This factor has a reliability $\alpha = 0.90, RO2 = 0.76$. It is related to the *Task-Oriented Coping* scale, $r = 0.61, p < 0.05$, and negatively with the *Emotion-Oriented Coping* scale, $r = -0.41, p < 0.05$.
4. The fourth factor explains 12.68% of the variability of the results and measures coping with stress by seeking help from other people. This factor has a reliability of $\alpha = 0.77, RO2 = 0.52$. It is positively connected with the *Social Diversion* scale, $r = 0.47, p < 0.05$, and negatively with *Emotion-Oriented Coping* scale, $r = -0.53, p < 0.05$. The current study used only the first factor, measuring the parent's withdrawal from the upbringing situation.

Representation scale. The scale by Agnieszka Szymańska consists of 11 items. The scale consists of four uncorrelated factors that together explain 54.46% of the variability of all results. The first factor, explaining 28.82% of the variability of the results, measures the parent's emotional involvement in the child's affairs (reverse positions), which includes items ro3, ro5, and ro7. The second factor, which explains 13.34% of the variability of the results, measures the lack of commitment to the child's affairs, and it includes the items ro2 and ro8. The third factor explains 8.81% of the variability of the results and it measures the parent perceiving the child as a person who does not need the parent's involvement. This factor includes items ro1 and ro6. The fourth factor explains 3.5% variability of the results and includes the item ro8. It measures misunderstanding the child's needs. The position ro2, belonging to the second factor, had the strongest correlation with this factor.

Indifference scale. This scale, developed by psychology students at WSAP in Białystok under the leadership of Szymańska, examines the attitude of the parent shown in assuming distance in relation to the affairs of the child and the child itself and in a lack of interest in the child's activity. The scale consists of 11 items which are reduced into two factors that together explain 61.23% of the variability of all results. The first factor explains 48.13% of the variability of the results and measures the lack of interest in the child. The second factor explains 13.09% of the variability of the results and measures the avoidance of the child and its problems. The scale's reliability is $\alpha = 0.90$, $RO2 = 0.46$. In order to check the convergent validity of the tool, the scale was correlated with Gurycka's scale measuring parental indifference [2]. The scales' correlation proves the validity of the tool: $r(153) = 0.69$, $p < 0.05$.

Questionnaire measuring the child's emotional development at a younger school age

The questionnaire for measuring emotional development of children at a younger school age, created by Karolina Torebko, consists of 15 items and measures three aspects of a child's development: (a) emotional competence, (b) social and emotional skills, and (c) school readiness [25]. Each item contains two extreme aspects of the child's emotional development. Answers are given on a seven-point scale. The author's assumption was that the questionnaire should be filled in either by the parents (guardians) of the child or its teachers, because either one can, through systematic observation and joint actions, provide reliable and objective information on the emotional development of the examined child.

Exploratory factor analysis. The scale consists of three factors that together explain 67.40% of the common variability. The first factor measures emotional competence and explains 27.83% of the variability. The second factor measures social and emotional skills and explains 19.93% of the variability. The third factor measures school readiness and it explains 19.63% of the variability.

Reliability. The overall reliability of the scale for the 15 items is $\alpha = 0.91$. Intra-class correlation coefficient: $RO2 = 0.41$. The reliability of the entire tool is therefore satisfactory. Reliability for individual scales was as follows:

- emotional competence – this subscale consists of 6 items, $\alpha = 0.93$; $RO2 = 0.69$. Reliability is very good;
- socio-emotional skills – this subscale consists of 4 items, $\alpha = 0.86$; $RO2 = 0.60$. Reliability is good;
- school readiness – this subscale consists of 5 items, $\alpha = 0.85$; $RO2 = 0.53$. Reliability is good.

Questionnaire to measure parental mistakes as perceived by the parents

The Educator's Self-perception Questionnaire was developed by Antonina Gurycka, published in 1990 [2]. It consists of 33 questions. The questionnaire measures eight parental mistakes: rigorousness, aggression, constraining the child's activity, indifference, the parent's self-accentuation, indulging the child, doing things for the child, and idealizing the child. Each of the mistakes measured by the questionnaire consisted of four positions, with five in the case of the mistake of constraining the child's activity. Only the items measuring aggression were included in the current analysis.

Data analysis method

The following methods were used for analysis:

Systems of structural equations. The purpose of the structural equations systems was to determine the strength of connections between the variables described in the theoretical and alternative models presented in Figure 1 and to determine whether the presented models fit the data accurately. The structural models tested the hypothesis that a model reconstructed on the basis of theory does not differ from the empirical model.

Generalized *k*-means cluster analysis. The associative algorithms of the data mining method tested how many clusters of people similar to each other in regard to the variables described in the model can be distinguished in the data set. Therefore, they tested how many of the respondents had high scores on the variables related to experiencing stress, that is, on discrepancy, the negative mental representation of the child, and in response to stress by withdrawing from the parenting situation and adopting an attitude of indifference towards the child.

