

TEMPERAMENT: A GROUNDED THEORY STUDY ON THE FORMATION OF TEMPERAMENT

"I was physically comfortable during my pregnancy, but mentally I was down (M7)."

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Received: 17 July 2023 ; Accepted: 21 October 2024; Published: 24 October 2024

To cite this article (APA) : YALÇIN, V. (2024). Temperament: A Grounded Theory Study On The Formation Of Temperament. *Southeast Asia Early Childhood Journal*, 13(2), 68–87. <https://doi.org/10.37134/saecj.vol13.2.5.2024>

To link to this article : <https://doi.org/10.37134/saecj.vol13.2.5.2024>

ABSTRACT

Every baby brings its own temperament with it into the world. Although it is widely accepted by scientists that genetic factors are effective in the formation of temperament, this study aims to examine the possible effects of the pregnancy process on the temperament characteristics of children in line with the experiences of mothers and the role and effects of the father in the pregnancy process and to present a theoretical model explaining this process. The research, which was conducted in the Grounded Theory design, was conducted with a total of 237 mothers consisting of 3 different study groups. The study concluded, important evidence was found that temperament cannot be caused only by biological factors and that the mother's well-being during pregnancy also affects the child's temperament. The study also found that a father supporting the mother during pregnancy (father involvement) was the strongest factor positively influencing the mother's well-being and thus the child's temperament. Based on the research findings, Theoretical Model 1 for temperament formation and Theoretical Model 2 for the father's role in the pregnancy process were presented.

Keywords: Father, mother, pregnancy process, temperament, personality formation, grounded theory

INTRODUCTION

Personality is a set of innate characteristics that distinguish individuals from other individuals and that can be acquired later (Kagan, 2010; Özdemir et al., 2012). In the formation of personality, which is constantly under the influence of internal and external stimuli, there are many factors such as family experiences, living conditions, expectations and needs of society, and learned characteristics (Aktaş, 2006). Temperament, on the other hand, is the entire set of innate characteristics that determine the unique behavior of individuals, that is, the characteristics that come through genes (Peker, 2013; Sarı, 2018). Children's personality and temperament development is influenced by innate genes and environmental factors that are later recognized (See Figure 1). While genetic factors mostly reveal the potential of children, environmental factors are in the direction of how to use this potential (Özdemir et al., 2012).

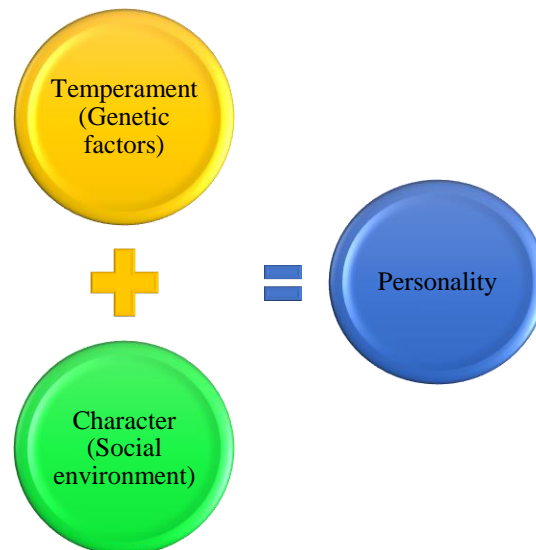


Figure 1. *Formation of personality*

Temperament is one of the topics that scientists have been interested in, curious about, and researched for many years, but the mystery has not been fully solved. In this context, in the title of the study, the unknown mysterious structure of temperament is analogized with the invisible dark side of the moon. However, there are three widely known theories that explain temperament and personality development. The first of these is the object relation theory. The object relationship theory is based on the first experiences of the mother and the child, which begin in the early period. The development of object relationship is of great importance for the development of psychological structure. Therefore, the communication with the child should be extremely careful (Kernberg, 2004). The object for the child consists of everything around him/her, but the most effective object is the child's parents. For this reason, parental interaction is of critical importance in personality formation (Akyüz, 2018).

Another theory that is effective in personality and temperament development is attachment theory. Attachment is the child's relationship with other people that starts in the early period and shows a continuity (Çam & Keskin, 2007). This attachment relationship is usually maintained with the caregiver or the mother. According to Bowlby, a secure attachment relationship between mother and child provides the child with healthy psychological development (Tüzün & Sayar, 2006). Secure attachment helps the child to achieve healthy social and emotional development. Those who cannot establish a secure attachment relationship in their first relationships cause them to be more irritable, disturbed, aggressive, unable to fulfill their responsibilities and insecure personalities within and outside the family (Çam & Keskin, 2007). This is very important for the child's entire future life.

Another theory that affects personality and temperament is Adler's (1949) birth order theory. Birth order theory refers to the order in which children in a family come into the world (Çakır, Şen, 2012). The positions and experiences of each child in the family may be different from each other. In other words, although the family environment is the same, each child has a special and separate place (Çınarbaş & Nilüfer, 2019). Adler often emphasized the importance of the relationship between personality traits and birth order. According to Adler, he emphasized that although siblings may have commonalities according to their birth order, the interest and attention shown to them by the family may be different. These different behaviors lead to different personalities of children (Çakır & Şen, 2012).

LITERATURE REVIEW

Formation of Personality: Temperament and Character

Every baby brings his or her own temperament with him or her into the world. Temperament is defined as the physiological basis for individual differences in response to an event, including motivation, activity and attention (Kiff, Lengua & Zalewski, 2011; Sari, 2018; Zembat et al., 2018). Some scientists state that the temperament that comes through genes cannot be changed over time (Buss & Plomin, 1984). On the other hand, Kagan (2010) argues that individuals inherit temperament physiologically through genes, but they can learn to change their temperament to some extent through experience. However, it is not yet clear whether this change is really due to Kagan's phenomenon that temperament can change to some extent, or whether it is due to learned behaviors or role-playing that we have somehow learned before in response to the events around us. However, Rothbart (1989) focused on the fact that temperament changes with maturation. He stated that even if one dimension of temperament changes, some dimensions may remain constant. Rothbart (1989) states that temperament is interactive and emphasizes that although temperament comes with the person, it is shaped with the environment.

Although temperament traits are based on innate foundations, the environment also has a great influence on the shaping of a child's attitudes and behaviors (Plomin & Dunn, 1986). In this context, character represents the social environment that is effective in the formation of personality. In the literature on the subject, 4-month-old babies are shown simple toys with animal figures on them. The reactions of infants to these toys are observed. According to the results of the study, there is a strong correlation between the stressful reaction of the 4-month-old baby to the toy phone and the possibility of being shy in the following years (Kagan, 1997). According to the same study, babies who have stressful reactions to toys are also more sensitive to changes in their environment; they can be very anxious even in the face of daily routines such as the doorbell ringing or diaper changes. Finally, a baby's reaction to a toy can give clues about their social skills in adulthood beyond early childhood (Kagan, 1997; LoBue, 2019). When it comes to children's social environment, parents and parental attitudes become very important. While your attitudes, expectations, and demands that are appropriate for your child's temperament provide emotional well-being; on the contrary, they can pave the way for maladaptive behaviors (Callueng & Oakland, 2014; Slagt, et al., 2016).

