



Family stressors and motivation to have a child as related to mothers' parental stress¹

<https://doi.org/10.34766/fetr.v55i3.1194>

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Abstract: *Introduction:* Mothers differ greatly in their psychological adjustment to parenting, with some mothers being more stressed than others. This study aimed to determine the role of family life stressors related to the relationships with children and spouse and motivation to have children in predicting parental stress for mothers. The project is based on the parental stress theory and the self-determination theory (SDT). We examined whether motivation to have children played a mediating role in the relationship between family stressors and mothers' parental stress. *Method:* Parental stress was measured using the Parental Stress Scale (PSS; Berry, Jones, 1995). Motivation to have a child was measured using the Motivation to Have a Child Scale (MCS; Brenning, Soenens, Vansteenkiste, 2015). The intensity of difficult experiences in the relationships with the child and with the spouse (family stressors) was assessed using the Family Stressors Scale. The study involved 99 mothers who were in a relationship and had at least one child up to 7 years of age. There were between one and seven children in their families. Statistical analyses were performed using structural equation modeling (SEM). *Results:* It was found that difficult situations in relationships with children and spouse increased mothers' parental stress. Intrinsic motivation and amotivation mediated the effect that difficult situations in family relationships had on parental stress. Difficult situations in family relationships were negatively related to intrinsic motivation and positively related to amotivation. Intrinsic motivation to have a child was negatively related to parental stress, while amotivation was positively related to that stress. Extrinsic, identified, and introjected motivations were associated neither with parental stress nor with difficult situations in family relationships (family stressors). *Conclusions:* In confrontation with stressors, intrinsic motivation to have a child plays a protective role against the experience of parental stress in mothers, while amotivation intensifies this stress. The implications of the results for future research and clinical interventions are discussed.

Keywords: parental stress, motivation to have a child, self-determination theory, family stressors, mothers

Introduction

Parenthood is regarded as one of the most important sources of positive experiences in human life (Więsyk, Lachowska, 2020). Apart from studies supporting this thesis, however, there are plenty of those showing that the relationship between parenthood and well-being—not only parents' but also children's—is highly complex and ambiguous (Jazłowska, Przybyła-Basista, 2019; Nelson, Kushlev, Lyubomirsky, 2014; Piotrowski, Bojanowska, Szczygieł, Mikołajczak, Roskam, 2023; Woolf, Sallis, Munafò, 2023). Moreover, the results of previous

research indicate that mothers differ in terms of their parenthood-related experiences (Qian, Mei, Tian, Dou, 2021). This suggests the need for research into this area, with various psychological variables included. The present study addressed issues relating to this area. It aimed to provide better knowledge of the factors explaining parenthood-related experiences, with a focus on parental stress experienced by mothers. Among the factors explaining mothers' parental stress, we analyzed difficult situations involved in the relationships with the child and spouse.

¹ Article in Polish language: Stresory rodzinne i motywacja do posiadania dziecka a stres rodzicielski matek <https://www.stowarzyszeniefidesetratio.pl/fer/2023-3Lach.pdf>

1. The theoretical basis of the issues investigated

Parental stress is defined as a psychological response (distress) that appears when parents encounter demands associated with the parental role that they are unable to meet because they lack adequate resources, such as energy, time, or skills, which would make it possible to meet these demands (Chung, Lanier, Wong, 2020; Deater-Deckard, 2014; Holly, Fenley, Kritikos, Merson, Abidin, Langer, 2019). It is believed that the more demands associated with being a parent one is faced with and the less resources for effectively coping with these demands there are, the more severe the parental stress is (Pisula, Barańczuk, 2020). This means stress increases in connection with the experience of stressors (Rayce, Pontoppidan, Nielsen, 2020). Parental stress is assumed to be a key factor explaining parents' behaviors towards the child, particularly undesirable ones (Berry, Jones, 1995; Brown, Doom, Lechuga-Peña, Watamura, Koppels, 2020; Chung et al., 2020). It also has a negative effect on the child (Crnic, Gaze, Hoffman, 2005) and on the quality of the relationship with the partner (Baldoni, Giannotti, Casu, Luperini, Spelzini, 2020; Garthus-Niegel et al., 2018).

