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Andreea Krenek

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Explanatory Note

The present study was conducted in collaboration with a fellow graduate student, Alexandra Raspop. The focal points of the two diploma theses differ, however the data that was used is the same for both theses. Due to the fact that the topics are similar, the cited literature could be overlapping. This should not be interpreted as plagiarism, but rather as a mere consequence stemming from the usage of the same data and instruments.

Introduction

Parenting is considered to be a challenging and demanding process, (Willinger, Diendorfer-Radner, Willnauer, Jörgl & Hager, 2005). It can result in adverse parenting, which, in turn, is a factor which may negatively impact the development of a wide number of health and behavioral issues for children and may as well predict negative adult outcomes. The behavior and characteristics of the child can influence parenting, as well as health and psychological well-being of the parent and the effects of pressure and support. Parental issues may constitute a considerable stress factor for mothers and fathers. This happens especially when the child is characterized as problematic or demanding and the relationship between parent and child are seen by the parent as challenging (Bloomfield & Kendall, 2012).

Stress can arise from challenging events, excessive demands in various areas of life, frustrations and conflicts. Parenting stress can be defined as the stress that emanates from being a parent or the parent's perception of demands (Kramis-Aebischer & Aebischer, 1996). Therefore, it is to be expected that stress is also an important component of parenting. Stress related to parenthood can be described in three different ways: environmental, as a stimulus that can be objectively observed or illustrated (stressors such as: events, hassles, transitions, life circumstances that produce feelings of tension); as a response to stressors: with psychological and physiological components or as a process (a relation between the environment and the person). Furthermore, parenting stress can occur as a result of perceived discrepancies between the parents' perception of their own personal resources and the demands of parenting (Östberg & Hagekull, 2000).

Parenting stress can also be described as an interaction between child and parent trait and environmental factors (Abidin, 1995) and it has been described as an influencing factor regarding parenting behavior and child development (Bloomfield & Kendall, 2012).

The present study examined the relationships between parenting stress and parental conduct, as well as the discrepancies between mothers and fathers with respect to parental pressures and general stress experiences.

During the following chapters, the theoretical framework used for this research project will be illustrated.

The first chapter will describe definitions and theories of stress, as well as stress-triggering factors, consequences and individual reactions to stress.

The second chapter of the present thesis will handle the subject of parenting, illustrating its definitions and theories. Furthermore, classifications of parenting styles throughout history will be presented.

Subsequently, parenting stress and its several theories and determinants will be explained in detail. Also, the current research findings will be presented briefly, providing the theoretical basis for this diploma thesis.

The last chapter of the theoretical section will present the aims, research questions and hypotheses of the study.

The theoretical framework will be followed by the empirical section of the diploma thesis, which deals with the description of the examination process and its findings. The first chapter of this section illustrates the research plan and intended sample, followed by a detailed description of the applied survey instruments. Afterwards, social and demographical details regarding the participants and their children are provided.

The results obtained through the statistical analysis are presented in the *Findings* chapter of the present thesis. These results are discussed in relation to previous findings from the literature in the following chapter.

Finally, a summary of the purpose and the discussed outcomes of the study are illustrated.

I. Theoretical Framework

1. Stress

1.1 Stress – terminology and definitions

The term "stress" derives from the latin verb *stringere* and can be translated as "to compress, to press together" or "to tighten (Bartholdt & Schütz, 2010, p. 21), but nowadays it is more often used to describe time and performance pressure. Also, when one talks about stress, it is to depict one's current state of mind and/or the reaction to several triggering conditions (Bartholdt & Schütz, 2010).

Researchers originating from diverse areas of expertise have investigated and tried to define the notion of stress, leading to a variety of classifications, descriptions and definitions. Therefore, depending on the disciplines (which are diverse: epidemiology, physiology, neuropsychology, sociology, occupational health, crisis management, organizational psychology, family studies, etc.) and on the sole viewpoint of the researcher/author, one is bound to get several answers while researching this term. For example, some scholars have proven that too much pressure could lead to severe health issues in the individual, while others researched stress from a more relational perspective, focusing on families or other social systems in their studies (Maguire, 2012).

In scientific research the term *stress* is ambiguous, and it is identified and described through particular aspects. In some contexts it is used as a synonym for notions such as: (excessive) demands, strain, liability, pressure and overload, while at the same time it is related to several similar psychological constructs (fear, frustration, conflict) without allowing a concrete delimitation from these notions (Kramis-Aebischer & Aebischer, 1996).

A. Stress as status symbol:

The European Agency for Safety and Health ascertained in the year 2000 that work-related stress is one of the biggest dangers for the well-being of the individual. Also, several surveys and polls have been conducted throughout Europe and their results showed that every third employee is affected by work-related stress. It has also been proven that stress does not appear only in the workplace, but also in the family and in schools. Other forms are performance pressure, relationship stress and even stress related to free time, thus proving that it is a very relevant health-related risk factor. Almost every aspect of everyday life is affected

by stress and it is associated with several impairments of physical and mental well-being (Kaluza, 2007).

B. Physiological Definition of Stress:

One of the first researchers of stress in the medical discipline was Dr. Hans Selye, co-founder of the Canadian Institute of Stress, whose studies were based upon animal testing. He developed the *General Adaptation Syndrome,* describing the physiological and chemical alterations that arise in animals under various conditions and due to a series of reasons (Selye, 1976). This Syndrome spans into three stages: the first one is characterized by an energy and hormone dispensation in the body (alarm response), which signals that the body is ready to take action; during the second one (resistance or adjustment phase) a restauration of the energy supplies and a recovery of the body takes place, and the third (and last) is the exhaustion phase. The last stage is rarely reached throughout one's life (as opposed to the first two, which are often experienced) and it could lead to unrecoverable damage, loss or even death trough extreme fatigue and an ongoing, lasting alarm reaction (Maguire, 2012). Therefore, stress represents the body's response to perceived alterations and provocations or, as Selye himself defined it, "the non-specific response of the body to any demand" (Tache & Selye, 1985, p.5. cited in Maguire, 2012, p. 7).

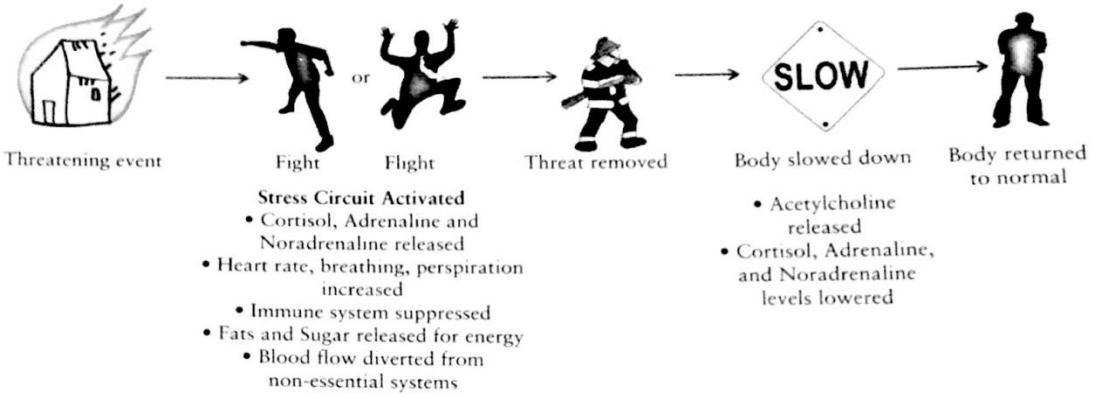

Figure 1: Human Stress Response (Maguire, 2012, p.8)

Figure 1 illustrates the physiological response during a stressful situation. The autonomous nervous system (ANS) manages several capacities of the body, namely those parts that function automatically and unconsciously, and it includes two important components: the parasympathetic nervous system (PNS) and the sympathetic nervous system (SNS) (Campbell & Reece, 2008). During a perceived possible danger or pressure, the fight-or-flight answer takes place, activated by the stress circuit (the hypothalamus-pituitary-adrenal axis). The

chemical called andrenocorticotropin (ACTH) is being produced by the pituitary gland during this process. This ACTH also produces three hormones, one of which is the cortisol, whose job is to inform the body to supply the individual with energy and accelerate his/her vigilance and information processing. The other two hormones, namely adrenaline and noradrenaline, increase the body's reaction time by accelerating the heart rate and blood pressure. These processes enable the fight-or-flight response. If the threat has been eliminated (or decreased), acetylcholine is released by the PNS, while the levels of cortisol, adrenaline and noradrenaline are lowered and the body reverses to normal (Maguire, 2012, pp. 8–9). The sympathetic nervous system and the parasympathetic nervous system operate combined to help individuals handle stress, face it and recover. This only works when the threat is eliminated and the bodies are given time to recuperate. But ongoing or regular pressure, danger or stress could lead to a state of enduring attention, accelerated blood pressure, etc. thus putting bodies at risk for illnesses (Stein & Miller, 1993). However, it has been proven that individuals react differently to stress and negative consequences do not always appear under the same conditions. This fact poses the question of the cause of resilience of others, creating the necessity of a psychological definition of stress (Maguire, 2012).

C. Psychological definition of stress:

The subjective experience of a threat, or danger is characterized by the fact that it is only lived and perceived from an individual's perspective. The type of setting or condition that causes fear or stress in a person depends on their previous experiences (childhood, education, economic status, etc.) and their genetic components. A clear distinction between an individual's subjective experience of stress and the objective description of this state is important for understanding the psychological processes during a stressful situation (Rensing, Koch, Rippe & Rippe, 2005). While Hans Selye (1976) became the first scholar to research and describe the physiological components of stress, Richard Lazarus and his colleague Susan Folkman (1984) were among the first to study the psychological process and components of stress (Maguire, 2012). Their work provided two different approaches to specify stress: the stimulus approach and the relational definition of stress (how people react to pressure). The stimulus approach classifies stress factors (stressors) as major changes or events (example: natural disasters), life events (birth, death) and daily hassles (Lazarus & Folkman, 1984). The focus of the psychological definition of stress is the second type of classification of stress: how people answer to threats or danger and the meaning attributed to this type of situation. Lazarus and Folkman (1984) describe psychological pressure as "a particular relationship

between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19). The cognitive appraisal perspective explains the plurality of individuals' stress reactions and it has two components: the primary and the secondary appraisal. During the primary analysis, the significance and the threat of an event is evaluated and classified by the individual. The secondary appraisal takes place if the situation or event has been valued as dangerous, offering coping strategies and solutions. The relationship between these two types of appraisals determines the rate at which people experience stress and their emotional reaction to pressure (Maguire, 2012).

1.2 Stressors and Stress Factors

Stress and especially its triggering factors (so-called stressors), are a highly independent and personal matter. These particular factors don't necessarily lead to stress in every individual, but they can be characterized as risky or potentially damaging (Bartholdt & Schütz, 2010, p. 26).

Research shows that, although individuals and their bodies may respond to stress similarly, the stressors for each person can vary and are often dissimilar (Maguire, 2012). Stressors can be "fatigue, pain, fear, concentration, humiliation, loss of blood, and even great and unexpected success" (Selye, 1976, p. 7), thus determining the unspecificity of a stress response and the difficulty to identify its source. In the stress literature one can find a variety of classifications and definitions of stressors. For example, Greif, Semmer and Bamberg (1991) define stressors as "hypothetical factors that trigger stress (or a stress reaction) with an increased probability" (p.13). Also, stressors have been described as any number of events that can cause change and other stressful reactions for an organism (Boss, 2002).

The classifications for stressors have been established on the grounds of several conditions and characteristics, but this chapter will present two dimensions considered particularly relevant by some researchers: valence and duration (Maguire, 2012, p.12).

On the valence dimension, two types of stressors can be distinguished: eustress and distress. The word *eustress* origins from the greek word *eu*, which translates to *good*, therefore this type of stressor is linked to positive and preferable results. *Distress,* on the other hand, translates into *bad* or *dissatisfaction* and it is associated with negative consequences (Selye, 1976, p.15). For example, a job promotion or the birth of a child can be considered positive

stressors (eustress) whereas a death in the family, loss of a job and others can be described as negative stressors (distress). Eustress triggers a pleasant, positive emotional reaction to a stressor, thus benefiting to the health of the individual and their coping strategies (Maguire, 2012) and it "reflects the extent to which a cognitive appraisal of a situation or event is seen either to benefit an individual or enhance his or her well-being" (Simmons & Nelson, 2001, p. 11). Distress, on the other hand, can cause unpleasant results in several respects (Maguire, 2012, p.14) and it takes place either when the individual perceives a gap between the expectations and the results (Simmons & Nelson, 2001) or when the individual has a negative reaction to a stressor (Edwards & Cooper, 1988).

On the duration dimension, the two types of stressors that have been identified are **discrete** and **chronic** stressors (Maguire, 2012). A discrete stressor is characterized by unexpected life events or life-changing occurrences (over a short period of time), which demand sudden adaptations of the individual (Thoits, 1995). Chronic stressors can be described as constant or ongoing stressors, which can cause several negative consequences and strains on physical, psychological or social levels (Boss, 2002).

Another classification was made based on the origin of stress-triggering factors: individual (sickness, loss of a job, starting a new career or school), family (divorce, sexual abuse, having a child) or community (taxes, bank failures, wars) stressors (Patterson, 1988; Weber, 2010).

1.3 Stress reaction and stress-associated consequences

The stress reaction is said to take place on four different levels (Kaluza, 2007): stress arises on a physical, cognitive, behavioral and emotional level (Bartholdt & Schütz, 2010).

The stress reaction from a physiological standpoint has been described in detail during the previous chapters and it has been shown that this reaction takes place during a normal biological process. The physical stress response evolved throughout history as a functional and purposeful mechanism to protect the individual during dangerous situations. During a stressful event, the body experiences several physiological changes, such as: the skeletal muscles are better supplied with blood to facilitate the fight or flight response; the heart is also better supplied with blood, beats harder and stronger, whereas the breathing increases. Other noticed changes in the bodies during stress could be a loss of sexual craving and a decrease in pain sensitivity (Bartholdt & Schütz, 2010).

On a cognitive level, researchers discovered that during a stressful event the perception of the situation and the attention span of the individual are the first to change and his/her thoughts are directed on the stressor (Kaluza, 2007). Other cognitive changes noticed are the loss of objectivity, irrational thoughts, impairment of the memory and decision-making process (compromise or emergency solutions are easily accepted and problems are superficially solved) (Litzcke & Schuh, 2007).

The emotions of an individual can also be influenced during a stressful event. Researchers show that the human stress reaction is characterized by negative feelings, such as: helplessness, insecurity, guilt, anxiety, restlessness, feelings of dissatisfaction and others (Kaluza, 2007; Litzcke & Schuh, 2007).

On a behavioral level the noticed changes are multifaceted and various. Some individuals react with aggressive behavior, irritability and increased sensitivity (Bartholdt & Schütz, 2010) and show signs of motor restlessness, hasty and conflictual behavior and lack of patience (Kaluza, 2007).

1.4 Coping Strategies

In 2006, Mental Health America did a survey involving 3000 adults regarding stress coping strategies. The results showed that 82% of the participants use leisure activities to cope with stress, such as: watching TV, reading or listening to music; 71% relied on social support (friends, family members), while others used prayer and meditation (62%) or exercise (55%). Other results showed that drinking, smoking and using drugs may also be considered a coping strategy (26%) by a smaller number of people (Maguire, 2012).

In order to better comprehend why some people choose a particular mechanisms, a better understanding of coping and its strategies is necessary.

One of the definitions regarding coping comes from the researchers Lazarus and Folkman (1984), whose perspective views coping as: “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of a person” (p.141). This definition by Lazarus and Folkman underlines the importance of the process of cognitive appraisal (as previously discussed) in choosing a coping strategy. The individual first estimates the potentially dangerous situation (primary appraisal), the possibility to avoid it and its probable duration and decides

accordingly (Maguire, 2012). During the secondary appraisal, the individual decides and evaluates the necessary steps to avoid and manage the event and its possible consequences, by using the resources at his/her disposal (social support, personal characteristics) (Lazarus & Folkman, 1984). For example, a positive self-perception, social skills, material resources, health, optimism, energy may be considered resources for coping with stress (Thoits, 1995).

The stress literature also offers several ways of classifying coping strategies. The categories are various and wide, however the present thesis will describe just three of them (commonly found in the literature): solitary, social and communal coping (Maguire, 2012).

Solitary coping strategies comprise the mechanisms an individual uses to tackle problems, handle feelings and interact with others under pressure (Maguire, 2012). These strategies could be distancing, self-control (when the individual keeps his/her emotions under control or hidden), positive reappraisal, avoidant behavior and others (Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986).

Social coping describes the instances in which the individual pursues help from others (family, friends) and it is one of the most researched strategies, as well as one of the most important ones. Receiving social backing in the form of supporting behavior and communication from others can be a powerful tool when trying to manage stress (Gardner & Cutrona, 2004).

Another important strategy is the communal coping, a fairly new category in the research literature. This type of coping describes a situation in which a larger number of people are concerned by the same stress factors and they combine their strategies in order to manage and tackle this stressor (Lyons, Mickelson, Sullivan & Coyne, 1998).

2. Parenting behavior

2.1 Parenting – Terminology and definitions

For most people parenting construes a big part of their life-span: the first part of each person's life is governed by his/her parents: they educate, care and feed their children, impact their decisions and their personal and social life. Then, after several years of autonomy, the children become parents themselves. Therefore, one can conclude that parenting plays a crucial role throughout a person's life-span, representing one of the most important relationships he/she will have (Holden, 2014).

The term "parenting" originates from the Latin verb *parere*, a word defined as "to bring forth or produce" (Holden, 2014, p.3).

Generally, this term refers to any and all interactions between parents and their children. These types of interactions are a succession of events, which prepare the child for his/her future life and include attitudes, values, interests and convictions of the parents. But not all interactions between a child and his/her parents are intended for educational purposes. Some are nurturing activities (feeding, cleaning, clothing, etc.), while others are expressions of love and affection, worry, pride, anger. Regardless, this type of interactions also has an impact on child-rearing. Parenting is an ongoing process: each moment in which the child is in the presence of his/her parents affects their momentary behavior and possibly their future development (Sears, Maccoby & Levin, 1976).

The present diploma thesis will introduce a relevant selection of the various definitions of the term *parenting*. For example, one can split the many different defining approaches in two categories: functional parenting and intentional parenting (Liebenwein, 2008).

A. Functional parenting

Functional parenting is characterized by the assumption that intentionality, the relationship between the educator and the one being educated, and value orientation are not necessary or sufficient in the process of child education (Liebenwein, 2008). Therefore, (according to this approach) child-rearing is based mostly on the influence of society and other involved parties. However, this concept has been severely critiqued by several parenting researchers (Brezinka, 1989).

B. Intentional parenting:

This concept defines child-rearing as a willful and purposeful process between the participants, a process that won more recognition than the previously described one (functional parenting) (Oelkers, 2001). According to the definition of Wolfgang Brezinka, (1974) parenting is goal-oriented, precise, governed by values and personal judgments. The concept refers to social actions, through which people are trying to permanently improve the structure of psychic dispositions of other people (Brezinka, 1974, p. 95). The intentionality of parenting can be found in several other definitions by researchers. For example Giesecke characterizes child education as being influenced by goal-orientation and values: "Education therefore always says only what is done consciously and planned for the purpose of optimal child development" (Giesecke, 1991, p. 70).

Parenting is a complex process, in which the parents assume a large number of roles and attributions: protector, primary care- and love-giver, educator, controlling the actions and comfort of the child. How parents manage all these roles is immensely altered by their personality and most of all their convictions. Throughout history, religious scholars, philosophers, politicians, psychologists, medical doctors and others have influenced these convictions (Holden, 2014).