Pregnancy Process and Fathers

Father involvement in infant care and education is critical for the mother and child, as fathers' involvement has many protective factors for families (Eddy et al., 2019). These protective factors include important issues such as increased maternal well-being and better attitudes towards motherhood (Sejourne et al., 2012), which will have a direct impact on the home climate and allow healthy individuals to grow up in every aspect. Studies have shown that fathers' prenatal and postnatal mental health has an important role in children's development and executive functions (Vänskä et al., 2017), children of depressed fathers are twice as likely to develop a psychiatric disorder by the age of 7 compared to children whose fathers are not depressed (Ramchandani et al., 2008), and fathers' mental health has negative effects on the overall development of children (Nishimura & Ohashi, 2010), with high rates of psychiatric disorders in school-age children. In this respect, the constant presence of children in such psychosocial conditions and home climate may lead to an increased risk of anxiety and depression, higher rates of emotional and behavioral disorders, hyperactivity, and delayed language skills (Paulson & Bazemore, 2010; Ramchandani et al., 2008).

In addition, isolating the father from the baby's care and education processes (Davey et al., 2006) has a negative effect on father involvement. When the above studies are examined, it is clearly seen that they focus on the damage that poor mental health of the father after childbirth will cause on the family and children (Davey et al., 2006; Nishimura & Ohashi, 2010; Paulson & Bazemore, 2010; Ramchandani et al., 2008; Sejourne et al., 2012; Vänskä et al., 2017). On the other hand, there is no study on the possible effects of the father during the birth process on the pregnancy process, home climate, mother's well-being and child's temperament. From this point of view, the study is considered very important as it will fill the gap in the literature on the subject and develop a theoretical model on the formation of temperament and the role and importance of the father in this process.

In the literature, the view that temperament is innate and genetic factors are effective in its formation is quite common (Kiff, Lengua & Zalewski, 2011; Peker, 2013; Plomin & Dunn, 1986; Sari, 2018). This idea may cause us to attribute the source of most negative or undesirable behaviors in ourselves and our children to temperament, and therefore, we cannot find a solution to the negative behavior in question (due to the belief that temperament emerges only from genetic factors), that is, a kind of learned helplessness. In addition, it is seen in the literature that the effects of father's postpartum psychological health on mother, child and home climate have been examined (Davey et al., 2006; Nishimura & Ohashi, 2010; Paulson & Bazemore, 2010; Ramchandani et al., 2008; Sejourne et al., 2012; Vänskä et al., 2017).

In this study, in line with the experiences of mothers, it was tried to determine whether the pregnancy process has an effect on children's temperament, whether there is an aspect of temperament that can be partially, if not completely, intervened before the children are born, and the role and effects of the father in the pregnancy process. In the light of the data obtained in this study, it was also tried to present a theoretical model regarding both the pregnancy process and temperament and the role of the father in the pregnancy process. For this purpose, answers to the following questions were sought. 1) What are the possible effects of the pregnancy process on children's temperament? 2) Can children's temperament be controlled in the context of pregnancy? 3) What is the role of the father during pregnancy and 4) What are the possible effects of the father on the pregnancy process and the temperament of the child?

METHODOLOGY

Research Model

In this study, the pregnancy processes of mothers with children aged 0 to 6 years and children's temperament characteristics were examined. In addition, in line with the opinions and experiences of the mothers participating in the study, it was tried to present a theoretical model regarding whether the pregnancy process has an effect on children's temperament, whether temperament can be partially, if not completely, intervened, and the role of the father in both the pregnancy process and temperament and the pregnancy process.

In this study, grounded theory design, one of the qualitative research methods, was used. Grounded theory is a research methodology that offers very practical tools to provide a general framework based on research and data on issues that do not have detailed explanations and theories, especially in cases where it is desired to determine how individuals relate to the phenomenon to be studied (Creswell, 2016). Grounded theory was preferred in this study because it is a methodology that is as related as possible to the main conceptual component, is inductively generated based on data, and allows for the identification of hypotheses and

characteristics embedded in the data (Merriam, 2013) in order to define the legal theory that will be tried to be put forward regarding the philosophical underpinnings of the research conducted in the field and the characteristics of the research tradition (by the researchers in the field).

Research Design and Process in Grounded Theory

Grounded Theory was developed by Strauss and Glaser in the early 1960s. In 1967, the method was introduced to the literature with the book "Discovery of Grounded Theory" and Strauss and Glaser described it as "discovering the theory from the data systematically obtained in social research" (Strauss, 2003; Glaser & Strauss, 2012). When the literature on Grounded Theory is examined, Strauss and Corbin's (1990-1998) Systematic Approach and Charmaz's (2005-2006) Structuralist Approach come to the fore.

In Strauss and Corbin's (1990-1998) more systematic and analytical method, researchers systematically search for a theory that explains the process, events or interaction on the topic. Strauss and Corbin's and Glaser and Strauus' Grounded Theory Methodology is based on a positivist and objectivist foundation. Charmaz, on the other hand, states that the positivist perspective is only a part of grounded theory (Charmaz & Bryant, 2007; Charmaz, 2000) and that the theory or model will emerge entirely from the research data. Furthermore, Charmaz places Grounded Theory on a pragmatist basis. According to him, from the researcher's perspective, what we see, when we see it, how we see it, and what exists is not self-evident; it is often implicit. This world we live in is already interpreted by both the researcher and the participant. But we may not be aware of them. The main goal for Grounded Theory is to reveal these implicit things.

In Constructivist Grounded Theory, the researcher strives to accurately understand the participants' beliefs, goals, actions and the reasons for these actions from their perspective. Charmaz's (2006; 2009) Grounded Theory Methodology is systematic but flexible, serves as a guide for the analysis and production of qualitative data, and serves to construct theories embedded in the data themselves (Charmaz,). According to Strauss, both past experiences and reading the literature can encourage theoretical precision and hypothesis generation (Heath and Cowley, 2004). On the other hand, Charmaz emphasizes that the literature review should be conducted after the analyses have been conducted and the model has emerged, since conducting the literature review at the beginning or during the study may influence a biased perspective and the model or theory that will naturally emerge (Charmaz, 2006).