Artificial neural network. The task of the network was to build predictions, that is, to determine whether, on the basis of the variables described in the model, the results of parents in withdrawing from the relationship with the child can be predicted. If it turned out that this prediction is possible, then it could be stated to what extent the variables presented in the model are good predictors of parental withdrawal.

Results

Measurement model

The first stage of testing the structural equation model (SEM) was the construction of the measurement model. The purpose of the model was to determine whether the latent variables were correctly constructed [26-28]. Based on psychological characteristics, the following five latent variables were constructed:

- (1) Discrepancy – this latent variable consisted of items belonging to the *Discrepancy scale*. The variable had a hierarchical structure. The first factor measured the discrepancy from the positive goals (i.e., personality traits desired by the parent). The variance of the factor was formed by three items characterized by the following factor loadings: $\lambda_{\text{rozb1}} = 0.39$, $\lambda_{\text{rozb2}} = 0.97$, and $\lambda_{\text{rozb3}} = 0.43$. The second factor measured the discrepancy from the negative goals, that is, the undesirable traits. The variance of the factor is formed by three items characterized by the following factor loadings: $\lambda_{\text{rozb4}} = 0.59$, $\lambda_{\text{rozb5}} = 0.70$, and $\lambda_{\text{rozb6}} = 0.76$. The reliability of the discrepancy variable was $\text{CR} = 0.61$ and the variance extracted – $\text{VE} = 0.45$.
- (2) Parental stress – this latent variable consisted of items belonging to the *Experienced parental difficulties scale*. The variable's variance was created by eight items that had the following factor loadings: $\lambda_{\text{tr1}} = 0.86$, $\lambda_{\text{tr2}} = 0.90$, $\lambda_{\text{tr3}} = 0.87$, $\lambda_{\text{tr4}} = 0.71$, $\lambda_{\text{tr5}} = 0.83$, $\lambda_{\text{tr6}} = 0.72$, $\lambda_{\text{tr7}} = 0.69$, and $\lambda_{\text{tr8}} = 0.54$. The reliability of the discrepancy variable was $\text{CR} = 0.92$ and the variance extracted – $\text{VE} = 0.60$.
- (3) Representation – this latent variable consisted of two items belonging to the *Representation scale*. They had the factor loadings of $\lambda_{\text{ro2}} = 0.19$ and $\lambda_{\text{ro4}} = 0.77$. During the construction of the measurement model, it turned out that only the fourth factor of the *Representation scale* is correlated with the entire structure. The variable constructed in this way measured the parent's mental representation of their child and its problems and tasks as difficult for the parent and unimportant for him/her.
- (4) Withdrawal – the latent variable consisted of items belonging to the *Withdrawal subscale* of the *Stress Response Scale*. The variance of the variable was created by six items, which had the following factor loadings: $\lambda_{\text{S10}} = 0.78$, $\lambda_{\text{S11}} = 0.67$, $\lambda_{\text{S12}} = 0.84$, $\lambda_{\text{S13}} = 0.75$, $\lambda_{\text{S14}} = 0.83$, and $\lambda_{\text{S15}} = 0.57$. The reliability of the discrepancy variable was $\text{CR} = 0.88$ and the variance extracted – $\text{VE} = 0.56$.
- (5) Indifference – this latent variable consisted of ten items belonging to the *Indifference Scale*. The variable had a hierarchical structure. The first factor measured the lack of interest in the child's affairs. The variance of the factor was created by eight items characterized by the following factor loadings: $\lambda_{\text{o1}} = 0.84$, $\lambda_{\text{o3}} = 0.75$, $\lambda_{\text{o4}} = 0.89$, $\lambda_{\text{o5}} = 0.82$, $\lambda_{\text{o7}} = 0.83$, $\lambda_{\text{o8}} = 0.80$, $\lambda_{\text{o9}} = 0.81$, and $\lambda_{\text{o10}} = 0.83$. The second factor measured avoiding the child and its problems. This factor consisted of two items with the factor loadings of $\lambda_{\text{o2}} = 0.59$ and

$\lambda_{06} = 0.38$. The variable's reliability was $CR = 0.73$ and the variance extracted $- VE = 0.57$.

Theoretical models validation. Results of structural equation systems

The results obtained using the systems of structural equations revealed that the relations between variables ranged from high to moderate. The relationship between discrepancy and parental stress was $\beta = 0.46, p = 0.023$. The discrepancy explains 21.2% of the variability of parental stress. The non-standardized relationship was 0.156, which means that when the discrepancy increases by one unit of measurement, parental stress increases by 0.156 units. The relationship between the variables is moderate.