A. Religious leaders:

Strict education, appropriate conduct and attitudes, values and ethics can be found in the center of a religious child-rearing (Holden, 2014). For example, Confucius, the founder of Confucianism, reiterated the importance of devoutness, godliness in children and obedience (in respect to parents and other older relatives), kinship and accomplishment (Lin & Fu, 1990). Seeing as religion is of great importance in the lives of many people, it should come as no surprise that there is a large number of writings regarding this matter and containing advices or rules on child-rearing. (Holden, 2014). One of the important Christian figures who addressed this issue was St. Augustine of Hippo, who regarded children as being born sinful, because they are all heirs of Adam and Eve, thus being born with their original sin (Augustine, 2011). A patriarchal approach on parenting was adopted by Martin Luther King, who considered fathers' involvement in education crucial. He viewed fathers as leaders of the family and thought they should serve as moral examples for their children and educate all members regarding prayer and a spiritual living (Gillis, 1997). Another famous view in the religious history was the authoritarian method: a concept which promoted harsh education, restraining children and use of physical punishment (Greven, 2010). However, nowadays

religious scholars and preachers do not condone physical punishment anymore. For instance, The United Methodist Church prohibited physical discipline in families and schools in 2004 (Holden, 2014, p. 9).

B. Philosophers

Several philosophers also expressed their beliefs regarding the practice of parenting. For example John Locke, physician and philosopher from England, disclosed a guide regarding how one should educate a child, his main approach being one of rationality and reason instead of harsh discipline and compensation. Another philosopher, Jean-Jacques Rousseau, regarded children as being born pure, untainted and encouraged parents to promote a natural development. Also, he thought girls should be educated differently from boys: while boys were described by Rousseau as social, helpful beings, the upbringing of girls should focus on raising them to be mothers (Holden, 2014).

C. Psychology

G. Stanley Hall (1904) and John B. Watson (1928) are recognized as two of the first researchers on the subject of child-rearing in the field of psychology. Stanley Hall (1904) launched a program of research on families and adolescents and he was an advocate of physical discipline: “We need less sentimentality and more spanking” (Cable, 1975, p. 172). John B. Watson (1928) became known through his work and studies of “Little Albert” and he introduced the concept of classical conditioning, overlooking genetics and attributing development of the child on learning processes. As opposed to Hall, he did not advocate or encourage physical discipline or aggression and viewed it as unwarranted (Watson, 1928; cited by Holden, 2014, p. 16).

2.2 Factors that influence parenting behavior

One of the known models of parenting determinants stems from Belsky (1984), who categorized the factors into three categories:

- Psychological abilities of the parents;
- Child traits;
- Contextual factors

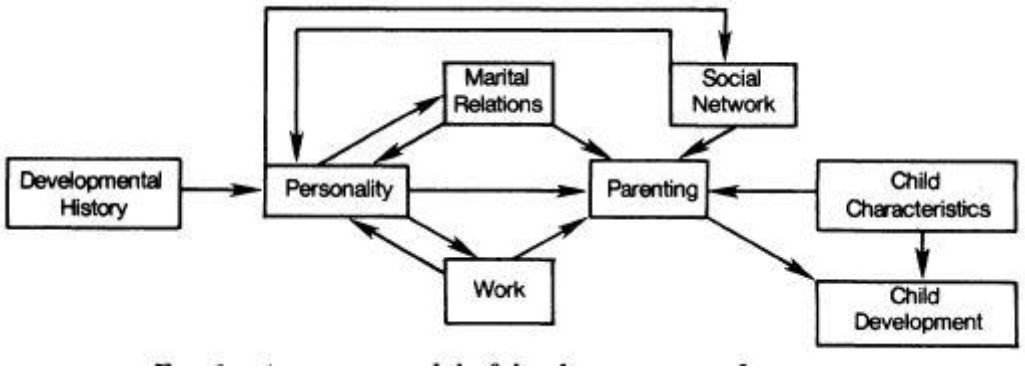

Figure 2: A process model of the determinants of parenting (Belsky, 1984, p.84)

The three categories of factors interact and influence one another, determining the parenting behavior of mothers and fathers. The personal traits of the parent are determined by genetics and their childhood experience with their own parents, in turn impacting their relationship with their spouse, social relationships and work. Furthermore, these three components and the attributes of the child determine parenting behavior (Holden, 2014).

Out of the factors described above, the personal trait of the parent is believed to be of crucial importance in child-rearing, because emotional stability and strength can provide support and help with coping in challenging situations, such as matrimonial conflict, difficult child, economic pressure, etc. (Belsky & Barends, 2002).

Subsequently various types of parenting influencing factors will be explained and described, such as:

- cultural factors (society and culture, financial and social status, religious beliefs);
- circumstantial factors (stress, social network);
- personality traits (of the child, parent and family as a whole)

A. **Society and culture:**

Generally speaking, a culture comprises social, financial and emotional adjustments of a society and its members. Regarding parenting behavior, culture affects the objectives, attitudes and values of mothers and fathers as well as their education rules and the concept of proper conduct of children (Ogbu, 1988).

Scholars try to explain cultures of mothers and fathers through the ethnicity or origin of the parent and cultural differences in parent-child relationships is a common topic in parenting research (Holden, 2014).

For instance, one study investigated cultural discrepancies in mothers' attitudes towards their 5-month old infants from France, Japan and the United States. The results showed a very small number of discrepancies in the demeanor of mothers and their babies. The single cultural discrepancy identified was in the reaction of mothers to their infants looking: Japanese mothers were more receptive when their babies where looking at other people (Bornstein et al., 1992).

B. **Financial and social status:**

The socioeconomic status of the parent is considered a compelling factor of child-rearing behavior and it is established by taking into account employment, education and revenue, thus offering the family a position within the society (Leyendecker, Harwood, Comparini & Yalcinkaya, 2005).

Many researchers have compared families of lower and middle financial and social status regarding their parenting practices. Results showed, among others, that middle-class parents use disciplining tactics such as rationality, remorse or shame, as opposed to lower-class parents who rely on physical sanctions more often (Holden, 2014).

It has been speculated that the employment situation of the parent and other general life conditions influence parenting practices. For instance, mothers and fathers with a higher financial status usually have jobs that demand accountability, autonomy and determination, thus influencing them to instill the same values in their children, by reinforcing responsibility, achievement, performance, and others. Furthermore, mothers and fathers from a lower socioeconomic status appreciate obedience, discipline and self-control more than independence (Kohn, Naoi, Schoenbach, Schooler & Slomczynski, 1990).

The relationship between social and financial status and parenting practices has been thoroughly studied and it has been proven (in eight countries) that socioeconomic status greatly influences child-rearing (Kohn et al., 1990; Luster, Rhoades & Haas, 1989).

C. **Religion:**

Faith impacts society norms and values, laws, sexuality, personal feelings and opinions. Therefore, it should come as no surprise that it strongly influences parenting behavior as well (Browning, Green & Jr, 2006).

Generally speaking, religion is "about what is to be valued in life" (Holden, 2014, p. 112); in consequence, several scholars have studied the relationship between faith and moral beliefs of the parents.

A study of 63 societies showed that parents who view themselves as religious (compared to other mothers and fathers) appreciated discipline, deference, devotion in their children over autonomy and decisiveness (Inglehart & Baker, 2000).

The importance of family devotion and education is present in all three of the world's great deistic religions (Christianity, Judaism and Islam). One can therefore presume that religious mothers and fathers would emphasize the importance of a more religion-oriented education and hold different moral beliefs (Wilcox, 2002).

D. **Stress:**

Stress is a general circumstantial factor that can greatly impact how parents raise and educate their children. Large-scale life stress factors (such as natural disasters, injuries, death), as well as pressures of day-to-day living (spousal relationship, financial hardship, personality, and child characteristics) can affect the well-being of mothers and fathers and influence their parenting styles and values (Holden, 2014).

Parenting stress is comprised of child traits, parent's personality, situations and life-events. This type of stress can have an additive effect on parenting (Deater-Deckard, 2004).

E. **Social Network:**

Friends, neighbors, co-workers, relatives can be a part of the social network of a parent, offering affection, support and love, thus helping mothers and fathers to cope with stress and other pressures. The most important support for a parent comes from their spouse, in the form of co-parenting and offering emotional comfort (McHale et al., 2002 cited in Holden, 2014, S. 116).

Several research studies have been conducted regarding the impact of social support on parenting behavior and stress, the results showing a positive effect on both of these variables.

For instance, highly distressed Dutch fathers (but not mothers) of children diagnosed with cancer experienced a noticeable decrease in their stress levels when they were offered social assistance and support (Hoekstra - Weebers, Jaspers, Kamps & Klip, 2001). Another study showed that poor African-American mothers who gained more social support were more nurturing and reported a better general disposition. However, these findings were lower in high crime neighborhoods (Ceballo & Mcloyd, 2002).

F. **Parent Traits:**

a) Gender:

The difference regarding parenting in mothers and fathers has been highly researched. The findings were not straight-forward, probably as a result of relatively recent changes in parenting roles, for example trough social modifications that cause a change of mothering and fathering, such as: working mothers or absent fathers due to divorce. However, one relevant discrepancy was proven in a study regarding participation in child nurturing. Although in recent years the involvement of fathers in the education of children has increased, it is still significantly lower than the involvement of mothers (except in the case of single fathers) (Cabrera, Tamis-LeMonda, Bradley, Hofferth & Lamb, 2000).

Other discrepancies between mothers and fathers were found regarding particular behavioral traits and beliefs, such as parent-child interactions: mothers participate in verbal or educational play more than fathers and they also try harder to introduce variations in their children's plays and activities. However, mothers tend to be stricter than fathers and impose more order. Furthermore, fathers appreciate autonomy and accomplishments more, as opposed to mothers who place value on feelings and emotions (Lamb, 2010).

b) Personality

Personal characteristics of mothers and fathers are of great importance in child-rearing. For instance, parenting wisdom and a general state of well-being have a powerful positive influence on parenting behavior (Belsky & Barends, 2002).

Studies have also shown that parents who described their own childhoods as negative or precarious tended to be more forceful and rigid in their disciplining tactics (Kochanska, Aksan, Penney & Boldt, 2007). Other research results regarding parents' personality traits showed that high levels of empathy (the capacity of mothers and fathers to better identify themselves with their child and understand their point of view) correlates strongly with

involvement, nurture and positive attitude towards children (Dix, 1992; cited in Holden, 2014, p. 122).

G. **Child Characteristics:**

a) Child's Age:

Seeing as children go through major changes (physical, cognitive, emotional, and social) while aging, it is to be expected that their age is regarded as the most powerful influencing factor on child-rearing (Bornstein, 2002).

b) Child's Personality and Temperament:

The temperament of children defines their emotional expressiveness, helps them react to modifications in the environment and it is considered to be biologically determined (Holden, 2014). Studies found that parents' reaction to a child's personality (or temperament) is more relevant to their development than the traits themselves (Putnam, Sanson & Rothbart, 2002). Therefore, a certain child can experience different parenting practices, depending on a parent's view of the child's behavior. One can conclude that a parent's response is highly subjective and his/her reaction to the child's temperament can greatly affect their development. Research shows that mothers who regard their children as challenging or troublesome offer less positive nurturing and consideration as opposed to mothers who see their children as even-tempered. Furthermore, parents of difficult children use more negative, punishing disciplinary techniques than those of even-tempered children who are more reactive and receptive to their child's needs (Putnam et al., 2002).

c) Child's Gender:

A study found that parents who were satisfied with the gender of their children were more involved in their education and spent more time playing with them, as opposed to parents who were not pleased and who tended to rate the relationship with their child as problematic (Stattin & Klackenberg-Larsson, 1991).

Two researchers, Lytton and Romney (1991) decided to investigate (through a systematic review) if parental attitudes and opinions of their children were affected by their gender. Their review of 172 studies showed that parents rarely tend to discriminate their children based on gender. One of the few strong gender effects discovered was about assumptions and beliefs of the parents about boys and girls, but even these were lowered when the child's age increased (Lytton & Romney, 1991).

H. **Family Characteristics:**

a) Family Structure:

The first aspect that needs to be taken into consideration regarding family structure is whether it is a single- or a two-parent family. Studies found various discrepancies between single and married parents, probably due to lack of time and increased pressure and strain. For instance, research showed that single parents tend to monitor and oversee children less compared to married parents and they can also be less involved in disciplining them (Weinraub, Horvath & Gringlas, 2002).

Another relevant aspect regarding family structure is the number of children in a household: a large number of children has been associated with more harsh and rigid disciplinary practices than those found in families of smaller sizes (Wagner, Schubert & Schubert, 1985).

b) Spousal relationship:

A high quality in the relations between husband and wife was found to be directly linked to positive child-rearing and positive viewpoints about children (Cowan & Cowan, 1992). Also, a different study discovered that parents in conflicting spousal relationships display a less effective child-rearing behavior than those in warm, loving marital relations. Furthermore, antagonistic parental relationships were associated with negative educational behavior (Erel & Burman, 1995).

2.3 Parenting styles and practices

A parenting style can be defined as a combination of beliefs and approaches that are disclosed to the child, resulting in an emotional environment of parental behavioral expressions. These expressions comprise non-purposeful parental attitudes (gestures, body language, impromptu disclosures of feelings), as well as goal-oriented parental behaviors, to the purpose of educating the child (Darling & Steinberg, 1993). Parenting styles are characterized by an inter-individual variability, however within the individual they are relatively stable (Krohne & Hock, 2001). Therefore, it can be concluded that the goals, practices and attitudes of parents are relatively steady in the general parent-child-relationship. Nevertheless, by examining several different parent-child-relationships the systematical variety of parenting styles can be observed (Liebenwein, 2008).

The parenting style is considered an essential determinant of child development, thus considerably increasing the interest of researchers regarding this subject matter (Nave-Herz, 2002). The modality of the patterns of parenting practices, as well as the concrete developmental consequences were (and are) one of the main focuses of researchers (Darling & Steinberg, 1993). Several theories and assumptions found their way into the literature in trying to explain the influences of parenting. According to Piaget (1932, cited in Grusec, 1997, S.5) parental behavior plays a crucial role in the moral development of the child. However, he considered the authoritarian interaction between a parent and their child as a hindrance and advised parents to use a more favorable, egalitarian practice.

The Psychoanalytic Theory also offered its own approach: forcing parents' beliefs on their children can only result in negative feelings such as animosity and displeasure. Nonetheless, children repress and hide these feelings out of fear (of abandonment or withdrawal of love) and they inadvertently adopt the values of their parents in an attempt to appease them (Grusec, 1997).

Several social learning theories regarding this subject have also been published. For instance, Mowrer (1960) introduced the idea that a child would resist temptations or refrain from infractions and misdemeanors due to multiple punishments and the fear associated with them.

Another study by social learning theoreticians tried to classify different types of maternal disciplining techniques: they identified the love-oriented discipline (characterized by appreciation, approval, love withdrawal and rationality) and the object-oriented technique (characterized by withdrawal of material rewards and physical sanctions) (Sears et al., 1976).

The subject of parenting styles has been thoroughly researched and various theories and classifications have been published, discussed and argued. Subsequently, three types of classifications stemming from different scholars will be discussed.

The Fels Research Institute from Yellow Springs, Ohio, USA, conducted a longitudinal study of child evolution. The following characteristics were systematically obtained and examined: prenatal development, growth and evolution of the children. Also, several aspects were surveyed in detail, such as: physical and skeletal evolution, intelligence, areas of social development, personality and environmental modifications. To better understand the climate and environment of the child, twice a year a researcher visited the home of the child, assessing attitudes, practices, and beliefs of the parents (Baldwin, Kalhorn & Breese, 1945).

To evaluate parenting styles, The Fels Parent Behavior Rating was used. This scale comprised thirty variables of parent behavior, incorporating several relevant facets of the parent-child-relationship. The study identified three major types of parenting styles: rejectant, casual and acceptant (Baldwin et al., 1945).

The **rejectant** parenting behavior is characterized by distant, unsympathetic attitudes of the parents and emotional coldness. This category comprises two different patterns of exclusion: the first one is portrayed by a general indifference and carelessness regarding the child's well-being and the second one is dominated by hostility towards the child. Parents who manifest this type of behavior tend to treat their children with coercion, harsh punishments and a practically non-existent parental empathy and understanding (Baldwin et al., 1945).

A second category of parent behavior discovered by Baldwin et al. (1945) is the **casual** pattern. Parents exercising this particular type of educational technique were found to be loose and relaxed in their emotional expressions towards their children, but also regarding their discipline tactics. This category can also be split in two patterns: casual autocracy and casual indulgence. The casual autocratic group rations the amount of affection given to the child and their behavior is chaotic and unorganized: they do not deal with challenging situations effectively, their problem-solving behavior can more likely be described as blundering and tumultuous. The parents adopting the second pattern within this category, the casual indulgent type, respond to situations impulsively, depending on their momentary state of mind. This mood is usually characterized by tolerance and an acceptance of the child's behaviors and wishes (Baldwin et al., 1945).

The last category identified in this study was the **acceptant** behavior, who also comprises three different patterns: indulgent, democratic and indulgent-democratic. Parents who adopted the indulgent type focus intensely on the children and on having a positive relationship with them. They offer their approval more often than disapproval and tend to overprotect their offsprings. The democratic pattern is characterized by flexibility and freedom, as well as understanding and respect toward childrens' beliefs and values. Criticism and guidance are basically absent from this type of behavior. The indulgent-democratic technique incorporates both previously described patterns, being child-centered and tolerant, but also democratic (offering unconditional freedom of choice to the child). Also, parents are relatively emotionally distant in order to encourage the autonomy of the child (Baldwin et al., 1945).

A known classification of parenting styles stems from Diana Baumrind (1971), who

conducted several research studies on this topic. One of her studies was undertaken with the purpose of reproducing parent-child-relationships found in two previous studies and to further discriminate between parental styles. In order to achieve these goals, several variables were examined and the parental beliefs and behaviors were measured and defined. Patterns of parenting styles were divided into three categories: authoritarian, authoritative and permissive (Baumrind, 1971).

The **authoritarian** pattern is characterized by a controlling, theologically motivated attitude of the parent. The authoritarian parent tries to restrict and dominate the development of the child, values physical and harsh punishments and represses the child's attitudes if these are not compatible with those of the parent. Also, this type of parenting style greatly appreciates order, discipline and unconditional respect towards authority, regarding the word of the parent as a universal, unquestionable law (Baumrind, 1968).

The previous pattern has a few characteristics in common with the **authoritative** parenting style, however a number of discrepancies can also be noticed: the parents use reason, rationality and power to impose their objectives and to guide the child. They share their motives with the child, reinforce communication and acknowledge the individuality and beliefs of the child, while still setting rules of proper behavior (Baumrind, 1968).

The last pattern identified was the **permissive** behavior, characterized primarily by tolerance and acceptance towards the child. The parents do not punish the child, on the contrary, they offer compassion, understanding and encouragement. The imposed rules of the household and family are explained and discussed with the child. Proper conduct and responsibilities are less valuable, while the independence of the child carries more weight. Also, the parents do not try to dominate and do not use power to impose guidelines, but rather favor rationality and open communication (Baumrind, 1968).

Years later, D. Baumrind (1991) herself expanded and modified the previously described patterns. She distinguished between authoritative, democratic, adequate, directive, non-directive and disinterested parenting styles. The identified techniques of control used by parents in these patterns were: directive, assertive, supportive and restrictive (Baumrind, 1991).

Based on Baumrind's (1968) initial classification, Maccoby and Martin (1983) expanded the three parenting styles to four, by dividing the permissive pattern into indulgent and neglectful

parenting.

They characterized the **indulgent** pattern as accepting, tolerant and with a high degree of responsivity. Also, the parent is often reserved and rarely tries to impose rules. In the **neglectful** pattern, the parents are not at all controlling, but rather dismissive, they tend not to feel any obligation towards their child and their involvement in the education of the child is minimal at best. In the **authoritative** style, their behavior is highly controlling, but also highly responsive (very similar to the pattern description of Baumrind, 1968). Furthermore, in the authoritarian pattern a high degree of control, but lower responsivity can be noticed. Parents are distant and domineering, imposing unquestionable and irrefutable rules (Maccoby & Martin, 1983).