In this context, Charmaz's (2005-2006) Constructivist Grounded Theory Approach was adopted in this study due to the fact that the model that emerged in this context was obtained entirely from the data in the research process, the literature review was conducted after the analysis and after the model emerged, and the differences in approaches mentioned above. In grounded theory, the discovery of the main category that revolves around the basic social process or all other categories, in a sense embedded, is explored and therefore the theory(s) explaining the cause of behaviors are developed.

The purpose of choosing the Grounded Theory design in this study is to examine the possible effects of the pregnancy process on children's temperament traits and the role and effects of the father in the pregnancy process in depth and to present a theoretical model explaining this process. For this purpose, answers to the following research questions were sought: 1) What are the factors affecting temperament? 2) Can pregnancy affect the child's temperament? 3) How are temperament, personality and character related? 4) What do mothers

with two or more children think about the difference in temperament between children? 5) What are the role and effects of the father in the pregnancy process? We tried to create a theoretical structure to answer these questions. In this study, in order to find answers or answers to all of the above questions, mother participants with different age categories and different numbers of children were identified through theoretical sampling (Ilgar & Ilgar, 2013).

In theoretical sampling, which is a type of purposive sampling, the sample is selected in the same way as the purposive sampling technique. However, in this technique, the researcher does not pre-determine the sample size, but continues purposive sampling until the relationships and categories between variables are revealed. This technique is used in grounded theory studies (Lin, 2021).

Glaser and Strauss (1967; Glaser, 1978; Strauss, 1987) listed the most important components of Grounded Theory in practice that researchers should follow in order to keep the research process under control and increase the analytical power of their studies as follows; i) Simultaneity and relationship between the data collection and data analysis processes, ii) Deriving analytic codes and categories from the data and not from preconceived hypotheses based on logical inferences, iii) Using the constant comparison method at every stage of the analysis process, iv) Continuously developing the theory at every step of the data collection and analysis process, v) Elaborating categories, vi) Keeping notes of your thoughts and opinions continuously in order to clarify the characteristics, define the relationships between categories and identify gaps in the theory, vii) Making the sample selection in accordance with the theory to be developed, not to represent a population and viii) Conducting the literature review (in terms of creating the conceptual and theoretical framework) after completing the data analysis (Charmaz, 2006).

In this context, the above-mentioned processes were followed and also sample groups representing the theoretical structure that was tried to be put forward in accordance with the grounded theory were determined. In accordance with the theoretical structure, two different data (internet responses and interviews) were collected with three different sample groups. The research was conducted in three separate studies with these sample groups. The main purpose was to reach more and different participants in different ways and to obtain in-depth data to produce a study with high reliability. Participant information and information about the research process for the three different studies are given below.

Participants

Criterion sampling, one of the purposeful sampling methods, was used in order to reach more comprehensive data sources in line with the objectives of the study (Patton, 2014). The inclusion criteria for this study were mother, at least 2 children, and two of the children not older than 6 years of age. The reason for the inclusion of mothers with at least 2 children (important in terms of being able to compare the temperament of the pregnancy process and children) and not older than 6 years of age (important in terms of being able to remember the pregnancy process) is that in the Grounded Theory approach, it is emphasized that all participants should have personal experiences related to the subject, field or process about which a theory or an analytical schema is to be created (Creswell, 2015). In the study, while defining the participant mothers, codes such as M1 (Mother 1)-M2-M3 were used. In addition, participants were coded as M12-1 (12th Mother - first child) and M12-2 (12th Mother - second child) when indicating the first and second child. Participant information for Studies 1-2-3 is explained below, respectively.

Study 1

Within the scope of this study, data were primarily collected online. Interview questions were prepared online via Google form and data were collected by sharing them on the researcher's social media account. In this context, the researchers shared the form with the questions from their own instagram accounts with 32000 followers named "birsuperbaba" and it was seen that 181 mothers participated in the study within 2 weeks. Particular attention was paid to the fact that the participants had at least 2 children (important in terms of comparing the temperament of the pregnancy process and children) and that the children were not older than 6 years (important in terms of remembering the pregnancy process). In this context, the data obtained from 181 participants in accordance with the theory were analyzed.

Study 2

Within the scope of the research, face-to-face interviews were conducted with mothers who had at least 2 children similar to Study 1 and whose children were no older than 6 years old. In this context, 30 mothers were interviewed and qualitative data were collected and analyzed.

Study 3

In this section, face-to-face interviews were conducted with mothers who were eligible for the theoretical sampling and who had at least 2 children similar to study 1 and 2 and whose children were not older than 6 years of age. In this context, 26 mothers were interviewed and qualitative data were collected.

Data Collection Tool

In this study, data were collected in two ways: data collected through the internet and data collected through face-to-face interviews. The first data was collected through the internet. Within the scope of this study, data was primarily collected online. Interview questions were prepared online through Google form and data were collected by sharing them on the researcher's social media account. This form includes 24 structured (yes/no) questions and one unstructured open-ended question. For example, the form includes questions such as "I had a peaceful pregnancy process in general (everything was fine, it was a calm pregnancy process)" and "I had some problems due to family problems (situations such as financial difficulties, problems between spouses, problems caused by relatives)".

Within the scope of the research, data were also collected through face-to-face interviews. The interview questions prepared by the researcher were sent to 7 experts in total, including 5 field experts, 1 measurement and evaluation expert and 1 Turkish language expert, and the interview questions were finalized in line with their feedback. Before the actual interviews, pilot interviews (five participants) were conducted with the finalized interview questions and the comprehensibility of the questions was checked. The interview questions consisted of a total of 10 basic questions and probing questions, including 1 question about pre-pregnancy, 5 questions about the pregnancy process and 4 questions about postpartum. For example, in the interview questions; *"Considering your pregnancy processes, how were the attitudes of your spouse and other people around you towards you? Interested-uninterested, positive-negative? (You can explain by comparing. In other words, while it was like this with the first child, it was like this with the others)"*.

Data Collection Process

It would be more accurate to explain the three-stage process in this study in two separate data collection processes. In the first study, data were collected online (via Instagram). Interview questions were prepared online via Google form and data were collected by sharing them on the researcher's social media account. In this context, the researcher shared the form with questions from her own Instagram account named *** with 32000 followers and it was seen that 181 mothers participated in the study within 2 weeks.

In Studies 2 and 3, data were collected through face-to-face and in-depth interviews with mothers. These interviews were guided by the research questions but were not so structured that they did not allow new ideas and themes to be explored. As data collection progressed, interview questions were revised to further refine questions that did not reveal the intended information and to reflect categories and concepts that required further development (Spradley, 1979; Strauss & Corbin, 1998).

All interviews were recorded and transcribed verbatim with the participants' permission. The transcribed interviews and field notes were entered into the MAXQDA qualitative data analysis program for analysis. Due to the large amount of qualitative data (281 pages) from different data groups, in-depth research and the lengthy analysis process, this research could be completed in approximately 21 months. Figure 2 shows information about the research process.