Parental stress is considered to be a universal phenomenon. It is experienced by parents of children at every age and in every culture (Louie, Cromer, Berry, 2017). The universality of parental stress and its great significance indicate the need for research that would offer better knowledge and understanding of the factors that explain it. The literature identifies different sources of parental stress (Pisula, Barańczuk, 2020). Apart from the child's characteristics (Szymańska, Aranowska, 2019), authors point to those of the social environment and the parents (Brenning, Soenens, Mabbe, Vansteenkiste, 2019). Authors emphasize that, when exploring parenthood, it is important to consider contextual factors (McGoron, Riley, Scaramella, 2020; Nachoum, Moed, Madjar, Kanat-Maymon, 2023). The damaging influence of this kind of stressors on family functioning, children's development, and parents' mental health is considered to be well-documented (Li et al., 2022). Belsky (cited in: Taraban, Shaw, 2018) points out

that all relational contexts can be sources of stress or support, influencing parental resources. The present study concerned difficult situations of family life associated with the marital relationship and the mother – child relationship.

In the group of factors associated with parents' characteristics, the one that has recently received an increasing amount of researchers' attention is the significance of motivation to have a child (Nelson et al., 2014). The decision to have a child is regarded as one of the most important and meaningful decisions in human life and one of those that have far-reaching implications (Cowan, Cowan, 2000). This decision has a variety of consequences, but still little is known about why people decide to have children, and even less is known about the consequences of specific motivations (Nachoum, Moed, Madjar, Kanat-Maymon, 2021). In research aimed to determine why people decide to have a child, the frequently adopted theoretical basis is the self-determination theory (SDT) by Ryan and Deci (2000, 2019; Ntoumanis et al., 2021). The SDT is regarded as a macro-theory of human motivation with a multidimensional perspective on motivational processes in different life domains, including parenthood-related ones (Nachoum et al., 2023). This theory concerns not only whether but also why individuals decide to have a child (Ryan, Deci, 2000, 2017).

Ryan and Deci (2000, 2017) distinguish three types of motivation, which differ in the degree of internalization of the motives inducing action. Internalization is the process of interiorizing external factors that induce behavior. With regard to motivation, this means a transition from extrinsic motivation and amotivation to intrinsic motivation (Ryan, Deci 2017; Vansteenkiste, Aelterman, De Muyneck, Haerens, Patall, Reeve, 2018). Each type of motivation is associated with specific regulation styles, located on a continuum that reflects increasing levels of internalization and autonomy (Ryan, Deci, 2000; Vansteenkiste et al., 2018). Intrinsic motivation is associated with intrinsic regulation. The regulation style opposite to intrinsic regulation is non-regulation, corresponding to amotivation. Finally, extrinsic motivation encompasses four regulation styles: external, introjected, identified, and integrated.

Non-regulation is marked by a total lack of autonomy (Deci, Ryan, 2000). The person is involved in the actions they perform, but these actions are entirely outside their will and are unrelated to their intention to act. External regulation is slightly more autonomous, but it is associated with the lowest level of internalization among all types of regulation corresponding to extrinsic motivation. Activities undertaken with this type of regulation are perceived as externally controlled or alien to the individual and causality is perceived as located outside the person. Actions are performed in order to achieve a reward or avoid punishment. The next form of regulation is introjection (Deci, Ryan, 2000). It consists in the internalization of external regulation in its original form. Actions undertaken as a result of it are still performed due to pressure, but the pressure comes from inside—from the person themselves. They are often performed in order to achieve a sense of pride or to minimize anxiety and guilt. Behaviors are still recognized as having an external locus of control and as unrelated to the self. They are only meant to strengthen the ego by allowing the person to show their abilities and maintain self-esteem (Deci, Ryan, 2000). The next form of regulation on the continuum illustrating the levels of internalization is identification. However, activity is still a means to an end rather than an end in itself. The last form of regulation that falls within the scope of extrinsic motivation is integration. It is the case when identified regulations are fully assimilated, which means they have been evaluated and found to be consistent with the individual's other values and needs. The actions undertaken are still regarded as external because they are oriented at certain external results and goals rather than at the very pleasure derived from activity (Deci, Ryan, 2000). They are similar to intrinsically motivated actions, but the regulation style fully corresponding to intrinsic motivation is intrinsic regulation. This kind of regulation is fully autonomous and internalized. Its aim is development, pleasure derived from activity, and the acquisition of new skills.