3. Parenting stress

3.1 Parenting-related stress: terminology and definitions

Scientists and researchers throughout history have argued (and proven) that the welfare and health of adults, as well as children, can be greatly influenced by stressful events and challenging situations that they encounter in their lives (Deater-Deckard, 2004).

Parent-related stress is different from stress related to other factors or events, such as employment or social and family relationships. It can therefore be concluded that stress develops and evolves depending on its origin and triggering factors (Deater-Deckard, 2004).

Studies have stipulated that parenting stress alters parenting conduct and children's development stronger than other types of stressors (Creasey & Reese, 1996). It can be exceptionally dominant as cause and as well as consequence of the discrepancies in parenting behavior and child evolution between several families. Despite this fact, parent-related stress can sometimes clash with other types of stress and cannot be fully separated from them (Barnett, Marshall & Singer, 1992; Creasey & Reese, 1996).

Parenting stress is considered to be a normative section of the parenting part (Crnic & Booth, 1991) and it is most commonly defined as the emotional reaction to the overpowering, vast requirements of parenting. It usually arises when there is a recognized disparity between parents' expectations of the demands of parenting and the perceptions of their personal resources needed to handle these demands. These demands are various and different from each other and require adjustment of the parent to the child's many characteristics: satisfying the child's basic needs (food, shelter, security) and emotional needs (nurture, affection, consideration) (Deater-Deckard, 2004). In regard to the parents, resources needed to meet the demands of parenting could be comprised of various emotional, intellectual and physical factors and social support (Deater-Deckard & Scarr, 1996).

The majority of research studies regarding parenting stress has concentrated more on parents with difficult children or children with different disorders and behavioral problems. However, more recent findings suggest that parenting stress can affect all families at one point or another, irrespective of their resources. Also, it is considered that daily hassles and challenges could have a greater (or equal) influence on parenting-related stress than major life stressors (Creasey & Reese, 1996; Crnic & Greenberg, 1990).

Furthermore, parenting stress is considered to be highly subjective, in the sense that parents stemming from different families rate their experiences differently, regardless of the similarity between their situations. One can therefore conclude that this type of pressure can appear even if parents have all resources needed at their disposal, such as: advantageous socioeconomic status, social and emotional support, etc. (Deater-Deckard, 2004).

Parenting stress can also be defined as unpleasant feelings that occur due to the transition and adaptation to parenthood. These feelings often convert to negative emotions toward the child and the self (Deater-Deckard, 2004).

3.2 Theories of parenting stress

One known theory of parenting stress stems from Mash and Johnston (1990) and it stipulates that child traits are the most essential predictors for parenting-related stress, mentioning also the importance of environmental factors. This theory focuses more on "parent-child interactive stress" instead of general parenting stress, implying that parent-child stress impacts parent, as well as child. The perspective of the authors is that parent-child interactive stress is one component of parenting stress which results in a dispute between parent and child. According to this theory, parent characteristics (such as parental cognitions, attributions for child behavior, emotional conditions, personality, welfare) are mediating factors of the ramifications of child traits and environment stressors. The major cognitive factors that are believed to influence parenting stress mentioned by the researchers are perceptions of the graveness of child conduct, beliefs and attitudes of the parent, and the parent's impression in regard to their competence to handle the demands of child-rearing (Mash & Johnston, 1990).

The second poignant theory in current literature is that of daily hassles, which advocates the influence of day-to-day parenting challenges on the development of parenting stress (Crnic & Greenberg, 1990). This theory promotes the idea that parenting stress is not a pathological occurrence (a symptom of mental illness), but rather something that parents must tackle and deal with on a daily basis. One very important factor in coping with daily hassles is adjustment, a component which can be considered the secret to successful parenting and greatly influences if the ramifications of trivial daily hassles are negative or not (Deater-Deckard, 2004).

Given the fact that many researchers have started to adopt this theory, the interest and focus on day-to-day pressures and their impact on parenting has grown considerably (Crnic & Low,

2002). Recent findings regarding this topic have proven that everyday challenges may be one of the most powerful influencing factors of parenting stress, consequently also on child-rearing and the development of children. The repercussions of daily hassles (such as prosaic duties regarding child care and discipline, managing work-life-balance, etc.) do not appear suddenly, they actually build up over time, given the fact that they are minor and insignificant if regarded separately and compared to major life stressors (death, divorce, chronic illness) (Deater-Deckard, 2004). However, parenting stress must not be confused with everyday displeasures that every parent faces. Everyday challenges evolve from only bothersome to real stressors only if they pose a threat to the parent's identity and existence and if their consequences can be described as severe (Wheaton, 1996).

A third theory stresses the importance of extra-familial factors (such as low socioeconomic status), social stressors (divorce, marital conflict, peer conflict) and child stressors (conduct problems) on the development and evolution of parenting stress. Also, this theory argues the idea that parent traits (including parent cognitions) mediate the effects of child, interpersonal and extra-familial stressors and contribute to parenting stress (Webster-Stratton, 1990).

Another important theory in the current literature is based on Lazarus and Folkman's (1984) theory of stress, proposing two major components of parenting pressure: appraisal and coping. Therefore, it is considered that the parent's cognitive appraisal of the child's conduct and traits may cause parenting stress. However, the appraisals differ from one parent to another, depending on their own personal resources and means to handle the demands of the child. If the needs of the child are assessed as challenging or stressful, parents must cope with this type of hardship, using all resources at their disposal, such as: social support, financial status, personality, environmental factors, etc. In the case of successful coping strategies, the process of positive adaptation takes place. In this particular theory, adaptation relates to the behaviors exercised by the parents and the impact on the child's behavior (McCleary, 2002).

The last theory presented by this diploma thesis stems from Abidin in 1976 (cited in Abidin 1995), representing the most extensively analyzed and dominant theory of parenting stress (Deater-Deckard, 2004). According to this theory, there are three major components of parenting stress: a parent domain (parent traits that could contribute to parenting stress, such as: parental attachment, sense of competence, depression), a child domain (child traits that could influence parenting stress: acceptability, adaptability, demandingness, mood, hyperactivity and being reinforcing to the parent) and situational stressors (health, isolation – refers to the social support and activity of the parent –, quality of the marital relationship). All

these factors are considered to be directly related to parenting demands and responsibilities (Abidin, 1995) and could cause negative consequences in regard to parenting aspects and successfulness, such as: a decline of nurture, warmth and affection, neglect of the child, escalations in the degree of severity and harshness of disciplining techniques. Subsequently, these decrements can be causes of child abuse, aggression, family conflict, and conduct problems of the child (Deater-Deckard, 2004).

Furthermore, this theory stipulates a reciprocal effect between parent traits and child characteristics, for instance: a difficult or challenging child can cause an increase in parenting stress leading to parental pressure that can cause problems in parenting behavior, which, in turn may result in child disorderly conduct, thus further increasing parenting stress. Correspondingly however, a decrease in parenting pressure will improve the quality of parenting and (consequently) the welfare of the children (Deater-Deckard, 2004).

Abidin's theory of parenting stress has been (as previously mentioned) thoroughly discussed, researched, and has obtained recognition and reinforcement. However, further research including the biological components of the stress response is required (Deater-Deckard, 1998).

3.3 Determinants of parenting stress

While analyzing parenting stress, its development and evolution, researchers identified three main predictors in parents of ordinarily-developed children with no major issues or disorders: child factors, parent factors, contextual factors (Abidin, 1995; Östberg & Hagekull, 2000; Theule, 2010).

A. Child Factors

Child effects, are dynamic, evolve over time, and can influence parenting behavior in a large number of ways (Deater-Deckard, 2004).

For instance, internalizing and externalizing behaviors of children have been proven to influence the development of parenting stress through several studies (Anthony et al., 2005; Deater-Deckard & Scarr, 1996).

Furthermore, children's temperament and personality traits (such as confidence, self-respect, pride, social competence, agreeableness) were inversely related to parenting stress (Anthony

et al., 2005; Deater-Deckard & Scarr, 1996).

Parents who described their children as challenging, difficult, and with troubled sleeping patterns were more prone to endure parenting stress or showed higher levels of parenting stress (Gelfand, Teti & Fox, 1992; McBride, Schoppe & Rane, 2002; Östberg & Hagekull, 2000; Sepa, Frodi & Ludvigsson, 2004).

Also, parents with children with born or later developed difficulties, illnesses, and disabilities (either physical or emotional) reported increased rates of parenting stress (Deater-Deckard, 2004). Moreover, aggressive or anxious behavior in children (such as skittish, frightened children or children with poor self-control) can also cause parenting stress (Östberg & Hagekull, 2000).

Among the previously described and many other child factors, researches also studied the influence of child age on parental pressure. However, no unequivocal or forthright relation could be proven (Deater-Deckard, 2004). Few studies have found higher levels of parenting stress amidst parents with younger children (infants, toddlers) (Deater-Deckard & Scarr, 1996), but a longitudinal study found no modifications in the course of the years regarding parenting stress (Dyson, 1993).

B. Parent Factors

Researchers mostly focused on psychological welfare of mothers and maternal stress (Deater-Deckard & Scarr, 1996; Mulsow, Caldera, Pursley, Reifman & Huston, 2002; Östberg & Hagekull, 2000), proving a strong relationship between maternal depression and high levels of parenting stress (Gelfand et al., 1992). It has also been shown that personality traits of mothers, such as sociability and agreeableness can decrease maternal stress (Mulsow et al., 2002).

Researchers also concentrated on the changes brought upon the parents' well-being by the transition to parenthood. For instance, a study discovered an increase in spousal conflict right after a child was born (Lavee, Sharlin & Katz, 1996), which in turn can lead to parenting stress. It was also shown that parents who unwillingly had a child (the pregnancy of the mother was accidental and undesirable) were more open to severe disciplining and punishment techniques (Pinderhughes, Dodge, Bates, Pettit & Zelli, 2000).

Also, becoming a parent at an early age (for example in adolescence) is associated with more

stress (Richardson, Barbour & Bubenzer, 1995; Taylor & Kemper, 1998). However, parenting for the first time at an older age (over thirty) can bring forth not only health issues, but also higher levels of parenting stress, as shown by Östberg and Hagekull (2000). Regarding the issue of first-time parents at an relatively advanced age, another study showed that women who became mothers with the help of fertility treatments (such as in vitro fertilization) reported much lower levels of parenting stress than mothers of the same age or older (Hahn, 2001). It is therefore safe to assume that age alone cannot be regarded as a reliable predictor of parenting stress, without considering the influence of other factors as well (Deater-Deckard, 2004).

Regarding psychopathology in parents, studies showed that a problematical psychological health and welfare may aggravate or heighten the negative effect of challenges and stressors, thus increasing the level of parenting stress (Gelfand et al., 1992). However, the reverse ramification was also noticed. An interplay between parenting stress and psychological health issues (such as depression, anxiety disorders) was proven by several studies: mental disorders and illnesses can be predictors, as well as consequences of parenting stress (Abidin, 1995; Deater-Deckard, Scarr, McCartney & Eisenberg, 1994; Gelfand et al., 1992; Östberg, Hagekull & Wettergren, 1997).

Moreover, personality traits also play an important role as determinants of parenting stress: they may influence how a parent perceives stress, how they cope, and how they experience the demands of parenting (Deater-Deckard, 2004).

Lastly, mothers' and fathers' experience with their own parents, the level of caring and nurture that they received, can also be predictors of parenting stress (Cain & Combs-Orme, 2005).

C. Contextual determinants

Contextual determinants of parenting stress found by researchers include the pressures of day-to-day living, and social and emotional support (from friends, family, spouse, coworkers).

Challenges and daily pressures are linked to an increase in the degree of parenting stress (Crnic & Greenberg, 1990) and a shortage of social reinforcement was related to high parenting stress (Östberg & Hagekull, 2000).

Culture may also influence the formation of parenting stress, as shown in the study conducted

by Cain and Combs-Orne (2005), where differences in the appraisal and understanding of parenting stress in parents from European-American and African-American families were found.

However, another study found similarities in the experience of parental pressure in African-American parents (Reitman, Currier & Stickle, 2002), while others (although the proven effect was small) showed that African-American families reported higher levels of stress (Bhavnagri, 1999; Hutcheson & Black, 1996). Furthermore, if the child was raised in a different culture than their parent, this discrepancy could also increase the rate of parenting stress (Martinez, 2006).

The community in which the parents live and raise their children can also be considered a contextual predictor of parenting stress. Parental pressure and severe disciplining techniques are reported lower among parents who live in a supportive community and meet regularly with the members of this community (Deater-Deckard, 2004). Also, friendships and frequent interactions in the community, parental support, social activities, etc. may considerably reduce parental distress (Chan, 1994; Cowen, 2001; Mullins, Aniol, Boyd, Page & Chaney, 2002).

4. Current Research Findings

Parenting stress has been thoroughly researched throughout the years, being analyzed in relation to several factors: child behavior (and behavioral problems), child development, parental conduct, financial status, beliefs and attitudes, attachment, etc.

A study conducted by Willinger, Diendorfer-Radner, Willnauer, Jörgl and Hager (2005) examined the relationship between parenting stress and parental bonding.

Attachment is considered to be one of the most relevant predictors of later social and emotional development of an individual. The study was conducted with the purpose of examining discrepancies between maternal and paternal bonding in relation with parenting-related stress (Willinger et al., 2005). 120 mothers with the mean age of 35.6 years, 78% sharing the household with their partners and 22% living without a partner, were the representative sample. Also, 120 children (66 boys and 54 girls) with a mean age of 7.31 years were recruited. (Willinger, et al., 2005, p. 64). The instruments used to analyze the data were the Parenting Stress Index (German Version), encompassing the self-recorded level of parenting stress (Abidin, 1995; cited in Willinger, et al., 2005, p. 64) and the Parental Bonding Instrument in German (Parker, Tupling & Brown, 1979; cited in Willinger, et al., 2005, p. 64). The results showed significant differences amidst the mothers (clustered in 4 maternal and 4 paternal bonding types) in relation to parenting stress. Mothers who reported the "optimal parental bonding type" scored the lowest rates of parenting stress. The authors of the study concluded that the representation of attachment relationships may influence and contribute to the coping competence of adults regarding pressures and stressors (Willinger et al., 2005, p. 63).

However, the present thesis does not investigate child traits in relation to parenting, therefore the focus of this section lies more within studies concerning parental stress and parent conduct.

The way a parent educates their child and the child-rearing practices are believed to impact the development of the child. Also, parenting beliefs are usually homogenous with their behavior (Mowder, 2005; cited in Respler-Herman, Mowder, Yasik & Shamah, 2012, p. 190). Furthermore, parenting stress and social reinforcement determine parenting styles and practices (Belsky, 1984; cited in Respler-Herman et al., 2012, p. 190).

A study by Respler-Herman et al. (2012) examined the interaction of parenting demands and challenges that may cause pressure and social assistance in regard to parenting practices. 87

parents (97.7% biological parents; 1.1% step-parent, and 1.1.% self-identified as other) were recruited. The sample was comprised of 74.7% females and 24.1% males. To measure parenting beliefs (seven domains: bonding, discipline, education, general welfare, responsivity, sensitivity and negativity), the Parent Behavior Importance Questionnaire-Revised was used (Mowder, 2000; cited in Respler-Herman et al., 2012, p. 191). The level of parenting stress was assessed using The Parenting Stress Index-Short Form (Abidin, 1995; cited in Respler-Herman et al., 2012, p. 192) and lastly, in order to quantify parents' perceived social support, The Multidimenisonal Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988; cited in Respler-Herman et al., 2012, p. 192) was applied. The findings of the study showed that positive parenting beliefs may decrease the rates of parenting stress, while greater ratings of parenting stress were linked to less positive parental attitudes. Regarding social support, no dominant moderating effects were found (Respler-Herman et al., 2012).

Another study regarding a similar subject was conducted by Ponnet et al. (2013), who examined how stressors and assistance perceived by parents affect child-rearing practices of both parents (Ponnet et al., 2013). 223 mothers and 200 fathers from non-divorced partnerships were asked to report on different sources of stress and the quality of their spousal relationship. To asses parenting behavior, child reports (evaluating the parenting styles of their parents) from 227 children were used. The mean age of the children was 14.12 years, 106 of them were boys and 121 were girls (Ponnet et al., 2013).

The results showed significant relationships between parenting stress and demanding and responsive parenting style. Moreover, partner influences between positive aspects of spousal interaction and responsive child-rearing style were found (Ponnet et al., 2013).

Additionally, another important factor to consider in the research of parenting stress is gender. Several previous research studies have found that family characteristics and parenting behaviors are linked to parenting stress. A study by Deater-Deckard and Scarr (1996) assessed the effect of marital quality on parenting stress, but also measured the gender differences in the pressure of the parental role between both parents. 589 married couples with young children were recruited and inquired to fill out the Parenting Stress Index (short form) (Abidin, 1990; cited in Deater-Deckard & Scarr, 1966, p. 45) and various measures of assessing parenting behaviors, beliefs, but also child traits, were used. However, the results were not unequivocal. Low gender effects were found, but these were influenced by child age and marital satisfaction (Deater-Deckard & Scarr, 1996).

A similar study was conducted by Dobrowska and Pisula (2010), however the focus of this were parents of young children with autism and Down-syndrome. Throughout this examination, gender differences were found regarding parenting stress, but only in the case of parents of children with the previously named disorders. As far as the parents of normally developing children were concerned, no discrepancies between mothers and fathers (in relation to parental stress) could be found (Dabrowska & Pisula, 2010).

5. Objectives and hypotheses

5.1 Objectives of the study and research questions

The present study was part of the project "Parenting and Parenting Stress" conducted by the Department of Neurology of the Medical University of Vienna and its aim was to research relationships between the following important aspects: parenting behavior, parenting stress and parent-child-relationship in a representative sample of parents. In addition, the difference between perceived parental stress between fathers and mothers was assessed. The study was conducted in collaboration with Alexandra Raspop, whose main point was the correlation between parenting stress and parent-child-relationship, whereas the present thesis focused on the relationship between parenting stress and parenting behavior.

The main research question that was addressed throughout this study regards the relationship between parenting behavior and parenting stress. Previous studies have shown significant relationships between parental strain and parenting styles (Ponnet et al., 2013), correlations between parenting stress and parenting beliefs and perceptions (Respler-Herman et al., 2012,) and also a reciprocal effect between parenting pressure and parenting behavior has been found (Mackler et al., 2015), all relationships which were also examined within the present diploma thesis.

A second relevant research question investigated in this study is the one regarding gender differences in parenting stress. Studies have not found straightforward results on this subject. For instance, it has been shown that mothers of autistic children experience greater levels of parenting stress than fathers, but the same effects could not be found in parents of children who developed ordinarily (Dabrowska & Pisula, 2010). Furthermore, some gender effects regarding parenting stress were found, but these were mediated by marital relationship and child characteristics (Deater-Deckard & Scarr, 1996). A study also found that parenting stress in mothers rises with the passing of time, while fathers' stress tends to remain constant (Gerstein, Crnic, Blacher & Baker, 2009). Considering these conflicting results, the present study conducted an examination of gender differences in regard to parenting stress of mothers and fathers.

In addition to these two important research questions, the study also assessed gender differences regarding the general stress experience and coping strategies between mothers and fathers on the basis of the results of Matud (2004), whose findings showed that trivial regular

stress factors and continuous stress are higher in women and that men and women differ in the techniques they use in order to cope with stress.

5.2 Hypotheses

- **Correlation hypotheses:**

H1,1: There is a significant relationship between the global parenting stress (PSI Total Score) and parents‘ tendency towards overreaction (EFB_ÜR).

H1,2: There is a significant relationship between the global parenting stress (PSI Total Score) and parents’ tendency towards laxness (EFB_NS).

H1,3: There is a significant relationship between the global parenting stress (PSI Total Score) and parents’ tendency towards verbosity (EFB_WS).