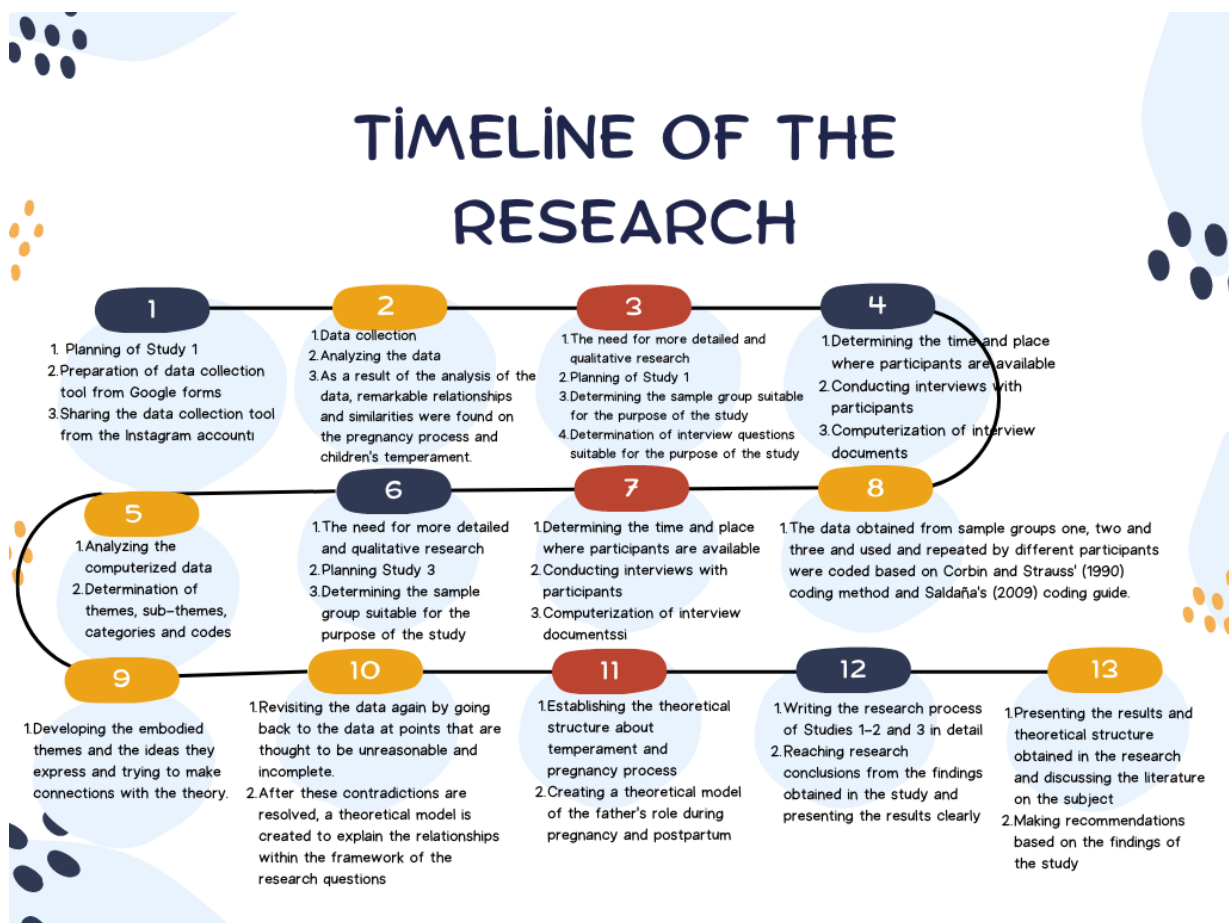


Figure 2. Timeline of the research

Sample Size

In grounded theory, the ultimate criterion for the final sample size is theoretical saturation (Charmaz, 2006; Strauss & Corbin, 1998). The following general rule is used in theoretical saturation. In theory building, data should be collected until each category (or theme) reaches saturation. This study was conducted with a sample size of 237 mothers, 181 mothers in Study 1, 30 mothers in Study 2, and 26 mothers in Study 3, and theoretical saturation was used to determine the final data (Charmaz, 2006; Lincoln & Guba, 1985).

Using theoretical saturation as the desired criterion, data were analyzed in each study (Studies 1-2-3) to determine the need for additional sampling. Despite the high number of participants in Study 1, the desired depth of data could not be reached and the need for resampling emerged. In this context, a new sample group consisting of 30 mothers suitable for the purposes of the study and theoretical sampling was determined and face-to-face interviews were conducted and it was seen as a result of the analysis conducted in Study 2 that both data that would further deepen the themes that emerged on the subject before and new information were reached.

Based on the new information obtained as a result of the analysis conducted in Study 2, theoretical sampling was applied again in order to ensure the theoretical saturation criterion. In this context, 26 mothers who were suitable for the purpose and criteria of the study were identified and final data were obtained through face-to-face interviews. Since the depth of the data provided by a total of 56 mothers in Studies 2 and 3 and the lack of new data in the last interviews is an important indicator that the theoretical data saturation has been reached, the sample for interviews was completed with 56 mothers.

Data Analysis

Since the aim of grounded theory is to create a specific theory by obtaining new concepts and categories through data, coding is crucial for the creation of categories and concept construction. There are various coding paradigms in Grounded Theory (Glaser, 1978; Strauss, 1987; Charmaz, 2006), and although names such as Glaser, Strauss, Corbin, Charmaz express the coding process in Grounded Theory with different terms and processes, what they are trying to explain is almost the same thing (Arik, & Arik, 2016). Since Charmaz's constructivist Grounded Theory Approach was adopted in this study, Charmaz's coding process was taken into consideration in the data analysis process. The flow chart of the grounded theory is shown in Figure 3.

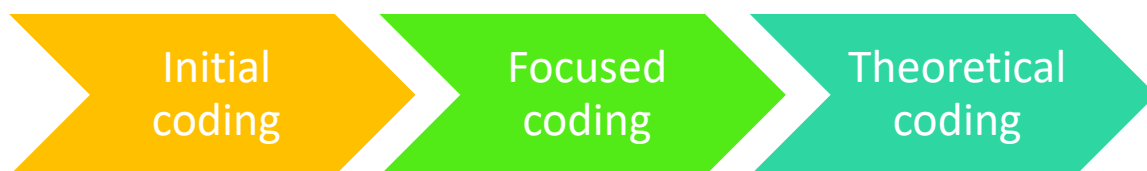


Figure 3. Charmaz's coding process (Charmaz, 2006)

The data obtained from the interviews were first computerized. A total of 282 pages of interview documents were included in the analysis process. The data obtained from sample groups 1-2 and 3 were coded based on Charmaz's (2006) coding method and Saldaña's (2009) coding guide. Codes were created by identifying the ideas used and repeated by different

participants, and the common codes were organized under categories and themes. Concretized themes and the ideas they expressed were developed and connections with the theory were tried to be established. At this stage, the data were reviewed again by going back to the data at points that did not make sense and were thought to be incomplete. After these contradictions were resolved, a theoretical model explaining the relationships within the framework of the research questions was created and reported (Auerbach & Silverstein, 2003). Saldana's (2009) coding guide is shown below.