Thus defined, the types of motivation and the regulation styles corresponding to them are related to decisions on having a child (Brenning et al., 2015). Amotivation means a lack of desire to have a child. It is linked with perceiving desirable goals as unattainable, a sense of incompetence, and a sense

of having no control over the situation. It may manifest itself through a pregnant woman's predictions that she will not cope with bringing up her child or through failure to perceive the values inherent in being a mother. External regulation, being a regulation style aimed at avoiding punishment, may be associated with a situation in which a woman decides to have a child in order to face up to pressure from others or to satisfy them. A decision to have a child made due to predictions that becoming a mother will increase self-esteem is a manifestation of introjection. The next regulation style, identification, is the case when a woman considers being a parent an important life goal and decides to get pregnant for this reason. Integrated regulation is when the value of being a mother, having a child, and getting pregnant are combined with other values cherished by a given person and when this gives rise to a decision to become a parent. Intrinsic regulation, which is equated with intrinsic motivation, is the case when a woman decides to become a mother because she believes that childcare will give her pleasure and that parenting will be an interesting challenge for her.

In the present study, we posed the question of how motivation to have a child and stressors associated with the mother-child relationship and with the marital relationship were related to mothers' parental stress. We also posed the question of whether motivation mediated the effect of stressors on the level of mothers' parental stress.

2. The present study

2.1. The conceptual model and research hypotheses

Based on the theoretical conception of parental stress, the concept of motivation to have a child, and the results of previous studies, we developed a conceptual model of relationships between the variables (Fig. 1).

In this model, it was assumed—in accordance with the parental stress theory—that family stressors (connected with the relationships with the child and spouse) impacted the level of parental stress experienced by mothers, contributing to its increase.

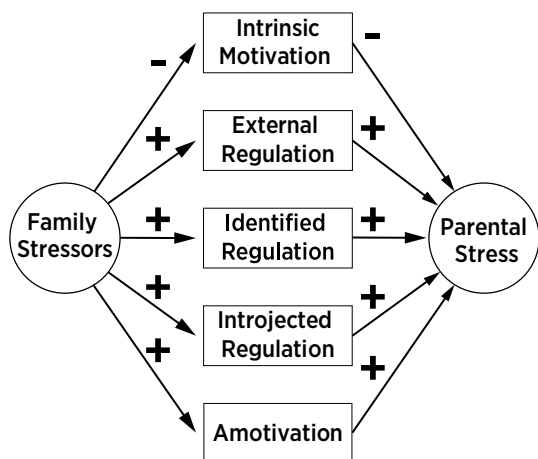


Figure 1. Theoretical model of dependencies between variables

It was also assumed in this model that the effect of stressors on mothers' parental stress was mediated by mothers' motivation to have a child. Therefore, the expectation was as follows:

H1. Mothers who experience more stressors associated with family relations will experience greater parental stress.

The self-determination theory distinguishes three types of motivation to have a child, which differ in the level of internalization. Research based on the SDT showed that more autonomous functioning was related to lower exposure to stress and better coping with challenging events (Van Der Kaap-Deeder et al., 2019), also in the prenatal period (Gugliandolo, Cuzzocrea, Costa, Soenens, Liga, 2021). More autonomous motivation led to better mental health (Ryan, Deci, 2017; Nachoum, Kanat-Maymon, 2018). It was also related to children's better adjustment (Nachoum et al., 2021). We therefore formulated the following expectation:

H2a. The higher the level of intrinsic motivation, the lower the level of parental stress.