H1,4: There is a significant relationship between the global parenting stress (EBSK) and parents‘ tendency towards overreaction (EFB_ÜR).

H1,5: There is a significant relationship between the global parenting stress (EBSK) and parents‘ tendency towards laxness (EFB_NS).

H1,6: There is a significant relationship between the global parenting stress (EBSK) and parents‘ tendency towards verbosity (EFB_WS).

H1,7: There is a significant relationship between the perceived global parenting stress (PSI Total Score) and the total parental pressure (EBSK).

H1,8: There is a significant relationship between parental characteristics (PSI Parent Domain) that may contribute to overall parenting stress and the total parental pressure (EBSK).

H1,9: There is a significant relationship between child characteristics that may contribute to overall parenting stress (Psi Child Domain) and the total parental pressure (EBSK).

- **Differential hypotheses:**

H1,10: There is a significant difference in the perceived life stress between mothers and fathers (Life Stress PSI).

H1,11: There is a significant difference in the overall parenting stress between mothers and fathers (PSI Total Score).

H1,12: There is a significant difference between the child characteristics assessment of mothers and fathers (Child Domain PSI).

H1,13: There is a significant difference between parental characteristics (that contribute to overall stress) between mothers and fathers (Parent Domain PSI).

H1,14: There is a significant difference between the current perceived total stress (SCI_Total_Stress) between mothers and fathers.

H1,15: There is a significant difference in physical and psychological stress symptoms (SCI_Symptoms) between mothers and fathers.

H1,16: There is a significant difference in coping strategies(SCI_Coping) between mothers and fathers.

II. Empirical Section

6. Methods

6.1 Examination plan and intended sample

As previously mentioned, this study was conducted in collaboration with my colleague Alexandra Raspop, who handled a different focal point. The purpose of this diploma thesis is to examine the relationship between parenting stress and parenting behavior, as well as the difference between mothers and fathers regarding parenting stress.

To investigate the previously described research questions, 134 parents (67 mothers and 67 fathers) of children with the age between 5 and 10 years, with German as their first language, were proposed to be the representative sample. However, before the collection of the data can be executed, a proposal of the present thesis and its aims should be presented to the Ethical Committee of the Medical University of Vienna. Only after receiving the approval from this committee can the study be conducted.

The collection of the data is planned from May to September 2015. The parents are required to sign a written informed consent regarding their participation in the research project and they should be recruited in leisure organizations (e.g. cultural organizations, scouting associations). Furthermore, parents should fill out a socio-demographical questionnaire regarding themselves and their children.

Anonymity and confidentiality regarding the answers of the parents and the collected data should be ensured. Moreover, each instrument and examination document should be labeled with a code for each test person.

6.2 Survey instruments

6.2.1 Parenting Stress Index

The Parenting Stress Index was designed for use with parents of children of three months to twelve years of age. Its underlying assumptions are that both child and parent characteristics contribute to stress in the interaction. The instrument consists of 120 items that assess three major domains of stress: life stress, child domain and parent characteristics. It is appropriate for the assessment of parenting stress across several cultures due to the reliability and validity

of the test. The answer format consists of a five degree rating scale: strongly agree, agree, not sure, disagree, and strongly disagree for the parent and child domain. As for the life stress scale, the answer format is comprised out of two choices: yes or no (Abidin, 1995).

The German version of the Parenting Stress Index was chosen to examine the parental pressures in the present diploma thesis due to the fact that it comprises the most important determinants of parenting stress (according to the previously described literature): child and parent characteristics and stressful life events (Abidin, 1995; Willinger et al., 2005).

The **Child Domain** was designed to examine child characteristics that may cause parenting stress and it is comprised of six subscales: Distractibility/Hyperactivity (DI), Adaptability (AD), Reinforces Parent (RE), Demandingness (DE), Mood (MO), and Acceptability (AC).

The first subscale of this domain is the **Distractibility/Hyperactivity (DI)**, which includes child conduct traits that may be considered manifestations of attention-deficit/hyperactivity disorder. Item example: *My child appears disorganized and is easily distracted* (Abidin, 1995).

The next subscale is **Adaptability (AD)**: examines the capacity of the child to adapt according to the environment. Item example*: My child reacts very strongly when something happens that my child doesn't like* (Abidin, 1995).

The subscale **Reinforces Parent (RE)** determines if the parent's relationship with the child is positively reinforcing. Example: *My child rarely does things for me that make me feel good* (Abidin, 1995).

Demandingness (DE) investigates the opinion of the parent regarding the requirements of the child. Item example: *My child has had more health problems than I expected* (Abidin, 1995).

Mood (MO) relates to the current emotional state of the child. Example: *I feel that my child is very moody and easily upset* (Abidin, 1995).

The last subscale of the Child Domain is **Acceptability (AC)**, which examines the discrepancy between parents' expectation of their child and the reality: *My child is not able to do as much as I expected* (Abidin, 1995).

The **Parent Domain** was developed to examine parent traits that may cause stress and it is comprised of seven subscales:

The first one is **Competence (CO)**, which investigates the parents' perception of their own capability to parent a child. Item example: *Being a parent is harder than I thought it would be* (Abidin, 1995).

The second one, **Isolation (IS)**, relates to the parents' social network and support. Example: *I feel alone and without friends* (Abidin, 1995).

Attachment (AT) determines the quality of the parent-child-relationship and the parents' capacity to recognize the child's requirements and to respond accordingly. Item example: *It takes a long time for parents to develop close, warm feelings for their children* (Abidin, 1995).

Health (HE) investigates the relation between the parents' physical health and global parenting stress: *Physically, I feel good most of the time* (Abidin, 1995).

Role Restriction (RO) examines the parents' perception of loss of freedom and individuality due to parenthood. Item example: *It is hard to find a place in our home, where I can go to be by myself* (Abidin, 1995).

Depression (DP) determines the parents' current emotional state: *When I think about the kind of parent that I am, I often feel guilty or bad about myself* (Abidin, 1995).

The last subscale is **Spouse/Parenting Partner Relationship (SP)**, which investigates the parents' opinion regarding the received support from their partner. Item example: *Since having my last child, I have had less interest in sex* (Abidin, 1995).

Lastly, The **Life Stress** scale offers information regarding challenging events and occurrences independent of the parent-child relationship, but which may contribute to the development of parenting stress. The parents are required to confirm or deny if they have experienced any of the following life events during the past year. Examples: *divorce, marital reconciliation, marriage, separation, pregnancy* (Abidin, 1995).

6.2.2 Eltern Belastungs Screening Test zur Kindeswohlgefährdung

The instrument **„Eltern Belastungs Screening Test zur Kindeswohlgefährdung**" (EBSK) is an empirically derived self-report questionnaire designed to provide an estimate of parental risk in suspected cases of child physical abuse and it is now used as a risk screening tool in a

variety of settings and in efforts to evaluate child abuse prevention programs (Deegener et al., 2009).

The EBSK is based on the Child Abuse Potential Inventory (CAPI), the most used screening instrument worldwide for the assessment of risk factors that may cause child abuse (Milner, 1990; cited in Deegener et al., 2009; Wells, Crouch, Schubert, Irwin, Risser & Skowronski; 2010). However, as opposed to the CAPI, EBSK does not only examine risk factors, it can also assess the global parental stress that may lead to harmful behavior towards the child (Deegener et al., 2009).

The instrument is comprised of 63 items and four scales, with a dichotomous answer format.
The **Stress Scale** includes 47 items, which examine the global parental stress and its consequences, such as depression, aggression, anxiety, etc. Also, this scale is used to measure the parents' expectations towards their child, social relationship and support, emotional instability of the parent, lack of satisfaction, feelings of loneliness, and abnormal relationships within the family (Deegener et al., 2009).
Item examples:
I have a child who often gets himself/herself into difficult situations.
I often feel rejected.
My family has trouble getting by. (Wells et al., 2011; Deegener et al., 2009).

The other 3 scales are validity scales and examine the answer tendency of the participants. The first one is the **Dishonesty Scale**, comprised of 5 items which indicate if the participants have been dishonest due to social desirability. Item example: *I never get angry with other people* (Wells et al., 2011; Deegener et al., 2009).

Another validity scale is the **Randomness Scale**, which includes 8 items that indicate the randomness of answers, such as: *A child who screams will never be happy* (Wells et al., 2011; Deegener et al., 2009).

The last validity scale is called **Inconsistency Scale**, which comprises 6 item pairs (some of which also belong to the Stress Scale), meant to indicate inconsistent responses. Example: *I laugh almost every day. Versus I don't laugh a lot* (Wells et al., 2011; Deegener et al., 2009).

6.2.3 Erziehungsfragebogen

The **Erziehungsfragebogen** was designed to assess parental discipline strategies and it was adapted from The Parenting Scale (Arnold, O'Leary, Wolff & Acker, 1993; cited in Naumann et al., 2010). It is a 35-item self-assessment scale in which parents are asked to rate their probabilities of using specific discipline strategies in response to various child misbehaviors or in different challenging situations. The items and their answers are bipolar and allow an assessment on a seven-step response scale, while the endpoints depict the effective versus ineffective parenting behavior in a given situation (Naumann et al., 2010).

This instrument comprises three scales regarding parental discipline strategies: Overreaction, Laxness, and Verbosity (Naumann et al., 2010).

The **Overreaction** scale (10 items) records the parental response such as anger, aggression, and irritability. Example of item: *I handle things without getting upset* (= 1) *I get so frustrated or angry that my child can see I'm upset* (= 7) (Arnold et al., 1993; Naumann et al., 2010).

The **Laxness** scale (11 items), on the other hand, captures the over-indulgent parenting behavior and the excessive tolerance regarding rule violations by the child. For instance*: If my child gets upset, I stick to what I said* (=1) versus *I back down and give in* (=7) (Arnold et al., 1993; Naumann et al., 2010).

The **Verbosity** scale (7 items) assesses inappropriate parenting conduct, such as insulting or offending the child, negotiating, and long speeches held by the parent. Item example: I keep my talks short and to the point (=1) versus I give my child a long lecture (=7) (Arnold et al., 1993; Naumann et al., 2010).

Regarding the quality criteria of this instrument, one can assume that the objectivity is given, due to the standardized execution, analysis, and interpretation of the test. Furthermore, an internal consistency of $\alpha = .80$ was proven (Arnold, et al., 1993; Hanisch et al., 2006).

6.2.4 Stress Coping Inventory

The **Stress Coping Inventory** measures stress, stress symptoms and stress coping strategies. This survey views stress as being caused by subjective assessments, regardless of whether a negative event really occurred. On one hand, it indicates situation assessments as unsafe,

threatening or hopeless. On the other hand, it analyzes various types of stress management. The method contains 10 scales with 54 items that are to be rated with seven- respectively four-point Likert response scales (Satow, 2012).

The first three scales, Stress caused by Insecurities, Stress caused by Excessive Demands, and Stress caused by Loss and actual negative Life Events comprise the current perceived Total Stress of the individual (Satow, 2012).

The scale **Stress caused by Insecurities** is comprised of 7 items, which show a positive value for internal consistency (α=.72), as well as Split-Half reliability (L4=.71). The participants are asked (through a leading question) to rate (on a Likert scale from 1 to 7, 1 being the lowest and 7 being the highest degree of uncertainty) how safe or uncertain they felt in the last 3 months, regarding different insecurities, such as: financial issues, employment, education, health, social network, partnership and important life goals (Satow, 2012).

The 7 items of the scale **Stress caused by Excessive Demands** has also obtained a satisfactory value for Split-Half reliability (L4=.69), as well as internal consistency (α=.69). This scale also begins with a preliminary question, requiring participants to rate (on a Likert scale from 1 to 7, 1 being the lowest and 7 being the highest degree of strain) how burdened or pressured they have felt in the last 3 months in regard to different demands, such as: financial issues, house hunting, employment, expectations from families, friends and life partner, health issues, and individual demands and expectations (Satow, 2012).

The third scale (and the last one regarding the current perceived total stress of the individual) also contains 7 items with adequate values of Split-Half reliability (L4=.74) and internal consistency (α=.69). This scale, called **Stress caused by Loss and actual negative Life Events,** examines the degree of perceived strain by the individual regarding negative incidents that have occurred in the last 3 months. For instance: significant financial loss, loss of employment, residence, friends, family members, and life partner, health issues, and failure in important areas of life. The participants are asked to rate the degree of current strain on a Likert scale from 1 to 7 (Satow, 2012).

In order to determine the value of the global pressure, the scores of the 3 previously described scales are gathered. Furthermore, the scale **Total Stress** yields very good values for reliability (α=.82; Guttman Split-Half: 0.80) (Satow, 2012).

The next important scale of the SCI examines physical and psychological **Symptoms of Stress** and it is comprised of 13 items (α=.86). Here, the participants are asked to rate 13 affirmations on a Likert scale from 1 to 4 (1= completely disagree; 4=completely agree).
Item examples: *I don't sleep well; I often experience headaches* (Satow, 2012).

The last scale, **Coping Strategies**, is comprised of 4 subscales which examine positive coping strategies and one subscale regarding a negative strategy. The instruction for the participants is identical with the instruction for the scale Symptoms of Stress and the items of the subscales are offered randomly (Satow, 2012).

The first subscale is **Positive Thinking**, with a reliability value of α=.74. It is comprised of 4 items registering the attitudes of the individual regarding stress.
Item example*: I consider stress and pressure to be positive challenges* (Satow, 2012).

The next subscale is comprised of 4 items, with a satisfactory value for reliability (α=.74) and it investigates **Active Stress Coping Strategies**.
Item example: *I try to avoid stress beforehand* (Satow, 2012).

The subscale **Social Support** also includes 4 items, achieving an outstanding reliability value of α=.88. It examines the individual's perceived support (emotional or otherwise) from family members, friends, and partner.
Item example: *When I am under pressure, I have people around me that help me.*
When I am under pressure, I receive support from my partner or a good friend (Satow 2012).

The last subscale regarding positive coping strategies comprises, like the previous ones, 4 items and it also shows a good internal consistency value (α=.78). It examines the individual's **Support trough Faith**.
Item example: *Prayers help me cope with stress and threats* (Satow, 2012).

The last scale of the test examines negative stress coping strategies: **High Alcohol and Cigarette Consumption**. The reliability value of this scale is α=.75. Item example: *When I'm under a lot of pressure, I smoke a cigarette (*Satow, 2012).

7. Examination

7.1 The Examination Process

The examination started in June 2015 (instead of May 2015, as originally planned), due to the fact that the study was approved by the Ethics Committee of the Medical University of Vienna at the beginning of May 2015.

The participants were recruited in leisure organizations, but also trough acquaintances who introduced me and my colleague (Alexandra Raspop) to friends, coworkers, family members, etc. The recruitment was based on the native language (German) and, as an essential requirement, on the age of the participants' children (ages 5 to 10).

The recruitment process proved to be harder than anticipated. A lot of parents refused to participate in the study due to the fact that they considered the instruments to be too complex and time-consuming (the estimated examination time was 2 hours). Furthermore, most of the parents were employed and preferred to spend the time outside of the workplace with their family. Therefore, we had to extend our examination timeline from September to October.

Moreover, during the examination process it became increasingly obvious that there was a high discrepancy in the distribution of genders (mothers proved to be more inclined to participate in the study than fathers). Thus, my colleague Alexandra Raspop and I, concentrated more on finding male participants throughout the second half of the process to try and balance the gender distribution.

The location of the examination varied according to the preferences of the participants. Due to their initial reticence regarding the participation to the study, we decided that the choice of the location should be theirs, in order to assure their comfortability. Therefore, the inquiry took place in the homes of the participants, as well as in our homes.

Furthermore, every examination began with a short verbal explanation of the background, purpose and extent of the study, an assurance of anonymity and confidentiality, followed by an information sheet with more details and a declaration consent which every participant was required to sign. Subsequently, if the parents had no questions (with the mention that the survey could be interrupted at any given time for further questions and clarifications or even permanently, if needed) the examination could begin.

First, the parents were asked to fill out a **socio-demographic questionnaire** regarding information about themselves and their children, such as: age, gender, education, relationship status, etc. Thereafter, the sequence of the instruments took place as follows:

1. Parenting Stress Index
2. Stress and Coping Inventory
3. Child Behavior Checklist
4. Parent-Child Relationship Inventory
5. Eltern-Belastungs-Screening zur Kindeswohlgefährdung
6. Erziehungsfragebogen

Due to the relatively long duration of the examination, the participants were naturally offered the opportunity to take a break as often as they liked, although most of them did not require it.

The initially proposed sample of 134 participants was not achieved. 120 mothers and fathers engaged in the study, but 4 of them were eliminated from the data set due to the fact that their children exceeded the required age (5 to 10 years). Therefore, the final sample was comprised of 116 participants.

7.2 Sample description

7.2.1 Parents

7.2.1.1 Gender distribution

Overall, 116 parents participated in the study: 66 were female (56,9%) and 50 (43,10%) were male (Table 1).

Table 1 Gender distribution for parents participants:

Frequencies

		Frequencies	Percentage
Valid	Female	66	56,9
	Male	50	43,1
	Total	116	100,0

Table 2 Gender distribution: Chi-squared test

	Gender
Chi-Square	2,207
Df	1
Asymptotic Significance	,137

In order to verify the uniform distribution of parents' gender, a Chi-squared test was performed. The results showed that the gender is evenly distributed: χ^2 (1, N=116) =2,207, p=.137.

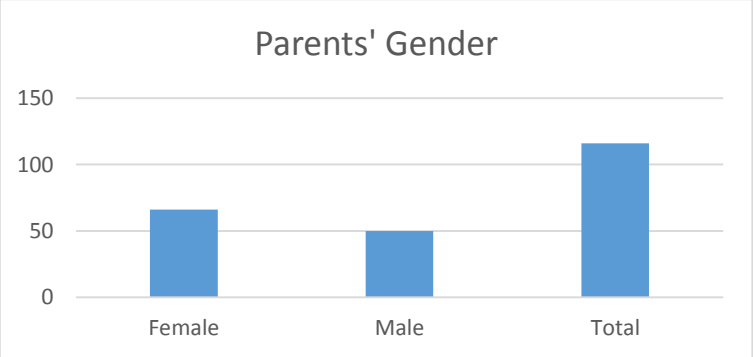

Figure 3 Frequencies of gender in the parents sample

7.2.1.2 Age Groups

The participants were between 25 and 65 years old, with a mean age = 39.22 and a standard deviation = 6.81. The distribution between age groups is described in Figure 4 and Table 3:

Table 3: Frequencies of age groups within parent sample

		Frequencies	Percentage
Valid	25-35	34	29,3
	36-45	64	55,2
	46-55	16	13,8
	56-65	2	1,7
	Total	116	100,0

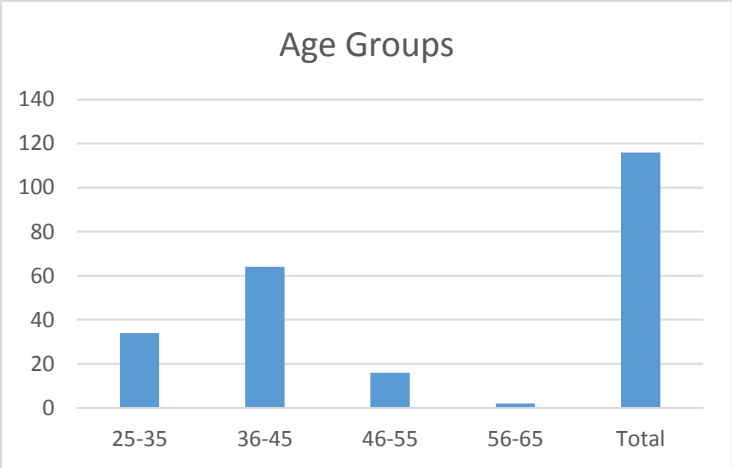

Figure 4: Frequencies of age groups

A Chi-Squared test was also performed to prove the distribution of age groups within the parents' sample. The results show that age is not evenly distributed within the sample: χ^2 (3, N=116) = 74,069; p=.001.