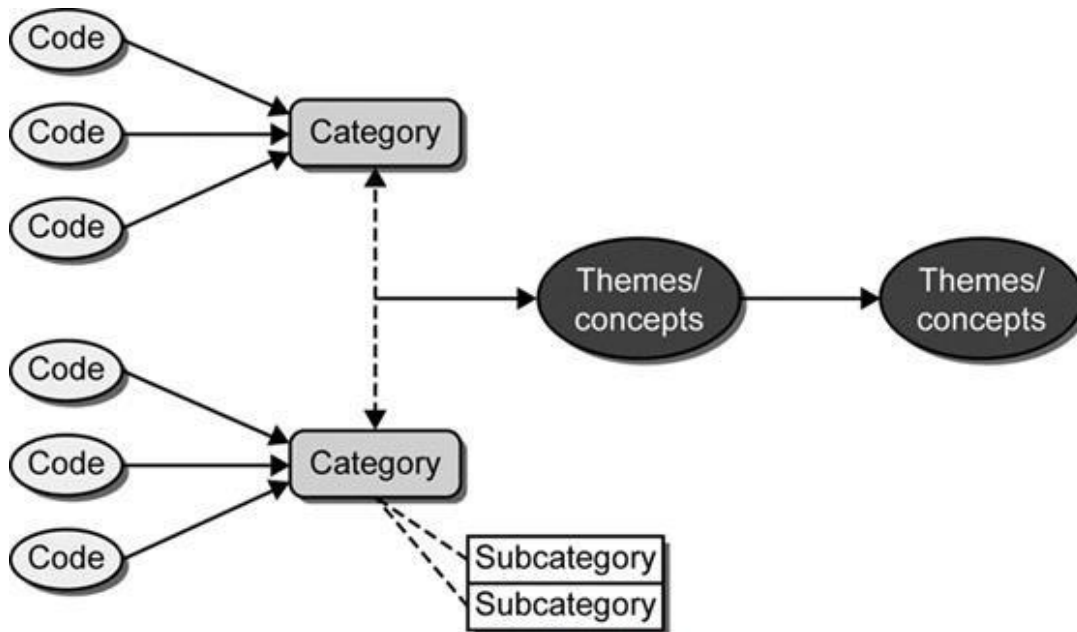


Figure 4. The Saldaña model (Saldaña, 2009)

The data obtained from sample groups 1-2 and 3 were coded based on Charmaz's (2006) coding method and Saldaña's (2009) coding guide.

RESULTS

The data obtained from sample groups 1-2 and 3 were coded based on Charmaz's (2006) coding method and Saldaña's (2009) coding guide. In this context, the theoretical model regarding the formation of temperament, pregnancy process and the role of the father in the pregnancy process was formed with the themes of "extended family, economic situation, social environment, school life, family climate and father" that emerged as a result of the analysis.

Figure 5 shows the themes, categories and codes obtained as a result of content analysis of the data obtained in the study. As can be seen in Figure 5, the claim about the formation of temperament was tried to be expressed with two themes and 9 categories, 38 codes and 10 sub-codes.

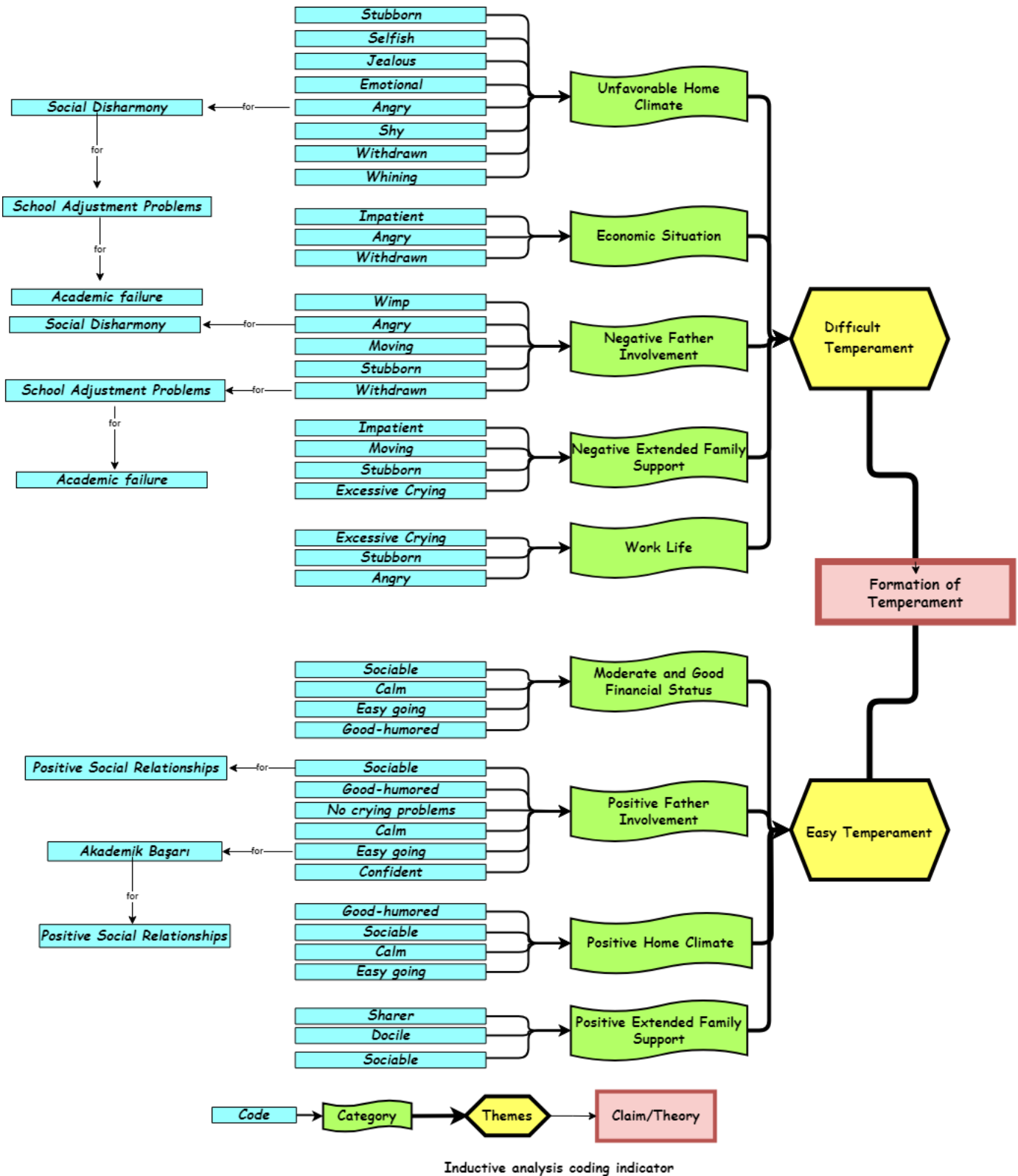


Figure 5. Themes, categories and codes obtained as a result of content analysis

The Formation of Temperament

In this study, following the coding paradigm proposed by Charmaz (2006), the phenomenon was evaluated within the framework of conditions, interactions, strategies and outcomes and the theoretical model was created. Figure 6 shows the theoretical model explaining the relationships between the themes. Based on the data obtained from the research findings, Figure 1 was developed and Theoretical Model 1 was created.