The relationship between parental stress and the mental representation of the child was $\beta = 0.56, p < 0.05$. Parental stress explains 31% of the variability of the negative mental representation of the child. The non-standardized relationship was 0.47, which means that when parental stress increases by one unit of measurement, the negative mental representation of the child intensifies by 0.47 of one unit of measurement. The relationship between variables is moderate.

The relationship between the parent's negative mental representation of the child and the withdrawal of the parent from the relationship with the child was $\beta = 0.89, p < 0.05$. The representation explains as much as 79% of the variability of withdrawal.

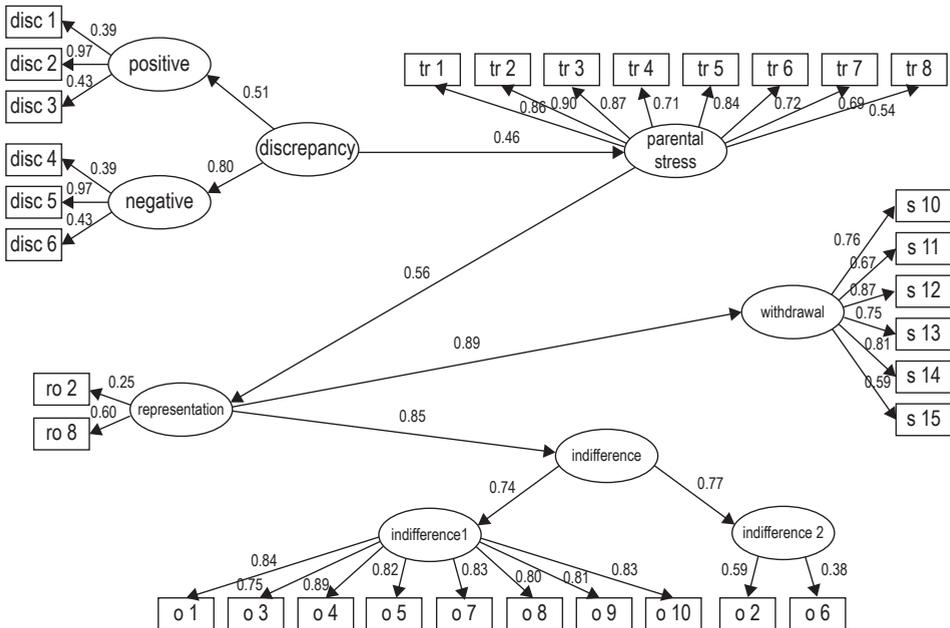


Figure 2. Graph of the theoretical model tested using the structural equations system

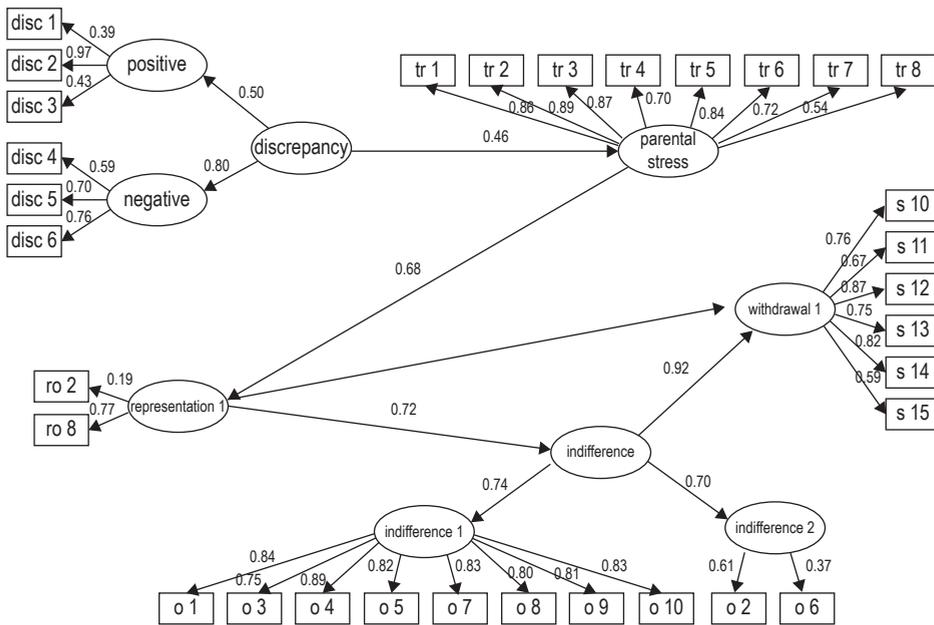


Figure 3. Graph of the alternative model tested using the structural equations system

The non-standardized relationship was 0.63, which means that when the negative mental representation of the child increases by one unit of measurement, the parent's withdrawal from the relationship with the child increases by 0.63 units. The relation between variables is high.