Table 4 Distribution of age groups within parent sample

	Age Groups
Chi-Square	74,069
Df	3
Asymptotic Significance	,001

Furthermore, a cross tabulation of gender and age groups within the parents sample was conducted. The results showed that the majority of males, as well as females, were between 36 and 45 years old. There exists no significant difference between the number of males and females regarding age groups (table 6 and figure 5).

Table 5: Cross tabulation of gender and age groups

		Age Groups				Total
		25-35	36-45	46-55	56-65	
Gender Parents	Female	20	37	8	1	66
	Male	14	27	8	1	50
Total		34	64	16	2	116

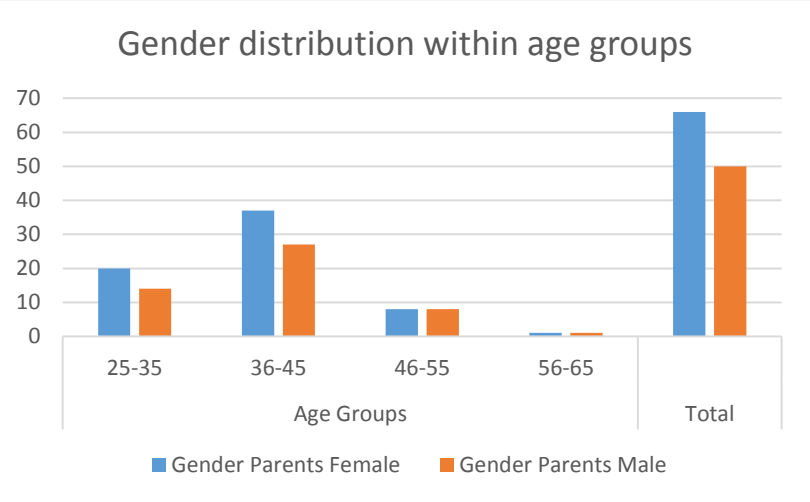

Figure 5: Gender distribution within age groups among parent sample

Table 6: Distribution of gender within age groups among parent sample

	Gender within Age Groups
Chi-Square	,422
Df	3
Asymptotic Significance	,936

7.2.1.3 Parents' highest degree of education

On the basis of the participants' answers, it was established that more than half of the sample (56%) had graduated from university. The distribution and frequencies will be shown in the subsequent figure 6. Moreover, a Chi-squared test was conducted and it was established that

the highest degree of education was not evenly distributed among the parent sample, as shown in table 7: χ^2 (3, N=116) = 264,638; p=.001.

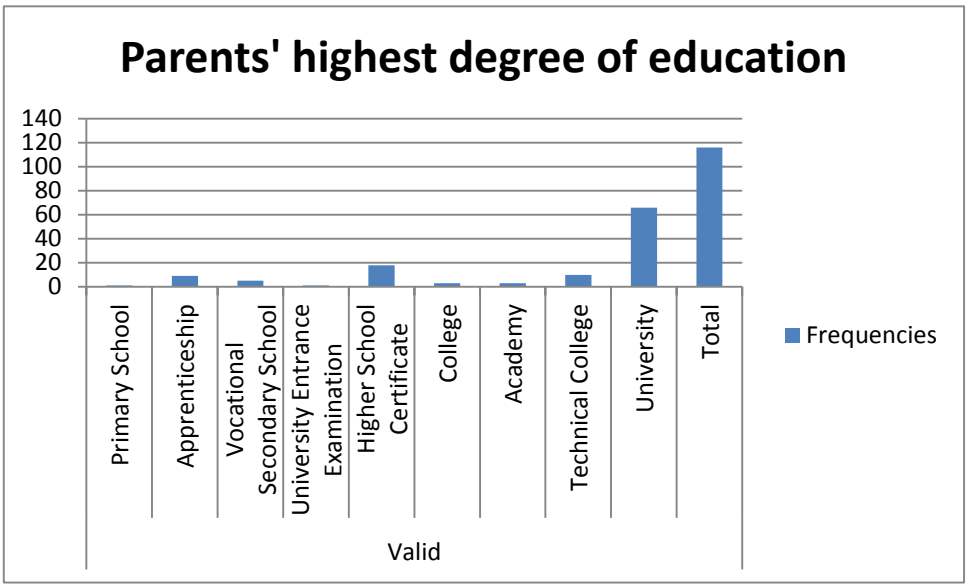

Figure 6: Frequencies of parents' highest degree of education

Table 7: Chi-Squared test for parents' highest degree of education

	Highest degree of education
Chi-Square	264,638
Df	3
Asymptotic Significance	,001

7.2.1.4 Number of children in household

The frequencies of number of children in household was also calculated, showing that the majority of parents (57,8%) had one child in their home. Moreover, a small percentage of 2,6% did not share the household with their child.

Table 8: Frequencies of number of children in the household

		Frequencies	Percentage
Valid	0	3	2,6
	1	67	57,8
	2	45	38,8
	3	1	,9
	Total	116	100,0

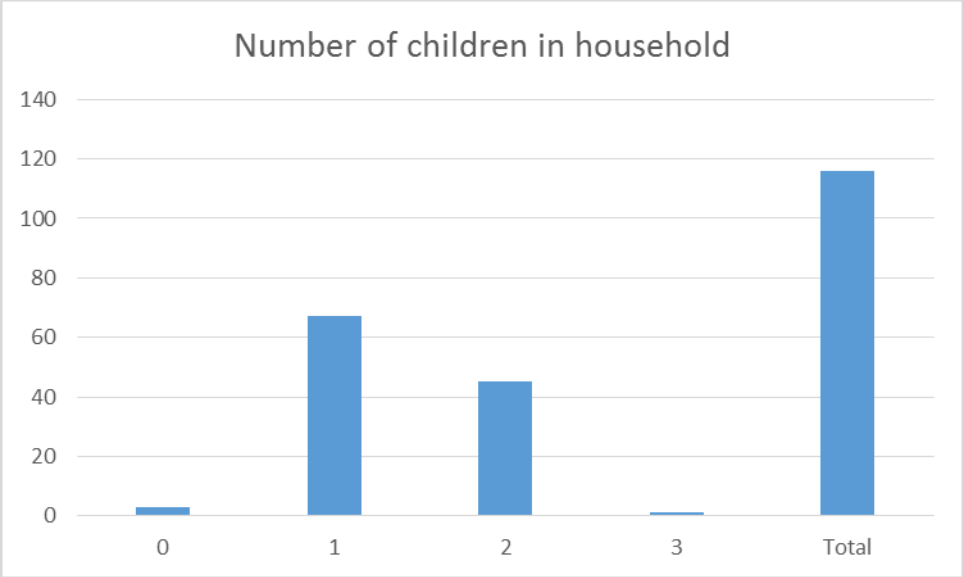

Figure 7: Frequencies of number of children in household

Furthermore, a Chi-squared test was conducted to determine the distribution of the number of children in the household. The result was significant, thus showing an uneven distribution: χ^2 (3, N=116) = 108,966; p=.001.

Table 9: Chi-squared test for number of children in household

	Number of children in household
Chi-Square	108,966
Df	3
Asymptotic Significance	,001

7.2.2 Children

The parents who participated in the study were asked to complete a socio-demographic questionnaire regarding their children. Subsequently, the collected data will be presented.

7.2.2.1 Gender distribution

Out of the 116 children described by their parents, 56 (48,3%) were female, while 60 (51,7%) were male.

Table 10: Frequencies for gender of children

		Frequencies	Percentage
Valid	Female	56	48,3
	Male	60	51,7
	Total	116	100,0

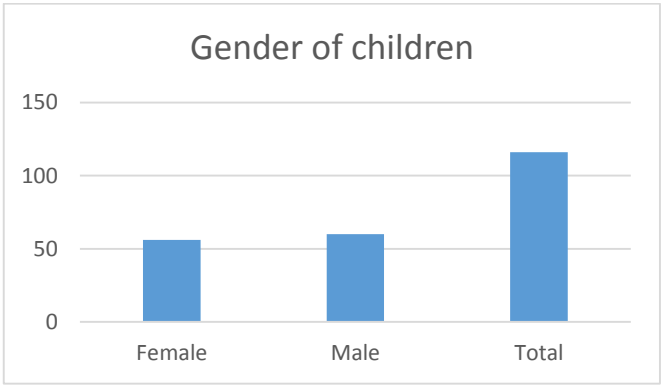

Figure 8: Frequencies of children's gender

A Chi-squared test was performed regarding the distribution of gender within the children sample and the results showed an even distribution: χ^2 (1, N=116) = .138, p=.710.

Table 11: Chi-squared test for gender of children

	Gender
Chi-Square	,138
Df	1
Asymptotic Significance	,710

7.2.2.2 Age of children

One of the requirements for the parents to participate in the study was the age of their children: children were aged between 5 to 10 years, with a mean age of = 7.74 and a standard deviation of = 0.52. The majority of the children were 7 years old (24,1%).

Table 12: Frequencies of children's age

		Frequencies	Percentage
Valid	5	7	6,0
	6	20	17,2
	7	28	24,1
	8	21	18,1
	9	21	18,1
	10	19	16,4
	Total	116	100,0

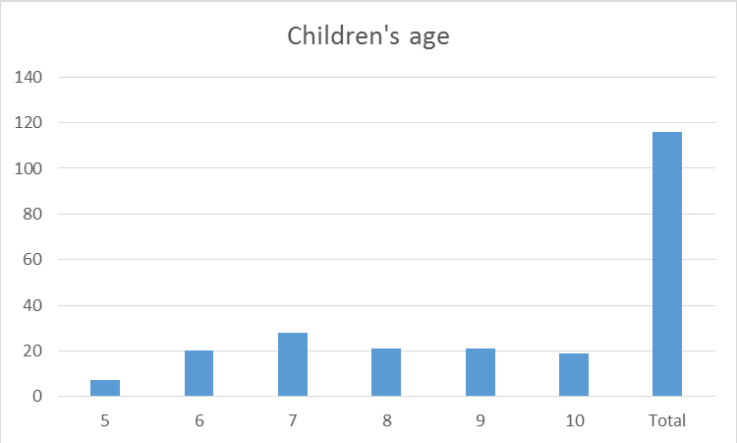

Figure 9: Frequencies of children's age

Moreover, the distribution of the age within the children sample was verified with a Chi-square test. The p value was significant (p=.034), showing that the age is not equally distributed: χ^2 (5, N=116)= 12, 069.

Table 13: Chi-squared test of children's age

	Age
Chi-Square	12,069
Df	5
Asymptotic Significance	,034

In addition, a cross tabulation of gender and age within the children sample was executed, showing that the majority of females were 7 years old, while the majority of males were 6 years old.

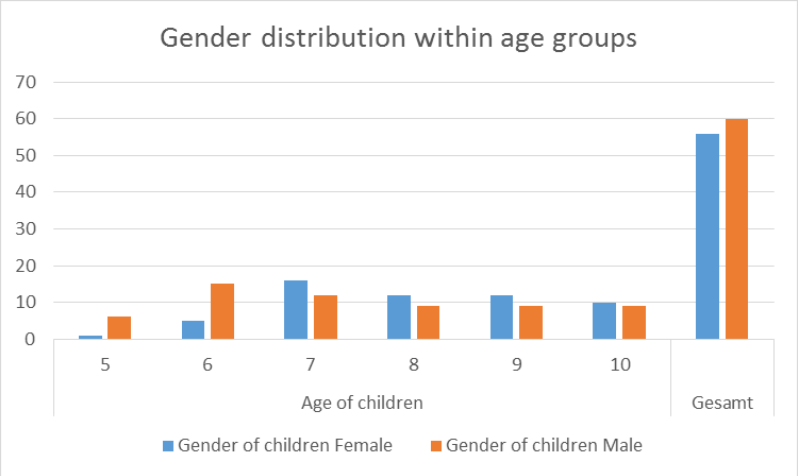

Figure 10: Cross tabulation of gender within age groups

In order to verify the distribution of gender within age groups, a Chi-squared test was executed. The results showed that an equal number of males and females can be found within the age groups: $\chi 2$ (5, N=116) = 9,927, p=.077.

Table 14: Chi-squared test for gender distribution within age groups among children sample

	Gender within Age Groups
Chi-Square	9,927
Df	5
Asymptotic Significance	,077

7.2.2.3 Number of siblings

The socio-demographic questionnaire also regarded the number of siblings the child has, if any. The collected data showed that 39,7% children from the sample had siblings, while the remaining 60,3% were only children. The detailed number of siblings will be presented in the following figures and tables:

Table 15: Frequencies for number of siblings of the children

		Frequencies	Percentage
Valid	1	42	36,2
	2	2	1,7
	3	1	,9
	7	1	,9
	Total	46	39,7
Missing	System	70	60,3
Total		116	100,0

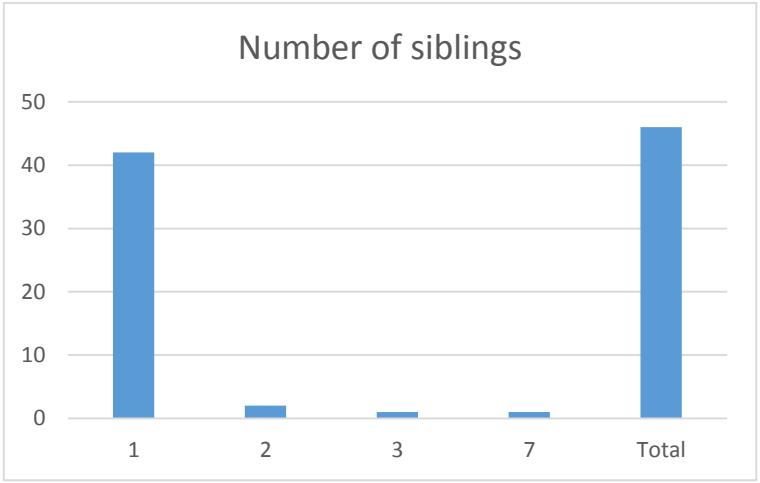

Figure 11: Frequencies of number of siblings

A Chi-squared test (table 16) showed an uneven distribution: χ^2 (3, N=116) = 107,913; p=.001. Therefore, there is a significant difference in the number of siblings among children sample.

Table 16: Chi-squared test for the distribution of number of siblings

	Number of siblings
Chi-Square	107,913
Df	3
Asymptotic Significance	,001

7.2.2.4 Current educational level of the child

The data collected from the socio-demographic questionnaire showed that 71,6% of the children are currently visiting primary school, while 11,12% are still in kindergarten.

Table 17: Frequencies of the current educational level of the child

		Frequencies	Percentage
Valid	Kindergarten	13	11,2
	Nursery School	3	2,6
	Special education school	2	1,7
	Primary School	83	71,6
	General School	1	,9
	Secondary School	14	12,1
	Total	116	100,0

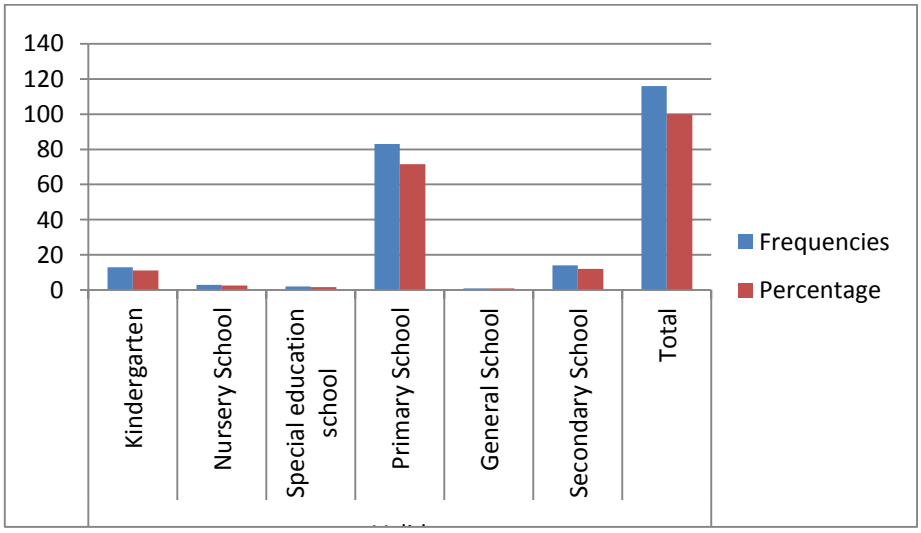

Figure 12: Frequencies of current educational level of the child

Lastly, the distribution of educational level among children was verified using a Chi-squared test. With a value of χ^2 (5, N=116) = 259,931 and p=.001, the results were not significant, showing a distinct difference in the distribution.

Table 18:Chi-squared test for current educational level of the child

	Current education level of the child
Chi-Square	259,931
Df	5
Asymptotic Significance	,001

7.3 Analysis Methods

In order to answer the research questions previously explained, descriptive statistics, t-tests, correlations, and one-way multivariate analysis of variance were conducted, using IBM SPSS Statistics Version 20. Furthermore, to calculate frequencies and distributions among the sample, descriptive statistics and Chi-squared tests were executed.

For all calculations, a significance level of 5 percent was assumed.

Bivariate Correlations: measure the strength of a relationship between two variables, with a value that can vary from 1 to 0. In the present diploma thesis, bivariate correlations were used to verify the correlation hypotheses (relationships between parenting stress and parenting styles, such as: overreaction, laxness, and verbosity). Both the Pearson correlation coefficient, as well as the Spearman correlation coefficient were used, depending if the assumptions were fulfilled or not (Field, 2013).

The Pearson product-moment correlation coefficient is the most common measure of correlation and it shows the linear relationship between two sets of data. The most important assumption for this correlation is the normality of the data (normal distribution). In some cases, this assumption was not fulfilled and the Spearman correlation was used. The Spearman correlation is a parameter-free measure of correlations and it can be used if the assumptions have been violated (Bortz & Döring, 2007).

Wilcoxon-Mann-Whitney-test (U-test) and t-test: the t-test is a parametric test which can be used to examine the difference between two group means. In the present diploma thesis the t-test and U-test were used to verify the differential hypotheses (differences regarding parenting stress, current perceived total stress, and symptoms of stress between mothers and fathers) depending on the assumptions. The t-test assumes the distribution to be normal and that the data be measured at least at the interval level (Field, 2013).

In some cases in the present diploma thesis, the assumptions for the t-test were violated and the (U-test) was conducted instead. The U-test is a non-parametric statistical test (it does not require a normal distribution) and it is used to verify the significance of the correspondence or consistency between two distributions (Bortz, 2006).

One-way multivariate analysis of variance (MANOVA) is applied to verify if there are discrepancies between independent groups on more than one continuous dependent variable. The assumptions for MANOVA are: independence, random sampling, multivariate normality and homogeneity of variances (Field, 2013).

Chi-Squared Tests: were applied to verify the distribution of gender, age, etc. within the sample and in the present diploma thesis the results of these tests were used for the sample description.

8. Results

8.1 Descriptive results of the survey instruments

8.1.1 Parenting Stress Index

The Parenting Stress Index is comprised of: Total Score, Parent Domain, Child Domain, and Life Stress.

Parenting Stress Index Total Score:

116 cases were obtained for the calculation of the PSI Total Score (M =354,28, Standard Deviation = 38,14). Furthermore, obtained values ranged between 245 and 435, as shown in table 15 and figure 13.