Extrinsic motivation encompasses various regulation styles, with different levels of internalization: external, identified, and introjected. Each of these levels is lower than in the case of intrinsic motiva-

tion. The experience of external motivation can be accompanied by a sense of boredom, stagnation, reluctance to act, anger, reduced pleasure, lower interest, lower perseverance, lower creativity, and lack of satisfaction (Deci, Ryan, 2000). The above led to the following prediction:

H2b. The higher the level of external, introjected, and identified motivations, the higher the level of parental stress.

A motivation is a state of lack of motivation and intention to act, associated with a sense of incompetence and lack of control over the situation. Such feelings are one of the factors intensifying the experience of stress in parents (Pagowska, 2014). The expectation, therefore, was as follows:

H2c. The higher the level of amotivation, the higher the level of parental stress.

Another hypothesis in the conceptual model of relationships between the variables (Fig. 1) was as follows:

H3. The effect of family stressors on mothers' parental stress is mediated by the mothers' motivation to have a child.

2.2. Method

2.2.1. Measures

Parental stress was assessed using the Polish version of the Parental Stress Scale (PSS; Berry, Jones, 1995). The PSS is widely used and recognized measure of stress involved in being a parent (Lachowska, 2021; Matuszczak-Świgoń, Bakiera, 2023; Nielsen, Pontoppidan, Rayce, 2020). Higher scores on this scale are associated with lower parental sensitivity in the relationship with the child and with lower quality of the parent-child relationship (Berry, Jones, 1995). The original version is composed of 18 items, which the respondent rates on a 5-point Likert-type scale, indicating how

strongly they agree with the description provided in each item (1 = strongly agree to 5 = strongly disagree). Scores range between 18 and 90. Higher scores indicate higher parental stress. The Polish version of the PSS has confirmed validity and acceptable reliability measured using Cronbach's alpha (in this study, $\alpha = .85$).

Motivation to have a child was assessed using the Motivation to Have a Child Scale (MCS; Brenning et al., 2015). It is a recognized and widely used measure (Gugliandolo et al., 2021; Nachoum et al., 2021). Its theoretical basis is the self-determination theory by Ryan and Deci (2017). The measure can be used both among women who are mothers and among women who have no children yet. It consists of 20 items, with four items in each of the five subscales: Intrinsic Motivation, Identified Regulation, Introjected Regulation, External Regulation, and Amotivation. The respondent indicates to what extent they agree with each of the items concerning the reasons for having a child. Answers are indicated on a Likert-type scale from 1 (do not agree at all) to 5 (agree very strongly). The possible score on each subscale ranges from 4 to 20. The higher the score, the higher the level of a given type of motivation. The MCS has confirmed validity and reliability. The reliability of specific subscales, measured using Cronbach's alpha, is acceptable in the present study: $\alpha = .89$ for Intrinsic Motivation, $\alpha = .86$ for Identified Regulation, $\alpha = .81$ for Introjected Regulation, $\alpha = .88$ for External Regulation, and $\alpha = .80$ for Amotivation.

The level of family stressors, associated with difficult experiences in the relationships with children and spouse, was assessed using the Family Stressors Scale. The measure consists of items concerning such situations (e.g., the child's illness, the child's learning difficulties, the child's difficulties in peer relations, conflicts in the relationship with the spouse, marital violence; Lachowska, 2021). For each item, the respondent indicates if they have experienced the situation described. A "yes" answer is coded as the occurrence of a given experience and scored 1. Added up, the responses yield a stressor score. The higher the score, the larger the number of a particular type of experiences.