The relationship between the negative representation of the child and the indifference of the parent was $\beta = 0.85, p < 0.05$. The representation of the child explains 72.8% of the variability of the parent's indifference towards the child. The non-standardized relationship was 0.69, which means that when the negative representation increases by one unit of measurement, the indifference increases by 0.69 units. The relationship between the variables is high. A model graph showing its results is presented in Figure 2.

The correctness of the alternative model was then tested. This model assumed that indifference mediated the relation between the parent's mental representation of the child and parental withdrawal. For this purpose, the path between the representation and withdrawal was excluded from, and the path between indifference and withdrawal was included in the model.

The results of the new model revealed that the relation between indifference and withdrawal was $\beta = 0.92, p < 0.05$. Withdrawal explains 66.4% of the variability of parental indifference. The non-standardized relationship was 0.90, which means that when withdrawal increases by one unit of measurement, the parent's indifference towards the child increases by 0.90 units. The relation between the variables is high.

With this setting of paths in the model in which indifference mediates the relation between parental stress and parental withdrawal, the relation between parental stress and the mental representation of the child increased to the level of $\beta = 0.68$ (from a moderate level of $\beta = 0.56$). At the same time, the relation between the mental representation and parental indifference decreased from the level of $\beta = 0.85$ to $\beta = 0.72$. The relation remains high, however. The graph of the alternative model tested by the structural equation systems is shown in Figure 3.

Table 2 presents statistics on model fit along with criteria for decisions about good fit. The selection of fit measures was guided by the recommendation of McDonald and Ho, who recommend providing RMSEA and CFI values based on 41 publications containing SEM analysis [28]. These two measures were – next to the χ^2/df criterion – the most important in testing model fit. In addition, the TLI measure was given. For RMSEA, values below 0.08 were taken as showing the fit of the model [26-30]. For CFI, values above 0.90 as showing the fit of the model [28, 31]. For TLI, values above 0.95 as showing the fit of the model [28], and for the criterion χ^2/df below 2.5 [27]. CFI, RMSEA and χ^2/df measures indicate model fit. The TLI is lower than the 0.95 match criterion. As Konarski says, “The situation in which the measures of fit give conflicting indications regarding the level of fit of the tested model is fully expected and does not have to automatically undermine the adequacy of the tested model” [28, p. 372]. Because the two most important measures, i.e., CFI and RMSEA, as well as the χ^2/df criterion reveal a good fit, the model is considered to be fit for the data.

Statistics comparing the goodness of fit of the models (ECVI and MECVI) reveal that both models have a comparable fit; on their basis it cannot be indicated which model is better.

Table 2. Fit statistics for the theoretical and alternative model

Fit indexes	Theoretical model	Alternative model	Criterion for not rejecting H0
χ^2	731.207	719.586	
df	456	456	
n	154	154	
χ^2/df	1.604	1.578	< 2.5
RMSEA	0.063	0.062	< 0.08
CFI	0.901	0.905	> 0.90
TLI	0.892	0.897	> 0.90
ECVI	5.758	5.681	
MECVI	6.021	5.944	

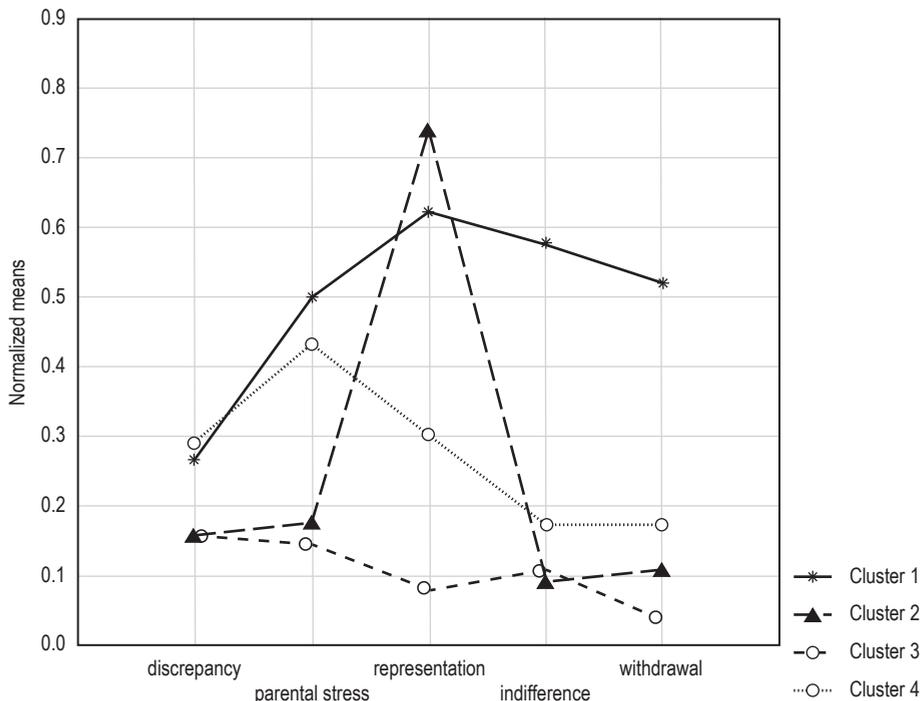


Figure 4. Generalized *k*-means cluster analysis results

The clusters of people distinguished due to the variables described in the theoretical model