Table 19: Statistical Values PSI Total Score

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
PSI Total Score	116	0	354,2845	38,14339	-,431	245,00	435,00

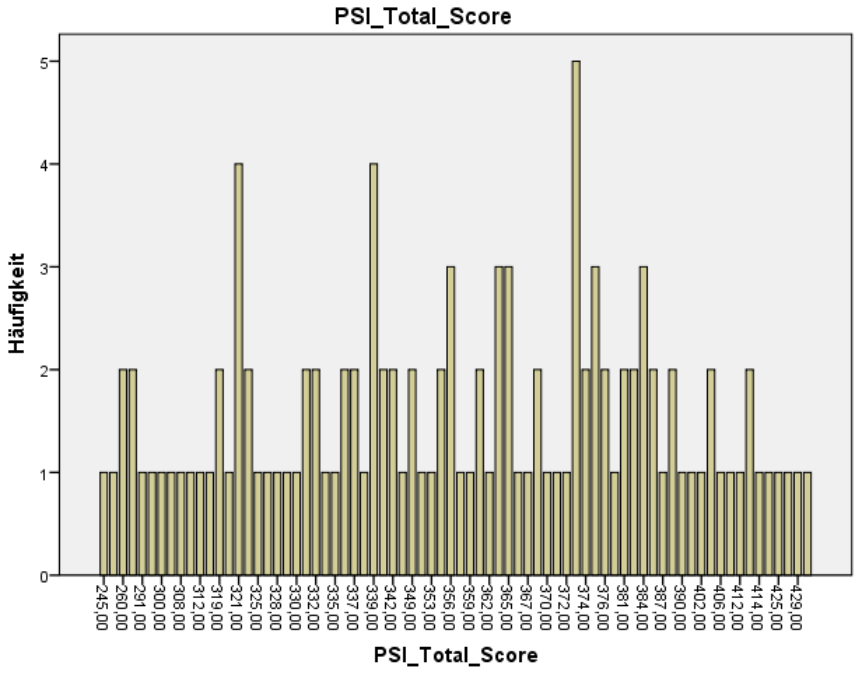

Figure 13: Frequencies PSI Total Score within the sample

Parenting Stress Index Parent Domain:

On the scale Parent Domain, 116 valid cases were gained and a M= 186,319 and SD= 22,77 were calculated, with a Minimum of 111 and a Maximum of 234, illustrated in Table 16 and figure 14.

Table 20: Statistical Values PSI Parent Domain

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
PSI Parent Domain	116	0	186,319	22,7713	-0,389	111,00	234,00

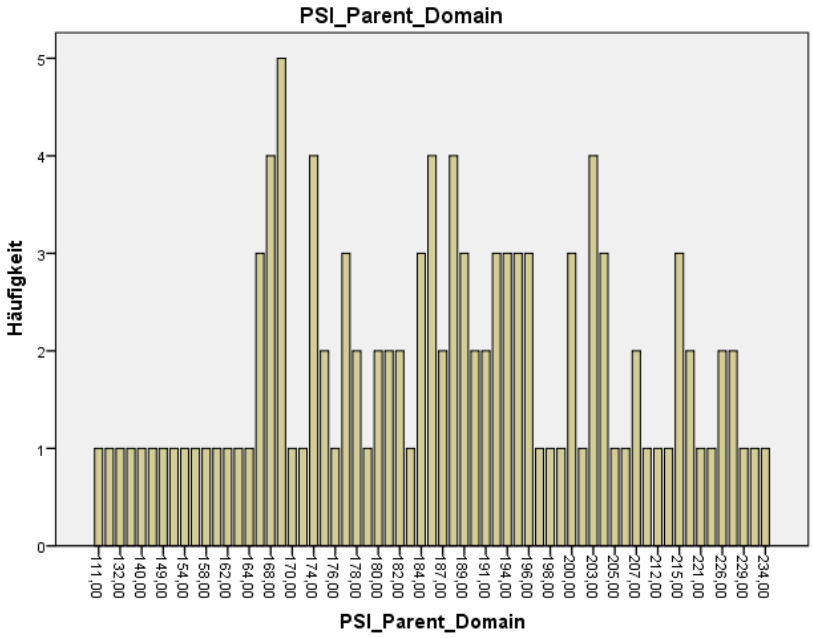

Figure 14: Frequencies PSI_Parent_Domain within the sample

Parenting Stress Index Child Domain:

The statistical values obtained for the scale Child Domain are illustrated in table 17 and the frequencies are shown in figure 15.

Table 21: Statistical Values PSI Child Domain

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
PSI Child Domain	116	0	167,9655	17,60728	-,547	109,00	201,00

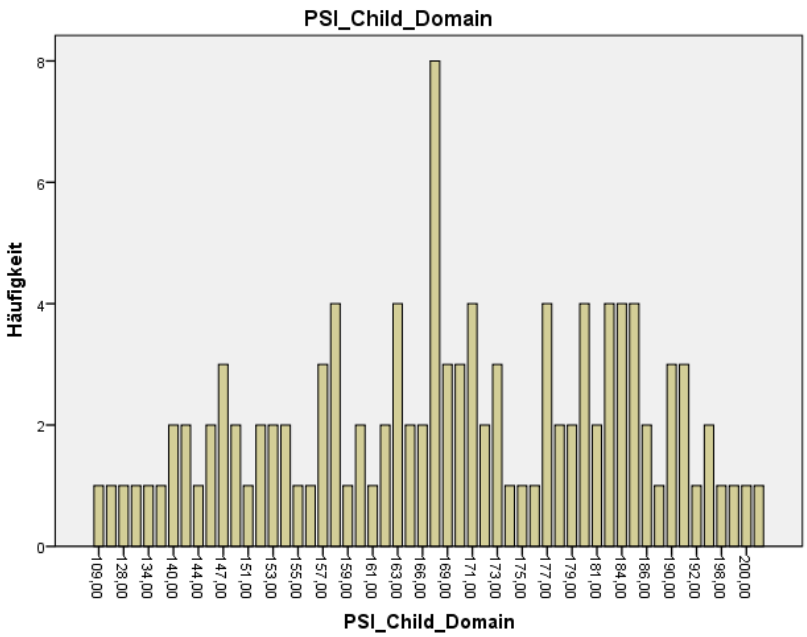

Figure 15: Frequencies for PSI_Child_Domain within the sample

Parenting Stress Index Life Stress:

On the scale for Life Stress of the Parenting Stress Index 116 cases were valid and the obtained scores had a mean of = 6,91 and standard deviation=7,98. Also, the values ranged between 0 and 42, as shown in table 18.

Table 22: Statistical Values for Life Stress

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
PSI Life Stress	116	0	6,9138	7,98539	1,376	0,00	42,00

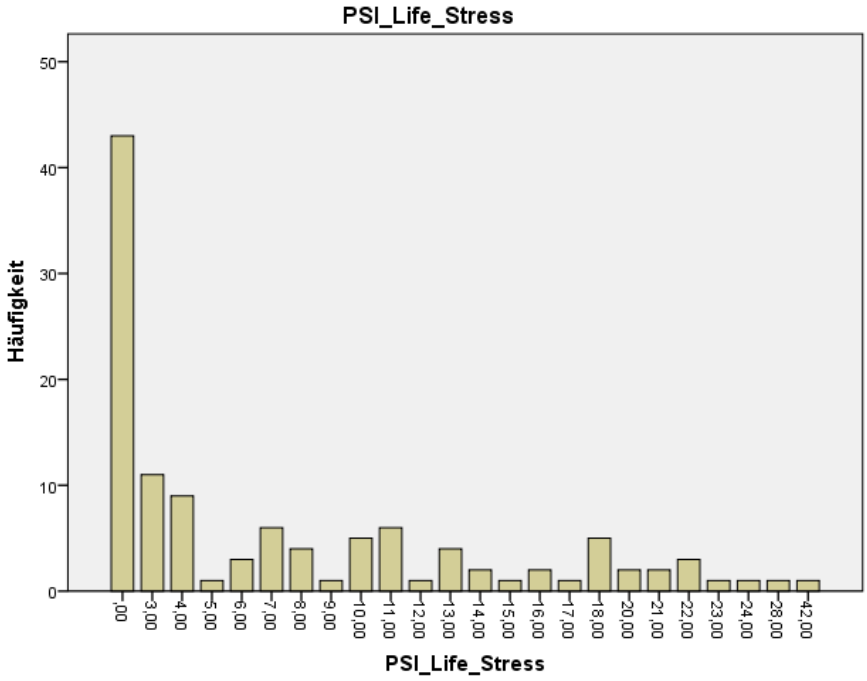

Figure 16: Frequencies for PSI_Life_Stress within the sample

8.1.2 Eltern Belastungsscreeningtest zur Kindeswohlgefährdung

The EBSK examines the global parental stress. 116 valid cases have been obtained (M=.3358 and SD=.33412) as shown in table 19 and figure 17.

Table 23: Statistical Values for EBSK_Belastung

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
EBSK_Belastung	116	0	,3358	,33412	7,604	,09	3,47

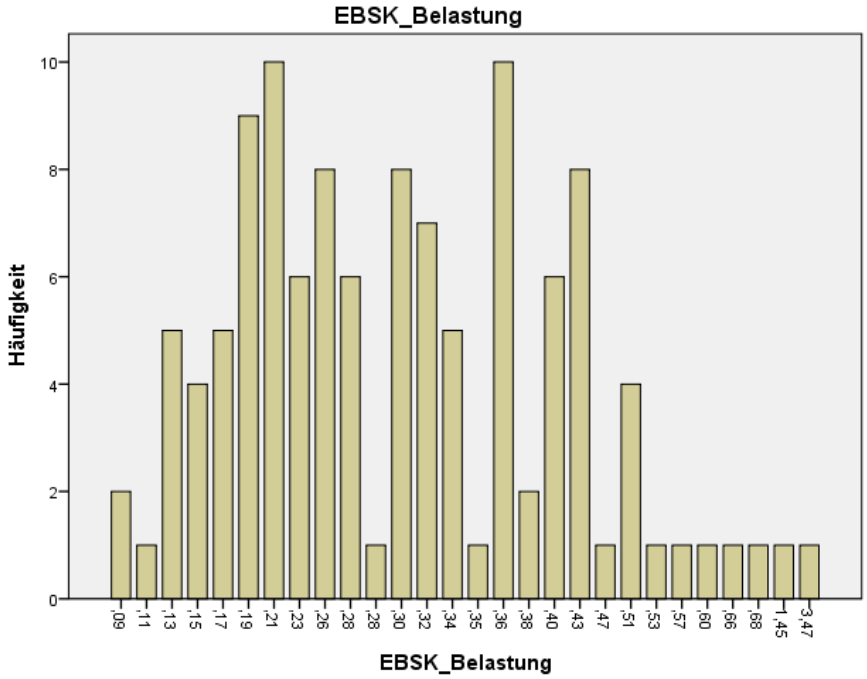

Figure 17: Frequencies for EBSK_Belastung within the sample

8.1.3 Erziehungsfragebogen

The EFB is comprised of the scales: Overreactivity, Laxness, Verbosity.

On the subscale **Overreactivity (EFB_UR)**, 116 valid cases were examined, with a M = 3,14 and SD = .77, and a Minimum of 1,69 and a Maximum of 5, 15, as shown in table 20 and figure 18.

Table 24: Statistical values for EFB_UR

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
EFB_UR	116	0	3,1455	,77815	,223	1,69	5,15

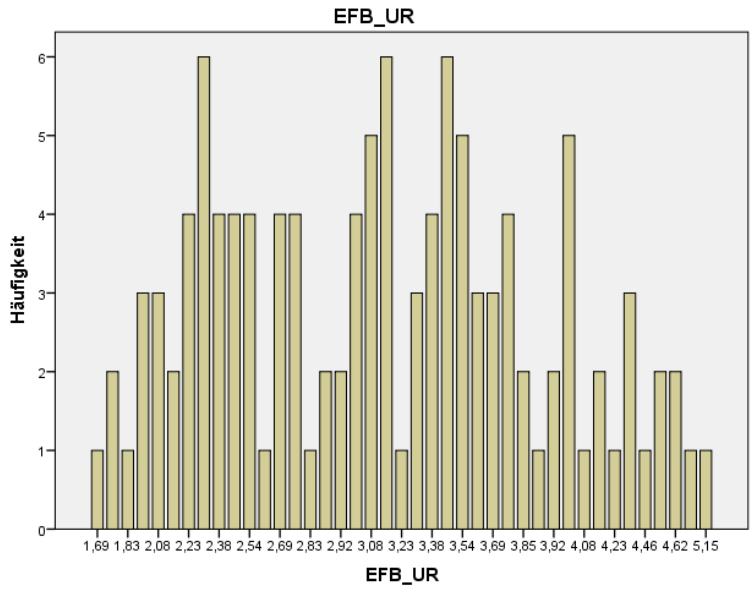

Figure 18: Frequencies for EFB_UR within the sample

On the subscale **Laxness (EFB_NS)**, 116 valid cases were registered and the obtained scores ranged from 1 to 8,56 (Table 21, figure 19).

Table 25: Statistical values for EFB_NS

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
EFB_NS	116	0	2,8299	1,10918	1,177	1,00	8,56

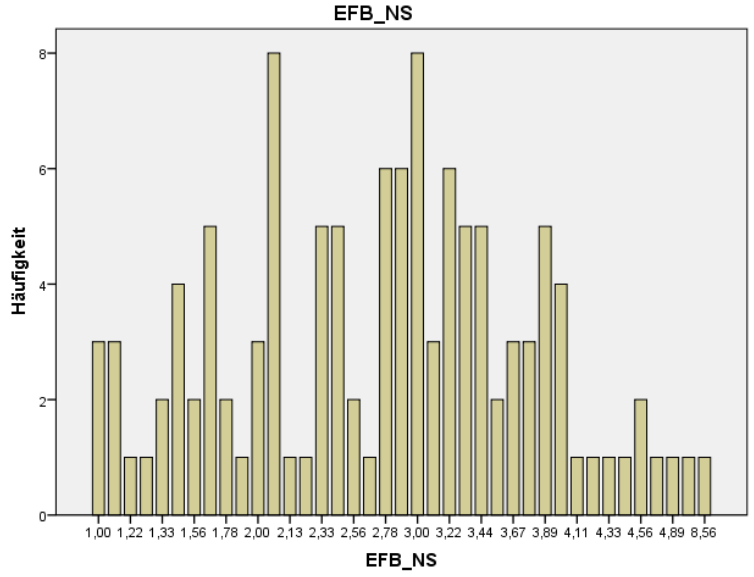

Figure 19: Frequencies for EFB_NS within the sample

On the subscale **Verbosity (EFB_WS)**, 116 valid cases were examined, with a M =4,4770 and SD =1,11057, as shown in table 22 and figure 20.

Table 26: Statistical values for EFB_WS

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
EFB_WS	116	0	4,4770	1,11057	,151	2,00	6,80

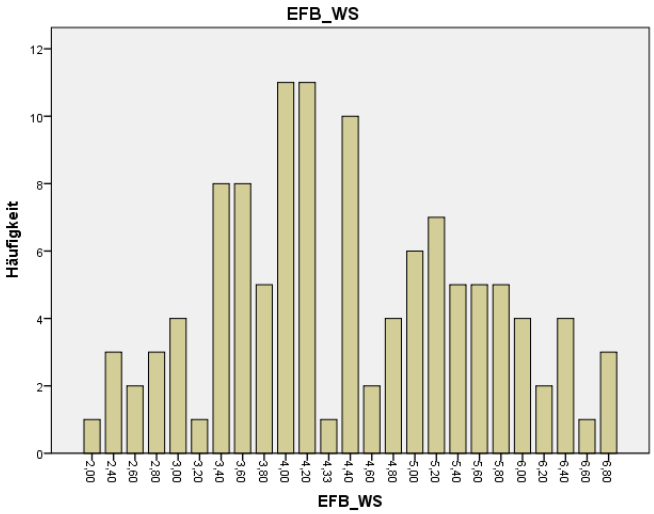

Figure 20: Frequencies for EFB_WS within the sample

8.1.4 Stress Coping Inventory

The most important scales (and relevant for the present thesis) of the Stress Coping Inventory (SCI) are: SCI_Total_Stress (current global perceived stress); SCI_Symptoms (physical and psychological stress symptoms) and SCI_Coping (stress coping strategies, such as: positive thinking, active stress coping strategies, faith, social support, and alcohol and cigarette consumption).

On the scale **SCI_Total_Stress** 116 valid cases were examined, with a M =2,22 and SD =,97 (Minimum = 1 and Maximum =5,24), as shown in table 23 and figure 20.

Table 27: Statistical values for SCI_Total_Stress

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
SCI_Total_Stress	116	0	2,2256	,97532	,875	1,00	5,24

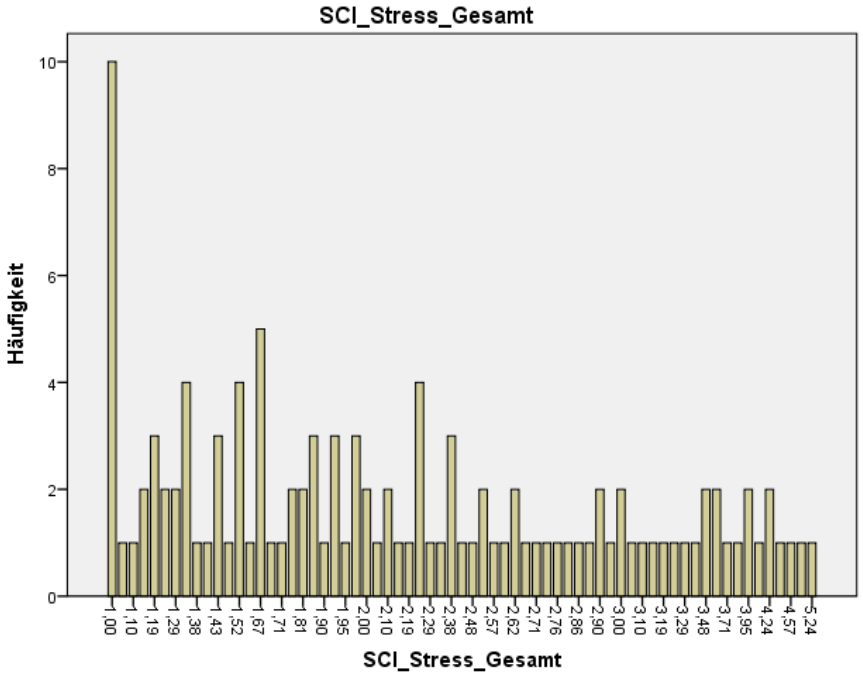

Figure 21: Frequencies for SCI_Total_Stress within the sample

Regarding **SCI_Coping** (coping strategies), 116 valid cases were examined. This scale is comprised of 5 subscales:

On the subscale **SCI_Positive_Thinking,** a Mean of 2,58 and SD = , 67 were obtained (table 24). The values ranged between 1 and 4, as shown in figure 22.

Table 28: Statistical values for SCI_Positive_Thinking

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
SCI_Positive Thinking	116	0	2,5876	,67520	-,145	1,00	4,00

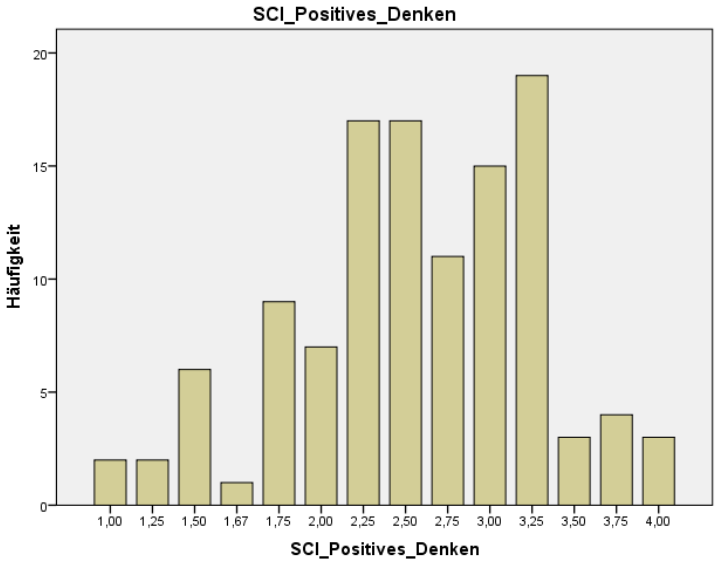

Figure 22: Frequencies for SCI_Positive_Thinking within the sample

On the subscale **SCI_Active_Coping,** a Mean of 2,79 and SD = ,74 were obtained (table 25). Also, the scores on this scale varied between 1 and 4, as shown in figure 23.