3. Results

3.1. Demographic characteristics of the sample of mothers

The mean age of the women who took part in the study was $M = 35.85$ years ($SD = 4.53$) and the mean length of their relationship was $M = 10.47$ years ($SD = 4.46$). Nearly all women lived in formalized relationships (90.9%). The vast majority of the mothers were economically active (80.8%) and had higher education (90.9%). Most participants in the sample (83.8%) came from big cities, with a population exceeding 100,000. There were between one and seven children in the mothers' families, aged from 1.6 to 13 years. The children's mean age was $M = 5.69$ years ($SD = 2.44$), and there was at least one child up to 7 years of age in each family.

3.2. Results of bivariate correlation analyses

Table 1 presents descriptive statistics regarding the distribution of the variables and the values of Pearson's r correlations between these variables (Brzeziński, 2019).

Bivariate correlations indicate that parental stress was significantly positively and moderately related to amotivation and negatively related to intrinsic motivation. The level of difficult situations in family relations (family stressors) was negatively associated with intrinsic motivation. Intrinsic motivation was positively but weakly correlated with identified and introjected motivations. Extrinsic motivation was moderately positively correlated with introjected motivation and weakly positively correlated with amotivation. The relationship between identified and introjected motivation was positive.

3.3. Results of analyses using structural equation modeling

In the analyses, we used structural equation modeling (SEM) in accordance with the solution proposed in AMOS 28 (Arbuckle, 2019) in SPSS 28 package. SEM makes it possible to determine if an a priori model is supported by empirical data. It offers the

possibility of testing hypothetical cause-and-effect relationships between variable and testing indirect effects. The analyses tested a model based on theoretical knowledge (Fig. 1). Because the latent variables included in the model were measured using scales consisting of numerous items, aggregated measurement was treated as a manifest variable. We checked if the condition for the aggregation of items was met, namely, whether the items of each scale made up one dimension—in other words, we checked if they were measures of one construct. In the case of the scales used in this study, the results of analyses made it possible to assert that this condition was met. To assess model fit, we used discrepancy functions based on the chi2 statistic (CMIN, CMIN/df) and measures of model fit: SRMR (standardized root mean square residual) and RMSEA (root mean square error of approximation), which are recommended in the literature (Xia, Yang, 2019). Based on the

literature, we assumed that values of RMSEA < .10 and SRMR < .10 indicated a good fit of a theoretical model to empirical data. We used the maximum likelihood (ML) method. In this study, we generated 600 bootstrap samples to obtain a bootstrap confidence interval.

The values of fit indexes (after the removal of statistically non-significant paths) allow for concluding that the model of relationships between family stressors and parental stress is well fitted to the variance and covariance matrix, which means it can be considered a good reflection of reality, $\chi^2(1) = .067$, $p = .796$; CMIN/df = 0.067, AGFI = .997, RMSEA < .001 [LL < .001, UL = .171], SRMR = .0065. Table 2 presents standardized path coefficients and 95% confidence intervals (Table 2).

The results of analyses showed that difficult situations associated with family relations (family stressors) had an indirect effect on mothers' parental

Table 1. Descriptive statistics of the distribution of variables and the value of correlation coefficients between variables

Variable	M	SD	Min-Max	1	2	3	4	5	6
1. Parental Stress	37.57	9.13	18-69	-	-	-	-	-	-
2. Intrinsic Motivation	16.58	4.34	4-20	-0.36***	-	-	-	-	--
3. Identified Regulation	14.29	4.71	4-20	-0.18	0.24*	-	-	-	-
4. Introjected Regulation	8.48	4.26	4-19	-0.06	0.34***	0.44***	-	-	-
5. External Regulation	5.50	2.85	4-20	0.02	0.01	0.16	0.49***	-	-
6. Amotivation	4.75	1.97	4-15	0.48***	-0.15	-0.14	0.06	0.24*	-
7. Family Stressors	1.30	1.28	0-6	0.18	-0.25*	-0.09	-0.12	0.01	0.19