Theoretical model 1: Theoretical model for the formation of temperament and personality-character relationship

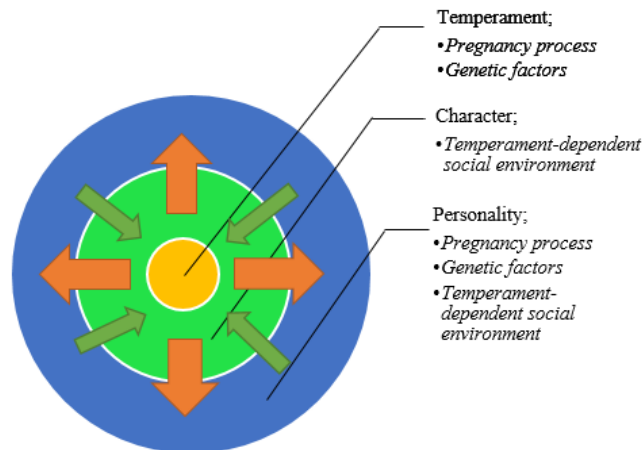


Figure 6. Temperament formation and personality-character relationship model (The superfather model 1)

As can be seen in Figure 6, temperament (gestational process and genetic factors) is at the center, character (temperament-dependent social environment) is outside it and personality (gestational process, genetic factors and temperament-dependent social environment) is outside it. The thick arrows pointing from the inside out (representing more influences) represent the influences of the temperament-dependent social environment. Thin arrows pointing from outside to inside (representing less influence) represent the effects of the social environment on temperament and personality. What is emphasized in this theoretical model is that temperament is actively and more intensely influential in the formation of personality than the social environment and the existence of a temperament-dependent social environment in this process.

In the literature on the subject, it is widely accepted that temperament emerges from genetic factors and character is formed at the end of the interaction with the social environment of the individual after birth and both temperament and character combine to form personality (See Figure 1). And again, according to this common view, temperament emerges from unchangeable, uncontrollable and genetic factors. However, in this theoretical model, it is seen that temperament cannot only depend on a situation arising from biological factors, but also the social environment of the mother during pregnancy and the psychological, economic and spiritual conditions of the mother, in short, the well-being of the mother can also affect the temperament of the child (See Figure 6).

The Father During Pregnancy

Theoretical Model 2: Theoretical Model of the Father's Role in the Pregnancy Process

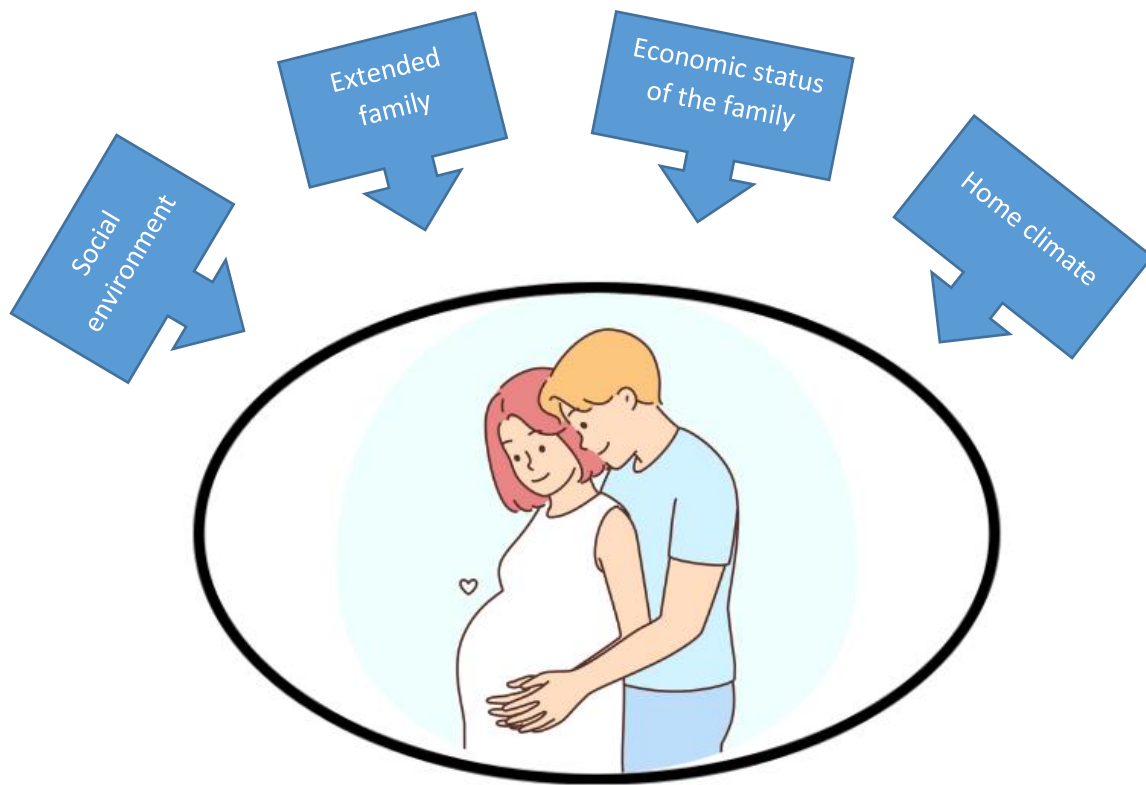


Figure 7. The father during pregnancy (The superfather model 2)

As a result of the analysis of the data obtained within the scope of the study, many themes that negatively affect the mother's well-being during pregnancy emerged. These are the themes of extended family, family climate, economic problems, social environment and father. In this context, the fact that the extended family does not support the mother during pregnancy or harms her in any way, economic problems experienced by the family or negative social environment effects can directly affect the mother to have a bad pregnancy process.