The cluster analysis used all of the variables distinguished in the theoretical model. Associative algorithms programmed in the generalized *k*-means cluster analysis carried out in the STATISTICA program determined the number of clusters that can be distinguished in the data set according to the participants' similarity in their results in the variables (STATISTICA Electronic Manual 2012). The algorithms classified people into clusters on the basis of their results in all the variables described in the model. V-cross validation was used for the calculations. The number of clusters was not indicated by the researcher. The algorithms had chosen the number that was necessary to classify the people in the data set in a way leading to the greatest possible diversity between the individual clusters (intergroup variance) and the smallest diversity within those clusters (intragroup variance).

The cluster analysis identified four clusters in the data set. Seventy-four people (48.37% of the test sample) belonged to the largest cluster (Cluster 3, see Fig. 4). This cluster included people who had the lowest scores in all variables. These participants had low scores in experienced stress, negative mental representation of the child, as well as indifference and withdrawal from the parenting situation.

The first of the two smallest clusters (Cluster 1, see Fig. 4) consisted of people who had the highest scores in discrepancy, negative mental representation of the child, indifference and withdrawal from the parenting situation. Eighteen people belonged to this cluster, which constituted 11.76% of the tested sample.

The second smallest cluster (Cluster 2, see Fig. 4) consisted of parents who had the highest scores in the negative mental representation of the child and the lowest scores in all the other variables. Eighteen people belonged to this cluster, which constituted 11.76% of the tested sample.

Forty-three people belonged to the last cluster, which constituted 28.12% of the tested sample. This cluster consisted of people who had the highest results in discrepancy, though their profile was close to the profile of the people characterized by low scores in withdrawal, indifference, and negative mental representation of the child (Cluster 4, see Fig. 4).

There were statistically significant differences among the clusters in all the variables (Table 4). The results of the differences among clusters are presented in Table 3.

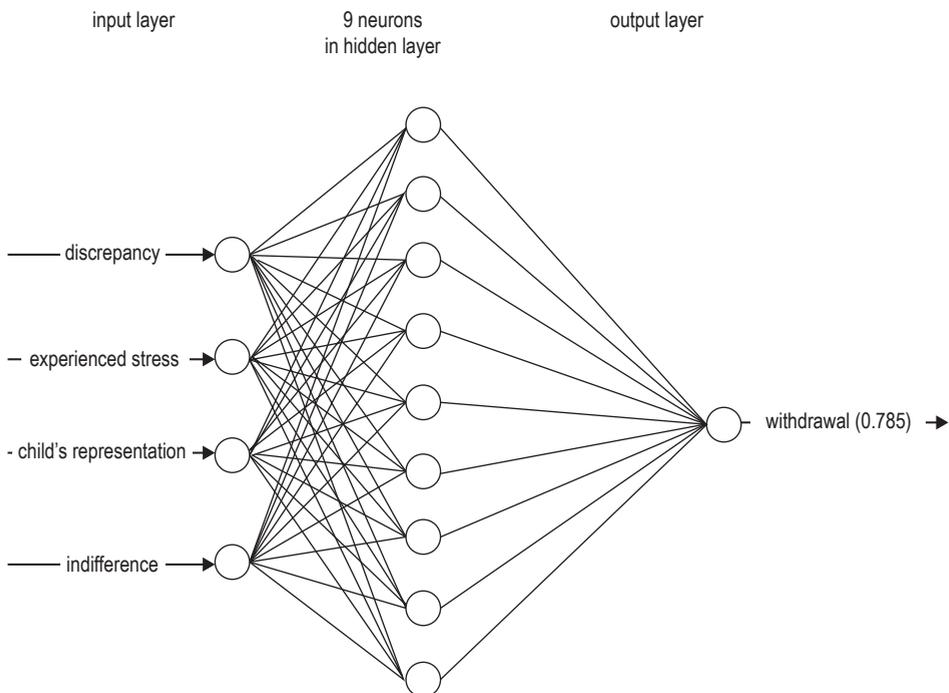


Figure 5. Artificial neural network graph

Table 3. Cluster means and the number of cases classified into clusters

Cluster	Discrepancy	Stress	Representation	Indifference	Withdrawal	Number of cases	%
1	208.55	28.17	8.72	39.83	19.83	18	11.76
2	125.83	9.94	10.39	6.61	4.16	18	11.76
3	121.73	8.27	1.15	7.57	1.55	74	48.37
4	227.37	24.30	4.28	12.14	6.69	43	28.10