* $p \leq 0,05$; ** $p \leq 0,01$; *** $p \leq 0,001$

Table 2. Standardized Direct, and Total Effects (Indirect Effects)

Effects:	Standardized β	Left-Bound 95% Confidence Interval	Right-Bound 95% Confidence Interval
Total Indirect Effect:			
Family stressors → Parental stress	0,16**	0,065	0,264
Direct Effect:			
Family Stressors → Intrinsic Motivation	-0.25*	-0.436	-0.036
Family Stressors → Amotivation	0.19**	0.048	0.351
Intrinsic Motivation → Parental Stress	-0.30**	-0.474	-0.143
Amotivation → Parental Stress	0.44**	0.198	0.633

* $p \leq 0,05$; ** $p \leq 0,01$; *** $p \leq 0,001$

stress, mediated by the effect they had on intrinsic motivation and amotivation. The mothers who had more negative experiences in their relationships with children and spouse experienced greater parental stress (standardized total effect = 0.16, $p \leq .01$) when these experiences decreased their intrinsic motivation to have a child (standardized direct effect = -0.25, $p \leq .05$) and increased their amotivation (standardized direct effect = 0.19, $p \leq .01$). Negative experiences associated with family relationships impacted mothers' parental stress only indirectly, through the effect they had on intrinsic motivation and amotivation. We found no direct effect of these experiences on mothers' parental stress, independent of their effect on motivation. Intrinsic motivation had a negative effect on mothers' parental stress (standardized direct effect = -0.30, $p \leq .01$), while the effect of amotivation was positive (standardized direct effect = 0.44, $p \leq .01$). The effect of difficult situations in relations with family members on extrinsic motivation was significantly stronger than their positive effect on amotivation (critical quotient = 2.982). The effect of amotivation on parental stress was, in turn, significantly stronger than the effect of intrinsic motivation (critical quotient = 6.555). Negative experiences associated with family relations as well as intrinsic motivation and amotivation together explained 32% of the variance in parental stress.

Discussion

The study aimed to determine the significance of difficult situations linked to relationships with family members (children and the spouse) and motivation to have a child in explaining mothers' parental stress. We considered five types of motivation distinguished in the self-determination theory. As expected, mothers' negative experiences concerning their relations with family members had an effect on parental stress, contributing to its increase. As also predicted, this effect was mediated by motivation to have a child. We found

that only intrinsic motivation and amotivation acted as mediators. The experience of difficult situations in relations with family members was associated with higher parental stress when it contributed to higher amotivation and to lower intrinsic motivation. We also found that amotivation fostered parental stress, while intrinsic motivation was related to lower parental stress. The present study revealed that, in confrontation with the demands of intra-family relationships, intrinsic motivation to have a child played a protective role against the experience of parental stress in mothers, while amotivation intensified this stress. The results are consistent with those of other studies (e.g., Nachoum, Kanat-Maymon, 2018), which confirmed the significance of intrinsic motivation as a protective factor in the face of difficult events.

Difficulties in relationships with family members had an effect on parental stress only through motivation to have a child: intrinsic motivation and amotivation. Contrary to expectations, the study did not support the effect of external, introjected, and integrated motivations on parental stress. The associations between these types of motivation and the experience of family stressors were not supported, either.

Research on motivation to have a child requires continuation. The results of recent studies suggest that not only the person's own but also their partner's motivation may be of significance (Nachoum, Kanat-Maymon, 2018).

The results of analyses indicate the considerable significance of motivation to have a child in explaining parental stress. This suggests the need for activities aimed at developing intrinsic motivation to have a child. Interventions designed to strengthen autonomous motivation are undertaken in different areas of human activity, bringing positive outcomes (e.g., Gillison, Rouse, Standage, Sebire, Ryan, 2019; Ntoumanis et al., 2021; Ryan, Ryan, Di Domenico, Deci, 2019). It is worth making use of these positive experiences in the area associated with motivation for parenthood.

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