The most important data supporting the conclusion that the father acts as a shield during the pregnancy process is the changing father (involved-uninvolved) factor during the pregnancy processes of the first and second children. For example, M23, regarding the second pregnancy process and the temperament of the child, states that despite the pregnancy process in a similar family environment, negative extended family and even the deterioration of the family's financial situation compared to the first pregnancy process, the father's interest and attention to the mother changed positively compared to the first pregnancy, which positively affected the family climate, the mother's well-being and thus the temperament of the second child. In summary, the positive change in the father's interest and attention to the mother between pregnancies plays a very important role in the mother's well-being and the child's positive-easy temperament (M1, M3, M6, M10, M13, M14, M19, M23, M25, M46).

In explaining the theoretical model in Figure 6 and Figure 7, which emerged from the research data, the following steps suggested by Auerbach and Silverstein (2003) were followed: 1) Starting the explanation of the model by stating the purpose of the research. Explaining the

area of interest of the research and what the researchers want to learn. 2) Continuing with the explanation of the first theoretical structure (theme). Specifying the ideas repeated in the data and referring to the participants' statements. 3) Applying this process to each theoretical construct created. Thus, the story of the participants is explained both through their own statements and the theoretical constructs.

Fathers

One of the most striking results in this study is undoubtedly fathers. The father can act as a kind of shield during pregnancy (Theoretical Model 2). In other words, even if there are any problems in the extended family, social environment or economic situation of the family, a positive father figure prevents all these negativities and helps the mother to have a positive home climate and a healthier pregnancy process (M1-2, M3, M6-2, M10-2, M11-1, M13-1, M14-2, M17-1, M17-2, M19-2, M25-1, M25-1, M26-2, M27-1, M27-2, M28-1, M30-1, M30-2, M31-2, M32-1, M33-1, M33-2, M38-1, M38-2, M49-1, M50-1, M50-2, M52-1, M56, M55).

Even if there are problems in any or all of the above-mentioned topics, a father who supports the pregnancy process allows the mother to relax and feel stronger mentally, physically and psychologically. On the other hand, even if there is positive extended family support, positive social environment support and good economic situation of the family, if there is no paternal support, we can say that the mother may be directly negatively affected during the pregnancy process and indirectly this situation may negatively affect the temperament of the child based on the opinions and experiences of the participants on the subject (M1-1, M2-1, M2-2, M5, M6-1, M7, M10-1, M13-2, M14-1, M15-1, M19-1, M20-1, M21-1, M21-2, A23-2, A23-1, M25-2, M29-1, M40-1, M41-1, M41-2).

For example, one of the participants M1-1 said about the pregnancy process of her first child, "*When I was pregnant with Elif Ada, my husband went to Azerbaijan to work and I had to deal with all kinds of problems at home alone. I was always alone at home and I was afraid to go to bed at night. My sister-in-law and I lived in the opposite apartment. My sister-in-law's daughter was sleeping next to me and this is how the pregnancy process went and my husband was never with me during my pregnancy until Elif Ada came when she was 3 months old after birth*". On the other hand, M1-1 expressed her views on the father's support during the first pregnancy process as follows: "*I was worried that my husband was not with me during the pregnancy. Since my husband was working in Azerbaijan, I did not have any financial difficulties and he met everything I wanted*". M1-1 said about the temperament of her first child: "*Elif Ada was a very gentle baby. Elif Ada did not like to talk much, she was a withdrawn child. She is very timid and cannot communicate with people.*"

In this context, even if there are any problems in the extended family, social environment, home climate or economic situation of the family, a positive father figure prevents all these negativities and helps the mother to have a positive home climate and a healthier pregnancy process (M1-2, M3, M6-2, M10-2, M11-1, M13-1, M14-2, M17-1, M17-2, M19-2, M25-1, M25-1, M26-2, M27-1, M27-2, M28-1, M30-1, M30-2, M31-2, M32-1, M33-1, M33-2, M38-1, M38-2, M49-1, M50-1, M50-2, M52-1, M56, M55). On the other hand, based on the participants' opinions and experiences on the subject, it can be said that even if there is positive extended family support, positive social environment support and good economic status of the family, if there is no paternal support, the mother may be directly negatively affected during pregnancy and indirectly this situation may negatively affect the temperament of the child (M1-1, M2-1, M2-2, M5, M6-1, M7, M10-1, M13-2, M14-1, M15-1, M19-1, M20-1, M21-1, M21-2, A23-2, A23-1, M25-2, M29-1, M40-1, M41-1, M41-2).

Mothers Who Think That Temperament Is Affected By Pregnancy

In addition to the important research results mentioned above, some of the participants of the study (M10, M13, M33, M12, M9, M56, M55, M4) stated that the pregnancy process affected the temperament of children, although there was no question that directly evoked this. Of these, M66 said, *"My husband's father was ill and stayed with us during this period. Acquaintances were coming and going all the time, and although I was pregnant, I had to serve all the time and this made me tired, stressed, nervous and irritable. Being in constant service to a guest wore me out. That's why my daughter was a more moody and irritable baby than my son. She used to cry all the time, she used to get angry at everything and she still does. She is not patient and has a quick temper. I think this was also affected by the process I went through during pregnancy."* Although such a question was not asked directly, the participants' explanation of this situation based on their own experiences is considered very important as it confirms the findings of this study and the theoretical models put forward in Theoretical model 1 and Theoretical model 2.

CONCLUSION

In this study, the pregnancy processes of mothers with children aged 0-6 years and children's temperament characteristics were examined. In addition, in line with the views and experiences of the mothers participating in the study, it was tried to provide a theoretical basis for whether the pregnancy process has an effect on children's temperament, whether temperament can be partially, if not completely, intervened, and the effect and role of the father on both the pregnancy process and temperament and the pregnancy process. The data obtained from three different participant groups were coded based on Charmaz's (2006) coding method and Saldaña's (2009) coding guide.

In this context, the first important result of the study is that extended family members (mother, father, siblings, sister, brother, etc.) who provide positive support during pregnancy help the mother to reduce stress and have a positive pregnancy. Therefore, positive extended family support may affect the baby to have a harmonious temperament (M3, M14-2, M17-1, M17-2, M25-1, M28-2, M30-2, M31-1, M31-2, M32-2, M35-1, M37-1, M41-1, M41-2, M43-1, M46-1, M46-2, M49-1, M50-1, M50-2, M52-1). It is valid in the opposite case. In other words, based on the opinions and experiences of the participants, we can say that the negative extended family (M2-1, M2-2, M5, M6, M10-1, M14-1, M20-1, M25-2, M40-1, M12) directly affects the mother (stress, anxiety, negative home climate, etc.) and indirectly causes the baby in the womb to have a difficult temperament.