Table 29: Statistical values for SCI_Active_Coping

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
SCI_Active Coping	116	0	2,7974	,74156	-,459	1,00	4,00

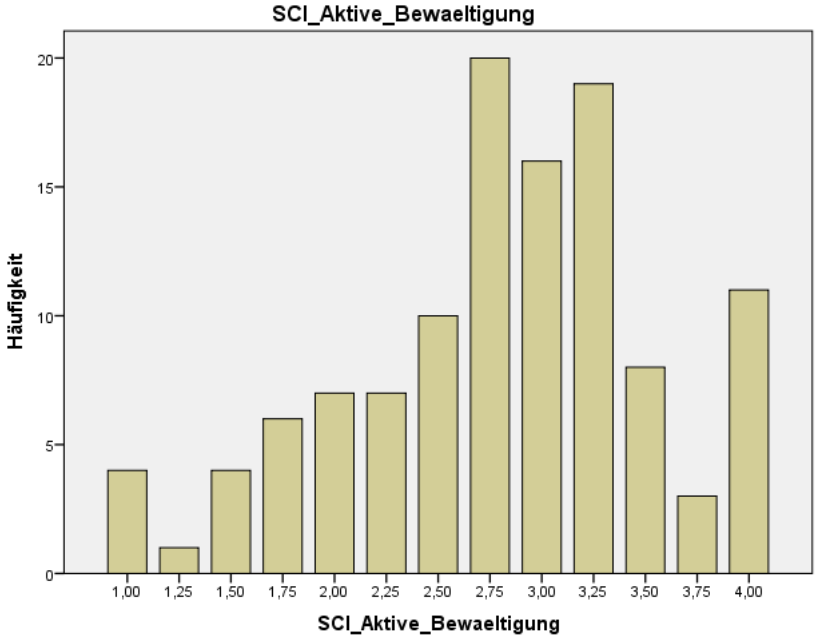

Figure 23: Frequencies for SCI_Active_Coping within the sample

On the subscale **SCI_Social_Support,** a Mean of 3,10 and SD = ,81 were obtained (table 26).

Table 30: Statistical values for SCI_Social_Support

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
SCI_Social Support	116	0	3,1078	,81908	-,766	1,00	4,00

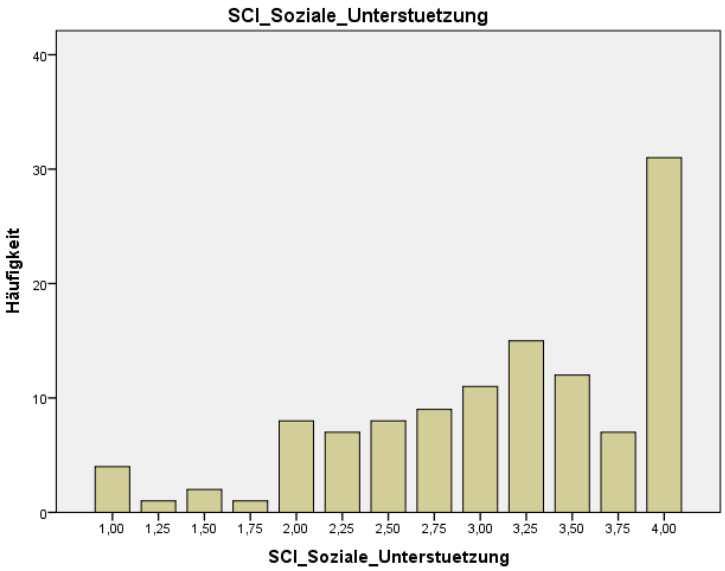

Figure 24: Frequencies for SCI_Social_Support within the sample

Figure 24 shows that the values obtained on this subscale of the SCI_Coping scale ranged between 1 and 4.

On the subscale **SCI_Faith,** 116 valid cases were analyzed, with a Mean of 2,56 and SD = ,059 were obtained (table 27).

Table 31: Statistical values for SCI_Faith

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
SCI_Faith	116	0	2,5661	1,04283	,059	1,00	4,00

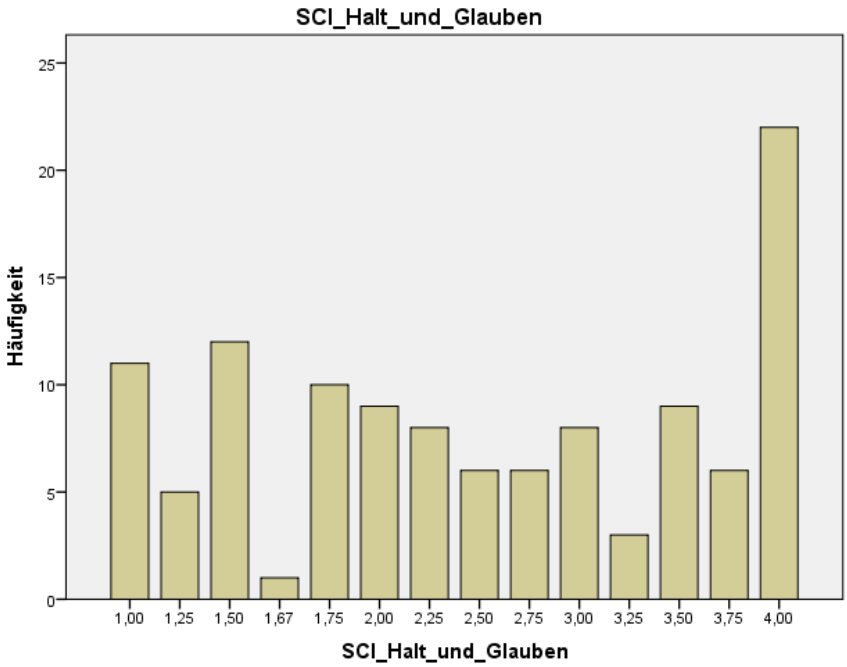

Figure 25: Frequencies for SCI_Faith within the sample

On the last subscale for SCI_Coping, **SCI_Alcohol_Cigarettes,** 116 valid cases were analyzed, with a Mean of 2,56 and SD = ,059 and a Minimum of 1 and Maximum of 3,5 (table 28 and figure 26).

Table 32: Statistical values for SCI_Alcohol_Cigarettes

	N						
	Valid	Missing	Mean	SD	Skewness	Minimum	Maximum
SCI_Alcohol Cigarrettes	116	0	1,7787	,54718	,685	1,00	3,50

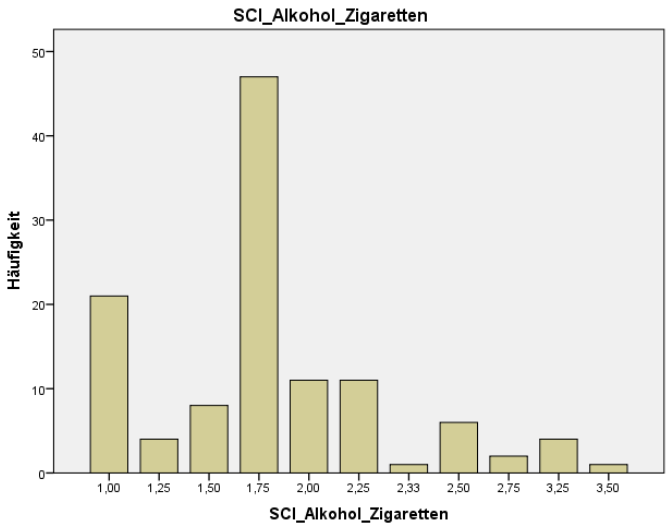

Figure 26: Frequencies for SCI_Alcohol_Cigarettes within the sample

8.2 Results of the correlation hypotheses

For the statistical analysis of the correlation hypotheses, Pearson product-moment correlations and Spearman Rhodes correlations were applied (according to the assumptions of each correlation). Relationships with a coefficient (r) of .10 to .29 are considered weak, .3 to .49 are moderate and over .5 are rated as strong correlations.

Research Question 1:

Is there a significant relationship between parenting behavior and parenting stress?

H1,1 : There is a significant relationship between the global parenting stress (PSI Total Score) and parents‘ tendency toward overreaction (EFB_ÜR).

In order to examine the relationship between these two variables, a bivariate correlation was applied. First, the assumptions for the Pearson product-moment correlation were verified and confirmed (as presented in table 15, the Kolmogorov-Smirnov test showed that the scale Total Score of the Parenting Stress Index, as well as the scale Overreaction were normally distributed), thus this was the preferred method.

Table 33: Tests of Normal Distribution

	Kolmogorov-Smirnov[a]		
	Statistics	df	Significance
PSI_Total_Score	,057	116	,200
EFB_UR	,075	116	,111
EFB_NS	,060	116	,200*
EFB_WS	,114	116	,001

There was a moderate, negative relationship between the two variables (PSI Total Score Mean =354,2845 and Standard Deviation=38,14339; EFB_UR Mean = 3,1455 and Standard Deviation=.77185), which was statistically significant ($r(114) = -.322$, $p < .05$), as shown in table 16. Therefore, the alternative hypothesis H1,1 can be accepted.

Table 34: Pearson Correlation for PSI_Total and EFB_UR

		EFB_UR	PSI_Total_Score
EFB_UR	Pearson correlation	1	-,322
	Significance (2-sided)		,001
	N	116	116
PSI_Total_Score	Pearson correlation	-,322	1
	Significance (2-sided)	,001	
	N	116	116

H1,2: There is a significant relationship between the global parenting stress (PSI Total Score) and parents' tendency towards laxness (EFB_NS)

A Person product-moment correlation was computed to assess the relationship between the global parenting stress and parents' tendency towards laxness. The data showed no violation of the assumptions for the Pearson product-moment correlation (as previously shown in table 15 on the basis of the Kolmogorov-Smirnov test). The results show that there is no significant correlation between the two variables ($r(114) = -196$, $p > .05$), demonstrated in table 17. Consequently, the alternative hypotheses H1,2 cannot be assumed.

Table 35: Pearson Correlation for PSI_total and EFB_NS

		EFB_NS	PSI_Total_Score
EFB_NS	Pearson correlation	1	-,156
	Significance (2-sided)		,095
	N	116	116
PSI_Total_Score	Pearson correlation	-,156	1
	Significance (2-sided)	,095	
	N	116	116

H1,3: There is a significant relationship between the global parenting stress (PSI Total Score) and parents' tendency towards verbosity (EFB_WS).

For the scale Verbosity, the assumptions for a Pearson correlation were not fulfilled (as demonstrated in table 15, the normal distribution could not be established), therefore a Spearman's rank-order correlation was run to determine the relationship between the global parenting stress and parents' tendency towards verbosity.

There was a weak, positive relationship between the global parenting stress and parents' tendency towards verbosity (EFB_WS Mean =4,4770 and Standard Deviation = 1,1057), which was statistically significant ($r(114) = -.195$, $p < .05$). As such, the alternative hypothesis H1,3 can be accepted.

Table 36: Spearman Rhodes Correlation for PSI_Total and EFB_WS

			PSI_Total_Score	EFB_WS
Spearman-Rho	PSI_Total_Score	Pearson correlation	1,000	,202
		Significance (2-sided)		,030
		N	116	116
	EFB_WS	Pearson correlation	,202	1,000
		Significance (2-sided)	,030	
		N	116	116

H1,4: There is a significant relationship between the global parenting stress (EBSK) and parents‘ tendency toward overreaction (EFB_ÜR)

According to the Kolmogorov-Smirnov test (table 19), the assumption of normality was violated and therefore a Spearman's rank-order correlation was computed to assess the relationship between the global parenting stress and parents' tendency toward overreaction. There was a significant, weak positive relationship (illustrated in table 20) between the two variables ($r(114) = .195$, $p < .05$), thus leading to the acceptance of the alternative hypotheses H1,4.

Table 37: Test for Normality

	Kolmogorov-Smirnov[a]		
	Statistics	df	Significance
EBSK_Belastung	,291	116	,001

Table 38: Spearman Correlation for EBSK and EFB_UR

			EBSK_Belastung	EFB_UR
Spearman-Rho	EBSK_Belastung	Correlation coeficient	1,000	,195
		Significance (2-sided)		,036
		N	116	116
	EFB_UR	Correlation coeficient	,195	1,000
		Significance (2-sided)	,036	
		N	116	116

H1,5: There is a significant relationship between the global parenting stress (EBSK) and parents‘ tendency toward laxness (EFB_NS)

A Spearman's rank-order correlation was run to determine the relationship between the global parenting stress and parents' tendency toward laxness. Because the data did not fulfil the assumption of normal distribution (table 19), the Spearman's rank-order correlation was the preferred method. The results show that there is no significant correlation between the two variables ($r(114) = .020$, $p > .05$). A relationship between the global parenting stress and parents' tendency toward laxness was not confirmed and the alternative hypotheses H1,5 cannot be assumed (table 21).

Table 39: Spearman Correlation for EBSK and EFB_NS

			EBSK_Belastung	EFB_NS
Spearman-Rho	EBSK_Belastung	Correlation coeficient	1,000	0,01966
		Significance (2-sided)		,834
		N	116	116
	EFB_NS	Correlation coeficient	0,019656109	1,000
		Significance (2-sided)	,834	
		N	116	116

H1,6: There is a significant relationship between the global parenting stress (EBSK) and parents‘ tendency toward verbosity(EFB_WS)

The assumption of normality was violated (table 19) and therefore a Spearman's rank-order correlation was computed to assess the relationship between the global parenting stress and parents' tendency toward verbosity. There was no significant correlation between the two variables ($r(114) = .000$, $p > .05$). No relationship between the global parenting stress and parents' tendency toward verbosity could be demonstrated (table 22).

Table 40 Spearman Correlation for EBSK and EFB_WS

			EBSK_Belastung	EFB_WS
Spearman-Rho	EBSK_Belastung	Correlation coeficient	1,000	-0,00011
		Significance (2-sided)		,999
		N	116	116
	EFB_WS	Correlation coeficient	-0,000109972	1,000
		Significance (2-sided)	,999	
		N	116	116

Research Question 2: Is there a significant relationship between the parenting stress measured with PSI and the parenting stress measured with EBSK?

H1,7: There is a significant relationship between the perceived global parenting stress (PSI Total Score) and the total parental pressure (EBSK)

A Spearman's rank-order correlation was run to determine the relationship between the perceived global parenting stress and the total parental pressure. Because the data did not fulfil the assumption of normal distribution, the Spearman's rank-order correlation was the preferred method. The results show that there was a moderate, negative correlation (table 23),

which was statistically significant (r(114) = -.457, p < .05). The alternative hypothesis H1,7 can be accepted. EBSK Mean = .3358 and Standard Deviation = .33412.

Table 41: Spearman Correlation for EBSK and PSI_Total

			EBSK_Belastung	PSI_Total_Score
Spearman-Rho	EBSK_Belastung	Correlation coeficient	1,000	-,457
		Significance (2-sided)		,001
		N	116	116
	PSI_Total_Score	Correlation coeficient	-,457	1,000
		Significance (2-sided)	,001	
		N	116	116

H1,8: There is a significant relationship between parental characteristics (PSI Parent Domain) that may contribute to overall parenting stress and the total parental pressure (EBSK)

The assumption of normality was violated and therefore a Spearman's rank-order correlation was computed to assess the relationship between parental characteristics that may contribute to overall parenting stress and the total parental pressure. There was a significant, moderate negative correlation (illustrated in table 24) between the two variables ($r(114) = .492$, $p < .05$). Therefore, the alternative hypothesis H1,8 was assumed.

Table 42: Spearman Correlation for EBSK and PSI_Parent_Domain

			EBSK_Belastung	PSI_Parent_Domain
Spearman-Rho	EBSK_Belastung	Correlation coeficient	1,000	-,486
		Significance (2-sided)		,001
		N	116	116
	PSI_Parent_Domain	Correlation coeficient	-,486	1,000
		Significance (2-sided)	,001	
		N	116	116

H1,9: There is a significant relationship between child characteristics that may contribute to overall parenting stress (PSI Child Domain) and the total parental pressure (EBSK)

The assumption of normality was violated and therefore a Spearman's rank-order correlation was computed to assess the relationship between child characteristics that may contribute to overall parenting stress and the total parental pressure. As shown in table 24, there was a significant, moderate negative correlation between the two variables ($r(114) = .362$, $p < .05$).

Table 43: Spearman Correlation for EBSK and PSI_Child_Domain

			EBSK_Belastung	PSI_Child_Domain
Spearman-Rho	EBSK_Belastung	Correlation coeficient	1,000	-,355
		Significance (2-sided)		,001
		N	116	116
	PSI_Child_Domain	Correlation coeficient	-,355	1,000
		Significance (2-sided)	,001	
		N	116	116

8.3 Results of the differential hypotheses

Research Question 3: Is there a significant difference in parenting stress between mothers and fathers?

H1,10: There is a significant difference in the perceived life stress between mothers and fathers (Life Stress PSI).

A Mann-Whitney U test was conducted to compare the perceived life stress between mothers and fathers because the assumption of normality was violated (table 26). The results show that the perceived life stress does not differ between mothers and fathers ($U = 1579.50$, $p > .05$) and they are illustrated in table 27.

Table 44: Test of Normal Distribution for PSI_Life_Stress

		Kolmogorov-Smirnov		
Gender parents		Statistics	df	Significance
PSI_Life_Stress	Female	,200	66	,001
	Male	,194	50	,001

Table 45: Statistical Values for Gender and PSI_Life_Stress

Statistics

Gender Parent			Gender Parent	PSI_Life_Stress
female	N	Valid	66	66
		Missing	0	0
	Median		0,00	4,0000
	Percentile	25	0,00	0,0000
		50	0,00	4,0000
		75	0,00	11,2500
male	N	Valid	50	50
		Missing	0	0
	Median		1,00	4,0000
	Percentile	25	1,00	0,0000
		50	1,00	4,0000
		75	1,00	11,0000

Table 46:U-Test for gender differences in PSI_Life_Stress

	PSI_Life_Stress
Mann-Whitney-U	1579,500
Wilcoxon-W	3790,500
Z	-,404
Asymptotische Signifikanz (2-seitig)	,686

H1,11: There is a significant difference in the overall parenting stress between mothers and fathers (PSI Total Score)

An independent-samples t-test was conducted to compare the overall parenting stress between mothers and fathers. The assumption of normal distribution was fulfilled. Levene's test for equality of variances revealed that the assumption of homogenous variances is violated. Therefore the Welch-Scatterthwaite method was used to make the required adjustments. The results show that the overall parenting stress did not differ between mothers and fathers ($t(114) = -.874$, $p > .05$), as shown in table 28.

Table 47: t-test for gender difference in PSI_Total_Score

		Levene-Test of equal variances		T-Test for mean						
									95% confidence range of	
		F	Sig.	T	df	Sig. (2-sided)	Mean difference	Standard error of difference	Lower	Upper
PSI_Total_Score	Equal variances	2,827	,095	-,903	114	,369	-6,46000	7,15717	-20,63831	7,71831
	Unequal variances			-,874	91,205	,384	-6,46000	7,38785	-21,13462	8,21462

Table 48: Mean and Standard Deviation Values for Gender and PSI_Total_Score

Group Statistics

Gender Parents		N	Mean	Standard Deviation
PSI_Total_Score	female	66	351,5000	34,09410
	male	50	357,9600	42,99310

H1,12: There is a significant difference between the child characteristics assessment of mothers and fathers (Child Domain PSI)

Because the data were normally distributed, an independent-samples t-test was computed to compare the child characteristics assessment of mothers and fathers. The variances were not homogenous. Consequently, the Welch-Scatterthwaite method was used. The results show that mothers and fathers did not differ in their child characteristics assessment ($t(114) = .022$, $p > .05$).