Table 4. Results of the analysis of variance for the cluster variables

	df intergroup	df intragroup	F	p-value	η^2
Discrepancy	3	149	8.390	< 0.05	0.14
Stress	3	149	50.94	< 0.05	0.51
Representation	3	149	161.96	< 0.05	0.77
Indifference	3	149	64.35	< 0.05	0.56

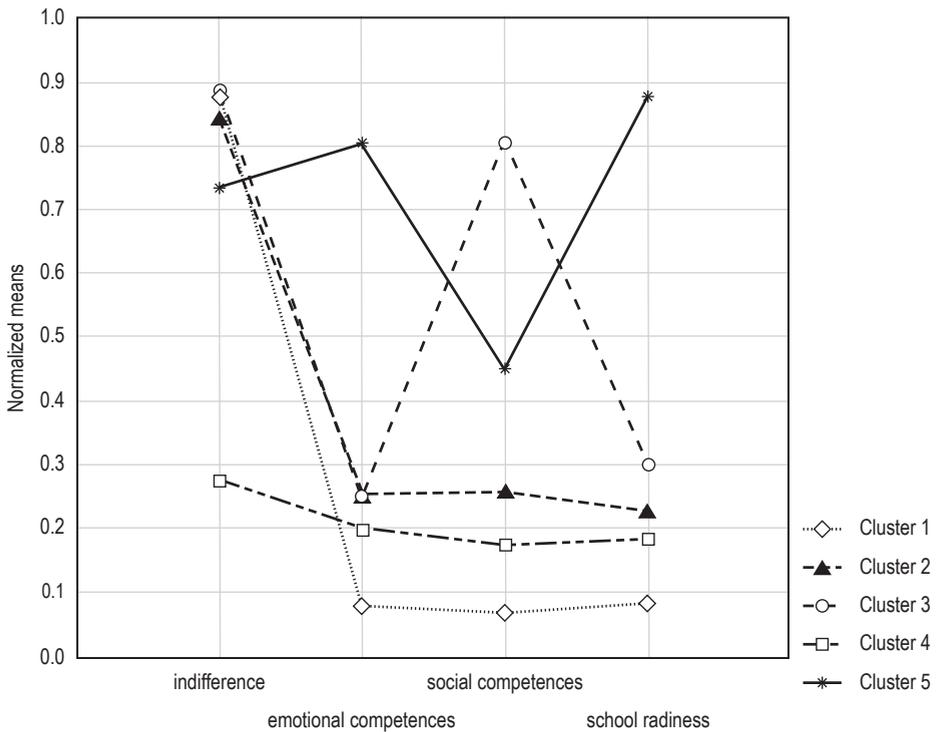


Figure 6. Results of generalized k-means cluster analysis for the relations between indifference and children’s emotional and social competences, as well as school readiness

Predicting parental withdrawal based on the model variables. Artificial neural network results

Two hundred neural networks were built, from which the most accurate network was selected. The network had four entries representing the variables of: (a) discrepancy, (b) experienced stress, (c) the parent's negative mental representation of the child, and (d) indifference of the parent towards the child. The network had nine neurons in the hidden layer and one exit which represented the variable of parental withdrawal [32, 34]. The artificial neural network is presented in Figure 5. The network prediction for the training set was 74.7%, which was quite high. For the validation set, the prediction was 78.5%, which was also high.

In summary, based on the results of the parents in the variables described in the model, the artificial neural network was able to predict their results in the variable of withdrawal from the parental situation quite well. This means that the variables described in the model are good predictors of parental withdrawal from the relationship with the child.

The training set and the most important one – the validation set – serving the network to check its solution, had achieved similar levels of prediction accuracy. This is very important, because it means that the rules that the network has learned on the training set could successfully be generalized (i.e., achieve results at a similar level) on the validation set [32–34].

Parent clusters distinguished by indifference scores and their children's emotional and social competences and school readiness development levels

The cluster analysis has distinguished five clusters in the data set (Fig. 6). The first, most-represented group, which included 37 people (46.25% of the tested sample) was comprised of parents who declared high indifference towards their children and, at the same time, whose children had the lowest results in the development of emotional and social competences and school readiness. The second cluster, to which belonged 24 parents (30%), included those parents who also had high indifference scores, but they were lower than in the first cluster. The children of the parents in the second cluster had slightly higher scores in the development of emotional and social competences as well as school readiness than did the children of the parents in the first cluster. The third cluster, which included only 4 people (5%), was comprised of parents who were characterized by high indifference but whose children nevertheless had the highest levels of social competence development and quite high levels of school readiness. The fourth cluster (13 people, 16.25% of the surveyed sample) included parents who had the lowest level of indifference and whose children also had quite low results in the development of social and emotional competences and in school readiness. Finally, the last cluster, represented by only two people (2.5%), included parents whose children had high scores in the development of emotional competences and school readiness, as well as quite high scores in the development of social competences. The parents of these children also reported a fairly high level of indifference.