Another result obtained in the study was a positive home climate during pregnancy (M1-2, M3, M6-2, M8-2, M10-1, M11-1, M13-1, M14-2, M17-1, M17-2, M19-2, M21-2, M23-2, M25-1, M25-1, M26-2, M27-2, M28-1, M30-1, M31-2, M32-1, M33-1, M33-2, M35-1, M37-1, M38-1, M38-2, M43-1, M44-2, M45-1, M46-2, M49-1, M50-1, M50-2, M52-1, M56) can positively affect the mother's well-being and thus the child's temperament. On the other hand, negative home climate (M1-1, M2-1, M2-2, M5, M6-1, M7, M8, M10-2, M13-2, M14-1, M15-1, M15-2, M16-1, M20-1, M19-1, M21-1, M21-2, M23-1, M25-2, M27-1, M29-1, M32-2, M40-1, M41-1, M41-2, M44-1, 48-2, M12, M9) can cause the mother to feel mentally bad and have a stressful pregnancy. Based on the participant views, it can be said that the home climate directly affects the mother's pregnancy process and the child's temperament.

One of the most striking results of this study is undoubtedly fathers. The father can act as a kind of shield for the mother during pregnancy (see Theoretical Model 2 (The Superfather Model 2)). In other words, even if there are any problems in the extended family, social environment or economic situation of the family, a positive father figure prevents all these negativities and helps the mother to have a positive home climate and a healthier pregnancy (M1-2, M3, M6-2, M10-2, M11-1, M13-1, M14-2, M17-1, M17-2, M19-2, M25-1, M25-1, M26-2, M27-1, M27-2, M28-1, M30-1, M30-2, M31-2, M32-1, M33-1, M33-2, M38-1, M38-2, M49-1, M50-1, M50-2, M52-1, M55, M56). Even if there are problems in any or all of the above-mentioned topics, a father who supports the pregnancy process allows the mother to relax and feel stronger mentally, physically and psychologically.

On the other hand, even if there is positive extended family support, positive social environment support and good economic situation of the family, if there is no paternal support, we can say that the mother may be directly negatively affected during the pregnancy process and indirectly this situation may negatively affect the temperament of the child based on the opinions and experiences of the participants (M1-1, M2-1, M2-2, M5, M6-1, M7, M10-1, M13-2, M14-1, M15-1, M19-1, M20-1, M21-1, M21-2, A23-2, A23-1, M25-2, M29-1, M40-1, M41-1, M41-2).

One of the most striking results of this study is the formation of temperament. When the issues of temperament, character and personality are examined in the literature, it is widely accepted that temperament emerges from genetic factors and character is formed at the end of the interaction with the social environment of the individual after birth, and both temperament and character combine to form personality (Kiff, Lengua & Zalewski, 2011; Plomin & Dunn, 1986; Sari, 2018) (See Figure 1).

However, the findings obtained in this study show that temperament cannot only be due to biological factors, but also the social environment of the mother during pregnancy and the psychological, economic and spiritual conditions of the mother, in short, the mother's well-being can affect the temperament of the child (See Figure 6 (The Superfather Model 1)).

In this context, an individual with a calmer and more harmonious temperament is likely to be able to control his/her reactions in an argument and be less affected, while individuals with an excited or angry temperament are likely to be more affected in an argument. As it can be understood from this point, temperament, which is actually static, dynamically affects the way we perceive, interpret and interpret the events around us, thus affecting our character and personality. In his study on the subject, Rothbart (1989) emphasizes that temperament is interactive and is shaped together with the environment. In this study, the opposite result is in question. He emphasizes that it is not a temperament that is shaped with the environment, but a social environment according to our temperament.

In addition, the situation that most supports the conclusion that the pregnancy process has a significant effect on the child's temperament, which emerged from the findings of this study, is that although the pregnancy process is experienced in a similar family environment, when the pregnancy processes are compared, factors such as the positive change in the father's interest and concern for the mother, the positive support of the extended family, the improvement of the family's financial situation and the positive social environment positively affect the mother's well-being and thus the child's temperament.

This research was conducted in a grounded theory design aiming to put forward a theoretical model. In this context, based on the results obtained in the study, temperament, the formation of temperament, the effects of the pregnancy process on temperament, and the role and effect of the father in the pregnancy process can be reviewed. In addition, this study can create a general framework for researchers who will work on temperament, the formation of temperament, the effects of the pregnancy process on temperament, and the role and effect of the father in the pregnancy process.

Although the literature is quite rich in terms of the formation of temperament and the effects of genetic factors on temperament, this study is unique in terms of systematic examination of environmental factors in the context of parents in the formation of temperament. In this context, since this study presents a new theoretical model on this subject, naturally, there are no studies in the literature on the subject that can directly discuss its results.

However, an attempt was made to discuss the results of this study in the themes of school life, social skills and father. Accordingly, when the literature is examined, the results that children with difficult temperament have poor social relationships (Sanson et al., 2004), temperament affects children's cognitive development (Bayley, 1969; Sari, 2018), temperament affects not only early childhood but also social-emotional skills in adulthood (Kagan, 1997; LoBue, 2019) support the results obtained in this study.

In addition, other studies on the subject of the research generally focus on postnatal fathers and show that fathers' prenatal and postnatal mental health has an important role on children's development and executive functions (Vänskä et al, 2017), children of depressed fathers are twice as likely to develop a psychiatric disorder by the age of 7 compared to non-depressed children (Ramchandani et al., 2008), and fathers' mental health is associated with high rates of psychiatric disorders in school-age children and has negative effects on children's overall development (Nishimura & Ohashi, 2010). In this respect, it can be said that children's constant presence in such psychosocial conditions and home climate may lead to increased risk of anxiety and depression, higher rates of emotional and behavioral disorders, hyperactivity and delayed language skills (Paulson & Bazemore, 2010; Ramchandani et al., 2008). In addition, isolating the father from the baby's care and education processes (Davey et al., 2006) may have a negative effect on father involvement. Although these studies focus on the postpartum father, it is seen that they support this study in terms of the results obtained and the role of the father in father involvement.

Practical Implications

The Theoretical Model 1 (*The superfather model 1*) and Theoretical Model 2 (*The superfather model 2*), which emerged in this study, provide a new framework for understanding the formation of temperament in the context of the pregnancy process and the role and influence of the father in this process. In addition, important lessons can be learned for future studies and applications: (a) It should be noted that temperament is not only influenced by genetic factors but also by the mother's well-being, that is, even before birth, the social environment has effects on the child's temperament. (b) Since the father, who is with the mother and acts as a shield despite the factors that negatively affect the mother's well-being during pregnancy (extended family, social environment, economic situation and home climate), directly affects the mother's well-being and indirectly affects the child's temperament, special attention should be paid to focusing on father involvement not only after birth but also before and during pregnancy.

Ethical Approval: Approval was obtained from University Research Ethics Committee (Approval no: 2022/14).

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