Table 49: t-test for gender differences in PSI_Child_Domain

		Levene-Test of equal variances		T-Test for mean						
									95% confidence range of	
		F	Sig.	T	df	Sig. (2-sided)	Mean difference	Standard error of difference	Lower	Upper
PSI_Child_Domain	Equal variances	2,827	5,383	,022	-1	114,000	0,44110	-2,55636	3,30693	3,99465
	Unequal variances				-0,741	86,177	0,46059	-2,55636	3,44894	4,29969

Table 50: Mean and Standard Deviation for Gender and PSI_Child_Domain

Group Statistics

Gender Parents		N	Mean	Standard Deviation
PSI_Child_	female	66	166,8636	15,05976
Domain	male	50	169,4200	20,56556

H1,13: There is a significant difference between parental characteristics (that contribute to overall stress) between mothers and fathers (Parent Domain PSI)

An independent-samples t-test was used to compare the parental characteristics (that contribute to overall stress) between mothers and fathers. The assumptions of normal distribution and homogenous variances were fulfilled. The results show that the parental characteristics did not differ between mothers and fathers ($t(114) = -.914$, $p > .05$).

Table 51: t-test for gender differences in PSI_Parent_Domain

		Levene-Test of equal variances		T-Test for mean						
									95% confidence range of	
		F	Sig.	T	df	Sig. (2-sided)	Mean difference	Standard error of difference	Lower	Upper
PSI_Parent_Domain	Equal variances	1,135	,289	-,914	114	,363	-3,90364	4,27240	-12,36723	4,55996
	Unequal variances			-,897	97,807	,372	-3,90364	4,34996	-12,53619	4,72892

Table 52: Mean and Standard Deviation Values for Gender and PSI_Parent_Domain

Group Statistics

Gender Parents		N	Mean	Standard Deviation
PSI_Parent_	female	66	184,6364	21,45954
Domain	male	50	188,5400	24,43835

Research Question 4: is there a significant difference in the general stress experience and coping strategies between mothers and fathers?

H1,14: There is a significant difference in the current perceived stress (SCI_Total_Stress) between mothers and fathers

A Mann-Whitney U test was used to compare the general stress experience between mothers and fathers because the assumption of normal distribution was violated. The results show that the general stress experience did not differ between mothers and fathers ($U = 1551.00$, $p > .05$).

Table 53: U-Test for gender differences in SCI_Total_Stress

	SCI_Total_ Stress
Mann-Whitney-U	1551,000
Wilcoxon-W	3762,000
Z	-,552
Asymptotic Significance (2-sided)	,581

Table 54: Statistical Values for Gender and SCI_Total_Stress

Statistics

Gender Parent			Gender Parent	SCI_Total
female	N	Valid	66	66
		Missing	0	0
	Median		0,00	1,9286
	Percentile	25	0,00	1,4286
		50	0,00	1,9286
		75	0,00	2,7262
male	N	Valid	50	50
		Missing	0	0
	Median		1,00	2,1905
	Percentile	25	1,00	1,4167
		50	1,00	2,1905
		75	1,00	2,9048

H1,15: There is a significant difference in physical and psychological stress symptoms (SCI_Symptoms) between mothers and fathers

To determine if there is a difference between mothers and fathers in physical and psychological stress symptoms, a Mann-Whitney U test was computed because the data were not normally distributed. The results show that mothers and fathers did not significantly differ in their physical and psychological stress symptoms ($U = 1331.00$, $p > .05$). But there is a slight tendency that mothers have a higher amount of stress symptoms, see table 55.

Table 55: Mann-Whitney U test for the difference between mothers and fathers in physical and psychological stress symptoms.

Variable	p-value	Mean Rank: mothers	Mean Rank: fathers
Physical and psychological stress symptoms	.075	63.33 (n = 66)	52.12 (n = 50)

Table 56: Statistical Values for Gender and SCI_Symptoms

Statistics

Gender Parent			Gender Parent	SCI_Symptoms
female	N	Valid	66	66
		Missing	0	0
	Median		0,00	1,7143
	Percentile	25	0,00	1,2857
		50	0,00	1,7143
		75	0,00	2,0000
male	N	Valid	50	50
		Missing	0	0
	Median		1,00	1,4286
	Percentile	25	1,00	1,1429
		50	1,00	1,4286
		75	1,00	1,8571

H1,16: There is a significant difference in coping strategies (SCI_Coping) between mothers and fathers

A one-way multivariate analysis of variance was used to determine whether there are differences between mothers and fathers in several coping strategies, specifically in SCI_Positive_Thinking, SCI_Active_Coping_Strategies, SCI_Social_Support, SCI_Faith and SCI_Alcohol_Cigarettes. All assumptions for the multivariate analysis of variances were met, except the assumption of multivariate normality. The test statistic Pillai's trace was chosen because it is relatively robust to deviations from multivariate normality. There was no significant difference in coping strategies between mothers and fathers ($F(5,110) = .211$, $p > .05$, Pillai's trace = .010).

Table 57: Manova for gender differences in SCI_Coping

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta-square
Constant term	Pillai-Spur	,972	771,812[b]	5,000	110,000	,000	,972
	Wilks-Lambda	,028	771,812[b]	5,000	110,000	,000	,972
	Hotelling-Spur	35,082	771,812[b]	5,000	110,000	,000	,972
	Größte charakteristische Wurzel nach Roy	35,082	771,812[b]	5,000	110,000	,000	,972
Gender parents	Pillai-Spur	,010	,211[b]	5,000	110,000	,957	,010
	Wilks-Lambda	,990	,211[b]	5,000	110,000	,957	,010
	Hotelling-Spur	,010	,211[b]	5,000	110,000	,957	,010
	Größte charakteristische Wurzel nach Roy	,010	,211[b]	5,000	110,000	,957	,010

Table 58: Manova for gender differences in SCI_Positive_Thinking, SCI_Active_Coping_Strategies, SCI_Social_Support, SCI_Faith, SCI_Alcohol_Cigarettes

Source		Sum of squares type III	df	Mean of squares	F	Sig.	Partial Eta-square
Gender parents	SCI_Positive_Thinking	,026	1	,026	,058	,811	,001
	SCI_Active_Coping_Strategies	,067	1	,067	,121	,729	,001
	SCI_Social_Support	,068	1	,068	,100	,752	,001
	SCI_Faith	,161	1	,161	,147	,702	,001
	SCI_Alcohol_Cigarettes	,162	1	,162	,539	,464	,005
Error	SCI_Positive_Thinking	52,402	114	,460			
	SCI_Active_Coping_Strategies	63,172	114	,554			
	SCI_Social_Support	77,085	114	,676			
	SCI_Faith	124,902	114	1,096			
	SCI_Alcohol_Cigarettes	34,270	114	,301			

Table 59: Statistical Values for Gender and SCI_Coping

Statistics

Gender Parents			Gender Parents	SCI_Positive_ Thinking	SCI_Active_ Coping	SCI_Social_ Support	SCI_Faith	SCI_Alcohol_ Cigarettes
female	N	Valid	66	66	66	66	66	66
		Missing	0	0	0	0	0	0
	Median		0,00	2,5000	2,7500	3,2500	2,5000	1,7500
	Percentile	25	0,00	2,2500	2,4375	2,6875	1,7500	1,5000
		50	0,00	2,5000	2,7500	3,2500	2,5000	1,7500
		75	0,00	3,2500	3,2500	3,7500	3,5000	2,0000
male	N	Valid	50	50	50	50	50	50
		Missing	0	0	0	0	0	0
	Median		1,00	2,7500	3,0000	3,1250	2,3750	1,7500
	Percentile	25	1,00	2,0000	2,2500	2,5000	1,5000	1,5000
		50	1,00	2,7500	3,0000	3,1250	2,3750	1,7500
		75	1,00	3,0625	3,2500	4,0000	3,7500	2,2500

9. Discussion

The purpose of this diploma thesis was to examine the relationship between parenting behavior and parenting stress, as well as the gender differences in the experience of parental pressure, general stress experience, and coping strategies between mothers and fathers.

The correlation between parenting stress and parenting behavior was thoroughly researched throughout the years. The most recent studies found significant effects of parental pressure on demanding and responsive parenting behavior (Ponnet et al., 2013). Furthermore, an increased amount of parenting stress may lead to negative parental attitudes and perceptions (Respler-Herman et al., 2012). Based on these findings, the present diploma thesis examined the relationship between parenting stress (measured with PSI and EBSK) and parenting behavior (registered with EFB). The previous findings were consistent with the results of the present study: significant relationships were found between parenting stress and parenting behaviors.

A moderate negative relationship was found between the global perceived parental stress (measured with the Parenting Stress Index) and the parents' tendency to overreact in their parenting behavior. Thus one could conclude that, as the amount of the global parenting stress increases, the parents' tendency toward overreaction decreases. However, no correlation was found between parental pressure (PSI) and the tendency towards laxness. Lastly, it was found that, as the amount of the global parenting stress increases, parents' tendency towards verbosity slightly increases (weak, positive correlation between the two variables).

However, when the same assumptions were investigated using the EBSK to register the global parenting stress, the same relationships could not be confirmed (except in the case of tendency towards overreaction and parental pressure). In order to explain these discrepancies, an analysis of the correlations of the instruments was conducted: the results showed significant, moderate, and negative relationships between the parenting stress measured with PSI and the parenting stress measured with EBSK, which could offer an explanation for the different results of correlation regarding parenting behavior and parental stress (when measured with PSI or EBSK).

In order to further explain the discrepancies between the results, one should take a closer look at the instruments that were used. Whereas the Parenting Stress Index is a complex survey instrument registering parent, child and environmental determinants of parental strain, the EBSK is a screening tool with less items and its focus lies within the parental characteristics

and risk factors, while the child characteristics are somewhat neglected. This difference between the two instruments could explain the discrepancy in the findings.

As a critical note, at this point it should be mentioned that previous literature investigated the relationships between parenting stress and parental beliefs, attitudes, and perceptions (Respler-Herman et al., 2012) and demanding and responsive parenting styles (Ponnet et al., 2013), and also a reciprocal effect between parental strain and parenting conduct (Mackler et al., 2015), whereas the present diploma thesis only examined the correlation between parenting stress and dysfunctional parenting behavior (overreaction, laxness, verbosity). Therefore, future research should also focus on the impact of parenting stress on positive parenting behaviors and attitudes, as well as on more specifically defined parenting styles. Furthermore, consequences of parenting stress on child development and child behavior, as well as marital relationships and social support as mediating factors (Ponnet et al., 2013) should be taken into account.

Moreover, the present diploma thesis also regarded and examined differences between mothers and fathers in the experience of parental pressure, as well as general stress perception and coping strategies.

Previous studies have not found unequivocal gender discrepancies in relation to parenting stress in typically developing children: the study of Dabrowska and Pisula (2010) showed that mothers of autistic children were more distressed than fathers, effects that were not proven in regard to mothers and fathers of children who developed ordinarily. A more detailed study, however, illustrated the effects of time on parenting stress: mothers' parental pressure increased as time passed, while fathers' remained constant (Gerstein et al., 2009). A relatively older study by Deater-Deckard and Scarr (1996) did find small gender discrepancies regarding parenting stress, but no straightforward conclusions could be drawn, seeing as the traits of the child acted as mediating factors for the discovered results.

The results found by the present study were consistent with the findings of Dabrowska and Pisula (2010): no gender effects could be proven regarding parental pressure of typically developing children. The overall parenting stress perceived by the parent was examined in the present study using the Parenting Stress Index. However, no significant differences between mothers and fathers were confirmed.

Regarding child characteristics that may contribute to parenting stress, the results showed that mothers and fathers did not differ in their child traits assessment.

Furthermore, parental characteristics (that contribute to overall stress) were also examined in the present study and no significant differences between mothers and fathers were confirmed.

Finally, the present diploma thesis investigated gender differences regarding the general stress experience and coping strategies between mothers and fathers.

This particular research question was mostly based on the findings of Matud (2004), which showed significant gender discrepancies in the experience of chronic stress, as well as minor stressors. Furthermore, differences between women and men were also found in regard to coping strategies: whereas females preferred to rely more on emotional support and restraint to cope with pressure, males favored rationality and indifference.

However, the results of the present diploma thesis were not consistent with the findings of Matud (2004). Gender differences regarding the current perceived global stress could not be confirmed. Moreover, mothers and fathers did not significantly differ in their physical and psychological stress symptoms. Nonetheless, a slight tendency that mothers may show a higher amount of stress symptoms was found.

In the present study, positive thinking, active stress coping strategies, social support, faith, and alcohol and cigarette consumptions were registered as stress management techniques. No differences between mothers and fathers could be found regarding any of these strategies.

Summarizing, the relationship between parenting stress and parenting behavior were confirmed throughout the present diploma thesis (thus being consistent with previous findings), whereas differences between mothers and fathers regarding parental pressure and general stress experience were not proven.

As far as future research is concerned, a more detailed investigation of the previously described variables is necessary. Also, mediating factors regarding gender differences in parenting stress should be included, such as: quality of the spousal relationships, socioeconomic status, number of children, employment status. Another important factor that should be considered while examining stress is the current emotional and mental state of the participants, since it can greatly influence their answers.

10. Summary

The main goal of this study was to put the relationship between parenting stress and parenting behavior into context. 116 parents, 66 mothers and 50 fathers, (with ages between 25 and 65 years) participated in this study. They were required to sign an informed consent, fill out several survey instruments regarding social and demographic data of themselves and their children, parenting stress (PSI and EBSK), parenting conduct (EFB), general stress experience (SCI), their relationship with their children (PCRI), and child behavior (CBCL). As previously mentioned, this study was conducted in collaboration with Alexandra Raspop and the present diploma thesis focused only on the data of the surveys registering parenting stress, parenting behavior, and general stress experience.

In order to answer the previously described research questions, correlation and differential hypotheses were formulated.

First, the correlation hypotheses (H1,1 to H1,9) were examined using Pearson product-moment correlations or Spearman correlations according to the assumptions of each method. Regarding the relationship between parenting stress (PSI) and parenting behavior (EFB: Overreactivity, Laxness, Verbosity), significant results were found and the alternative hypotheses H1,1 and H1,3, as well as H1,4 (EBSK and EFB_UR) were confirmed. However, the same relationships could not be found for the H1,2 and while using the EBSK to register parenting stress, therefore the hypotheses H1,2, H1,5 and H1,6 were not assumed.

Additionally, the relationship between the parenting stress measured with PSI and the parenting stress measured with EBSK was examined and yielded significant results, thus confirming the alternative hypotheses H1,7 to H1,9.

The differential hypotheses (H1,10 to H1,16) were assessed using t-test and U-test, according to the different assumptions of each test. No gender differences in regard to parenting stress (PSI) could be established throughout the present study, hence leading to the dismissal of the alternative hypotheses H1,10 to H1,13.

Furthermore, differences between mothers and fathers in the general stress experience and coping strategies (SCI) were examined (H1,14 to H1,16). The current perceived global stress and physiological and psychological symptoms of pressure in mothers and fathers were investigated (H1,14 and H1,15) but no significant differences could be established. The mentioned alternative hypotheses were discarded.

Lastly, different coping strategies (positive thinking, active stress coping strategies, faith, social support and alcohol and cigarette consumption) applied by mothers and fathers were assessed. No discrepancies between genders could be found, therefore the alternative hypothesis H1,16 was also dismissed.

From a total of 16 hypotheses, 6 correlation hypotheses (H1,1; H1,3;H1,4; H1,7; H1,8; H1;9) were confirmed, 3 correlation hypotheses (H1,2; H1,5; H1,6) and 7 differential hypotheses (H1,10; H1,11; H1,12; H1,13; H1,14; H1,15; H1,16) were discarded.

Abstract

Parenting is a highly complex process, with a number of demands and challenges (Willinger et al., 2005). Parenting stress can be defined as the stress that emanates from being a parent or the parent's perception of demands related to parenthood. Parental stress is also seen as a condition where the interactions of parenthood result in a perceived discrepancy between situational demands and personal resources. Parenting stress is thought to involve characteristics of the child, the parent and the context (Östberg & Hagekull, 2000) and has been linked to both parenting behavior and child functioning. Parenting stress negatively influences parenting behavior which has been linked to higher parental stress and more problem behaviors in children (Bloomfield & Kendall, 2012).

The aim of the present study was to research relationships between parenting and parenting stress in a representative sample of parents. In addition, the difference in perceived parental stress between fathers and mothers, as well as the parenting behavior was assessed. 116 parents between 25 and 65 years were examined, using the Parenting Stress Index (Abidin, 1995), the German version of the Child Abuse Potential Inventory (Wells et al., 2011), namely the Eltern Belastung Screening zur Kindeswohlgefährdung (Deegener et al., 2009), the Stress Coping Inventory (Satow, 2012) and Erziehungsfragebogen (Naumann et al., 2010).

The results of the study showed significant relationships between parenting stress and parental tendencies toward laxness, overreaction and verbosity. However, no gender differences regarding parenting stress could be found. Therefore, further research into this subject matter is necessary.

German Abstract

Erziehung ist ein hochkomplexer Prozess, mit einer Reihe von Anforderungen und Herausforderungen (Willinger et al., 2005). Als Erziehungsbelastung kann man die Spannung, die sich aus Elternschaft ergibt, definieren oder als die Wahrnehmung der Elternteil in Bezug auf Anforderungen der Elternschaft und persönliche Ressourcen. Erziehungsbelastung umfasst Eigenschaften des Kindes, der Eltern und der Umwelt (Östberg & Hagekull, 2000). Es wurde mit Erziehungsverhalten und Kindesentwicklung verbunden. Außerdem, Elternbelastung beeinflusst Elternverhalten in negativer Weise und führt zu Problemverhalten bei Kindern (Bloomfield & Kendall, 2012).

Das Ziel der vorliegenden Diplomarbeit war, Zusammenhänge zwischen Kindererziehung und Elternstress in einer repräsentativen Stichprobe von Eltern zu erforschen. Darüber hinaus wurde der Unterschied in dem wahrgenommenen elterlichen Stress zwischen Vätern und Müttern sowie der Erziehungsverhalten bewertet. 116 Eltern zwischen 25 und 65 Jahre alt wurden mit dem Parenting Stress Index (Abidin, 1995), die deutsche Version des Child Abuse Potential Inventory (Wells et al., 2011), nämlich die Eltern Belastung Screening zur Kindeswohlgefährdung (Deegener et al ., 2009), der Stress Coping Inventory (Satow, 2012) und der Erziehungsfragebogen (Nauman et al., 2010) befragt.

Die Ergebnisse der Studie zeigten signifikante Zusammenhänge zwischen Stress und Elterntendenzen für Überreagieren und Weitschweifigkeit. Allerdings konnten keine Unterschiede zwischen den Geschlechtern in Bezug auf Elternstress bestätigt werden. Demzufolge ist weitere Forschung in diesem Bereich notwendig.

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Curriculum Vitae

Löblichgasse, 1090, Vienna, Austria
+43 676/3950855
andreea_krenek@yahoo.com

ANDREEA KRENEK

Work experience

08/2014 – 09/2014	**Psychotherapeutic Private Practice "Saupe Mirela", Oradea, Romania** *6-weeks Internship Programme*
07/2013 – 08/2013	**Hospital for Neurology and Psychiatry; Department of Psychological Assessment and Diagnosis Oradea, Romania** *Intern*
11/2011 – 06/2013	**Private Childcare, Vienna, Austria**

Education

2009	**Faculty of Psychology, University of Vienna, Austria**
2004-2009	**"Mihai Eminescu" High School, Oradea, Romania Department for German Speakers**

Language skills

Romanian – Mother tongue

German – Deutsches Sprachdiplom Zweite Stufe/Kultusministerkonferenz, Deutschland

English – Cambridge Certificate in Advanced English Level 2/University of Cambridge ESOL Examinations

Spanish – conversational level