Differences between the clusters were statistically significant, as shown in Table 6. Table 5 presents the means of clusters in the variables.

Table 5. Cluster means and the number of cases classified into clusters

Cluster	Indifference	Emotional competences	Social competences	School readiness	Number of cases	%
1	26.32	8.76	5.22	6.70	37	46.25
2	25.71	14.42	8.67	9.54	24	30.00
3	26.25	14.25	18.50	11.00	4	5.00
4	17.15	12.61	7.15	8.69	13	16.25
5	24.00	32.50	12.00	22.50	2	2.50

Table 6. Results of the analysis of variance for the cluster variables

	df intergroup	df intragroup	F	p-value	η^2
Indifference	4	75	61.11	< 0.05	0.76
Emotional competences	4	75	21.56	< 0.05	0.53
Social competences	4	75	62.77	< 0.05	0.77
School readiness	4	75	30.96	< 0.05	0.62

The cluster analysis results revealed that when parents had high results in indifference, their children achieved quite low results in the development of school readiness and social as well as emotional competences. However, low indifference was not linked to high levels of children's emotional and social skills as well as school readiness development. On the basis of the obtained results, only a certain regularity for low scores can be determined. When parents reported high indifference, it should rather be expected that their children would have low results in emotional and social competences and in school readiness.

Summary and discussion

The obtained results provided answers to the research question. Above all, the SEM revealed that the parent's withdrawal from the relationship with the child is related with the parent's experience of stress and with a negative mental representation of the child, but only in the dimension of misunderstanding the child's needs. It can be assumed that both models describe equally well the phenomenon of parental withdrawal from the child's upbringing process. The parent can withdraw whether (s)he is indifferent towards the child or not.

It was also found that experiencing stress did not always involve creating a negative mental representation of the child and, consequently, adopting an attitude of indifference and withdrawal. In the research quite a large group of people (28.12%), despite experiencing stress, did not react with indifference or withdrawal. This confirms the

theories that show that people's reactions to stress can be very different depending on other variables, for example, their personal characteristics, temperament, coping skills, and intelligence.

The study also revealed that the mental representation of the child consisting of perceiving it as insignificant for the parent or burdensome for the parent does not have to depend on the experience of stress. Some parents had such a representation, despite the fact that they did not experience stress, did not feel indifference or did not withdraw from the relationship with the child.

Of course, the existence of a group of parents who experienced high stress, developed a negative mental representation of their child, and responded to the child with indifference and withdrawal from the parenting situation was also revealed. We know that this group of parents is small and comprises only about 11% of the tested sample. This result confirms the results of other studies [19].

On the basis of discrepancy, experienced stress, a negative mental representation of the child, and indifference, parents' results in withdrawing from the relationship with a child can be predicted with high accuracy. The prediction rate was 78.5%. The variables described in the model are thus good predictors of parental withdrawal.

In future studies, it should be determined whether similar relations between these variables will be recreated on other samples, in particular the links between representation, indifference, and parental withdrawal. The relationship between discrepancy and experienced stress has already been tested in other studies [19, 23]. We know it is positive. On the previously tested samples, it was more than 0.70, so this relationship is in the range between moderate and high results in the Polish population. The relation between representation, indifference, and parental withdrawal was tested here for the first time.

If it turns out that the relations between the variables will be similar in other samples and that the prediction of the neural networks will remain accurate, then this would allow to build expert systems in the future, explaining parental withdrawal [35]. For this purpose, however, it is necessary to determine in advance how strong the relations between the variables can be and to what extent correct predictions based on these variables are possible [36].

Subsequently, it should also be checked whether similar relations will reappear in other samples than the Polish population. The study on the coexistence of parental indifference and the development of emotional and social competences as well as school readiness of children also reveals that in the case of 76% of the studied sample, the rule that the parent's indifference coexisted with the child's lower competences and lower school readiness was confirmed.

Limitations of the research

The main limitation of the research presented here was the small study sample. Unfortunately, despite the efforts and the carefully prepared research, few parents

agreed to take part in the study. This is due to the fact that parents of preschool children rarely agree to take part in studies in general. Secondly, the subject of the study was very sensitive, which could have discouraged parents from participating. Future studies should focus on expanding the sample as far as possible so that the results can be generalized to the general population with greater certainty. The current samples, although allowing for obtaining statistically significant results, are too small to ensure generalization even to the Polish population. In this respect, the results should be approached with caution [37].

The undoubted advantage of this research was the tools used. The study tested a model based on Gurycka's theory of parental mistakes [2]. The study used the original scale of the author of the theory, as well as modern versions of the tools that were validated with the original scales. It seems that it was a very strong point of the analysis, which also allowed to obtain such interesting and reliable results.

In future studies – in addition to enlarging the sample and testing these relationships on other groups of respondents so that, in accordance with the central limit theorem, it will become possible to recreate real relationships that occur in the population – it would also be necessary to focus on testing these models on populations other than Polish.

Practical implications

The results of the research revealed that the attitude of indifference of the parent towards the child can be strongly determined by the parent's experience of difficulties in the relationship with the child. When the parent cannot achieve parental goals (the process of shaping traits in the child runs in the direction undesirable by the parent), (s)he experiences difficulties in the relationship with the child. The higher the level of parental difficulties experienced, the greater the chance that the parent will adopt an attitude of indifference towards the child and withdraw from the child's upbringing process.

Research conducted on other samples has shown that along with a certain increase in parental stress (experiencing parental difficulties), the level of parental withdrawal from the child's upbringing process increases [38]. Initially, a parent experiencing stress reacts through an attempt to apply pressure. If the effort does not succeed, the parent withdraws from the child's upbringing process.

Current research confirms this conclusion. A group of parents who withdrew from the child's upbringing process had the highest rates in the experienced stress in the relationship with the child. Why does the parent withdraw? It seems that this is the most extreme form of reaction to the experienced difficulty. The parent "lets go" of the child's upbringing process in a certain way, which is extremely unfavorable for the child's development [2]. Escape, parental withdrawal is a form of self-defense of the parent against excessive stress.

It should also be noted that indifference and withdrawal of the parent is preceded by a certain form of thinking about the child (representation). It involves perceiving

the child and his problems as too difficult for the parent and, at the same time, of too little importance for the parent. A problem that is difficult and at the same time not important is abandoned. It is only realizing how harmful this is for the development of the child that allows to discern how dangerous for its development is the problem of indifference and parental withdrawal. This is also confirmed by the current research. In the case of 76% of the examined sample, the increased results in indifference were accompanied by low results of children in terms of social and emotional competences and school readiness.

In order to avoid it, it is necessary to teach parents how to choose appropriate parental goals so that they are adequate to the child's development, so that the parent does not experience too much stress related to the inability to achieve these goals. It should also be remembered that the inability to achieve parental goals is not the only reason for the parent to experience parental difficulties, but always parental stress can lead to situations of parental mistakes that may have a negative impact on the child's development.

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Appendix

Eight items in the *Experienced parental difficulty* scale:

- dif1** I have many parenting problems with my child.
dif2 I have the impression that bringing up my child is a constant struggle.
dif3 I experience parenting problems associated with my child.
dif4 I am constantly upset due to conflicts with my child.
dif5 I often experience powerlessness in contact with my child.
dif6 I am constantly angry due to my child's behavior.
dif7 I cannot cope with my child.
dif8 I experience a lot of anxiety in contact with my child.

Eight items in the *Representation* scale (the two items used in research are bolded):

- ro1 My child is self-reliant, it does not need me.
ro2 The child's tasks are not personally important to me.
 ro3 Fulfilling my child's needs does not require my commitment.
 ro4 My activity is unnecessary in realizing the child's needs.
 ro5 The needs of my child engage me emotionally.
 ro6 My child is moving me emotionally.
 ro7 My child's tasks arouse emotions in me.
ro8 My child's problems are difficult for me to grasp.

Five items in the *Withdrawal* scale:

- S10** I'm tired of raising my child.
S11 I retreat when it is difficult and I cannot get along with my child.
S12 I avoid contact with my child when I lose strength to cope with my child.
S13 I do not try (I give up) when difficulties arise in my relationship with my child.
S14 The difficulties I experience in my relationship with my child make contact with my child very difficult.
S15 I do not confront my child.

Ten items in the *Indifference* scale:

- O1 Do you praise your child when it achieves success?
 O2 Do you avoid contact with your child when you know it has a problem?
 O3 Do you react when your child cries?
 O4 Do you worry about your child's affairs and enjoy good developments together?
 O5 Do you listen carefully when your child addresses you with something?
 O6 Do you think that the child should deal with its problems on its own?
 O7 Do you often think about your child?
 O8 Do you take your child's needs into account in your daily activities?
 O9 Do you like spending your free time with your child?
 O10 Do you consider your child's opinions?
 O11 Are you interested in the time your child spends in kindergarten or in the time it spends outside the home in other ways?

Figures title: