PARENTS' IMPLICIT THEORIES OF INTELLIGENCE AND HOW THEY RELATE TO FAILURE BELIEFS AND PARENTING STYLES

by

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PARENTS' IMPLICIT THEORIES OF INTELLIGENCE AND HOW THEY RELATE TO FAILURE BELIEFS AND PARENTING STYLES

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Parents' beliefs about their children's abilities shape their parenting practices and consequently their children's development. The current study aims to explore parents' implicit theories of intelligence. Two dimensions that are particularly important are: malleability and relevance for success. First, parents' beliefs on these two dimensions of intelligence were explored in relation to demographic variables (gender, level of education). Second, the relation between parents' implicit theories of intelligence and their failure beliefs was examined. Finally, we investigated whether different parenting styles could predict parents' implicit theories of intelligence. Data was collected through a survey posted online and processed with the IBM® SPSS® software. Results indicated that neither parents' gender not their educational level is

related to their implicit theories of intelligence. Additionally, no connection was found between views on malleability of intelligence and specific failure beliefs. Finally, permissive and authoritative parenting styles did not predict incremental theories of intelligence but the authoritarian style did. Suggestions for future research are also discussed.

Keywords: parents, implicit theories, intelligence, failure beliefs, parenting styles

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Introduction

Parents hold different beliefs regarding their children's abilities. One dimension that is particularly interesting is malleability. Some parents may believe that effort is the key to changing one's abilities, thus considering them as malleable, while others may believe that abilities are innate and therefore unchangeable by effort. What parents believe about their children influences significantly their parenting practices and consequently their children's behaviors (Bornstein et al., 2018). There is evidence that parents' implicit theories have significant effects on their failure beliefs, goal orientation, co-regulatory strategies and inevitably on their children's mindsets and self-regulation (Dweck and Leggett, 1988; Pomerantz and Dong, 2006; Blackwell et al., 2007; Moorman and Pomerantz, 2010; Burnette et al., 2013; Jiang et al., 2019; Stern and Hertel, 2020). Another dimension of abilities that should be taken into consideration is their relevance for success. In fact, when parents consider an ability to be important for their children's success, only then implicit theories regarding the malleability of that ability become relevant (Dweck and Leggett, 1988).

There is evidence that individuals can hold simultaneously different implicit theories about different domains (Muenks et al., 2015; Haimovitz and Dweck, 2017; Stern and Hertel, 2020). Some parents, for instance, might think that their children's ability to self-regulate is innate, therefore fixed, while their intelligence is changeable by effort. They might also think that self-regulation is relevant for success while intelligence is not. The different ways in which different domains and dimensions of implicit theories co-exist within individuals, affecting their attitudes, has not been extensively explored.

There is also evidence that parents' failure beliefs might be even more influential for children's development, since they are thought to be perceived more easily by children, who find the concept of intelligence quite abstract (Haimovitz and Dweck, 2016). Therefore, a simultaneous examination of both concepts might shed some light on the ways that these factors influence children's development.

This study will use a variable-centered approach. Two main variables will be used: malleability of intelligence and relevance for success. The relation between demographic variables (parents' gender and educational level) and the aforementioned variables will be investigated. Then, we will examine the association between parental failure beliefs and implicit theories of intelligence. Finally, we will explore whether different parenting styles (permissive, authoritative and authoritarian) can predict implicit theories of intelligence.

Implicit Theories of Abilities

It was Dweck and Leggett (1988) who, in their seminal work on social cognitive theory, first introduced the term implicit theories. With this term they referred to a system of personal beliefs and assumptions that individuals hold, regarding attributes and abilities about oneself or others, in an effort to understand and explain the world (Lüftenegger and Chen, 2017).

Implicit theories are at the heart of certain patterns of behavior that can be either adaptive or maladaptive for one's learning experience. For example, these theories might be the reason why some students see challenge as a threat of failure while others see it as a way to maximize their ability (Dweck and Leggett, 1988; Karlen and Hertel, 2021).

One aspect of ability that has been extensively studied, since Dweck and Leggett (1988) first placed implicit theories at the core of individuals' patterns of behavior, is malleability. Beliefs about abilities can be placed along a continuum, starting from incremental theories at one end, leading towards entity theories at the opposite end. Incremental theories view abilities as malleable, and effort is seen as a means to alter them, while entity theories regard abilities as innate and relatively fixed, unchangeable by effort (Dweck and Leggett, 1988; Karlen and Hertel, 2021).

So far, research on implicit theories has been conducted mainly with young learners and university students, demonstrating that individuals who hold incremental theories are more persistent with challenge, show higher levels of motivation, adopt sophisticated learning strategies and, consequently, they flourish academically (Dweck and Leggett, 1988; Blackwell et al., 2007; Burnette et al., 2013). More specifically, in a study conducted with a sample of Swiss preschoolers, Compagnoni et al. (2020) found that children who saw their willpower as a non-limited resource were more eager to exert effort and showed better behavioral self-regulation compared to their classmates with a more limited view of their willpower. In another study with a sample of Chinese primary school students, Su et al. (2021) found that students who held incremental theories had more positive failure beliefs and considered themselves more self-efficient in mathematics, something that ultimately influenced their academic achievement. In a survey with 244 secondary school students, Karlen et al. (2021) reported that students' implicit theories about self-regulated learning were positively related to their self-concept, learning strategies, enjoyment about learning and academic achievement. In another study conducted with Singapore students (Liu, 2021), incremental theories about intelligence were positively related to mastery-oriented goals while entity theories of intelligence

predicted performance-oriented goals. Finally, similar findings were reported in a study conducted with college undergraduates, showing that incremental implicit theories about motivation were linked to mastery-oriented goals (Wang et al., 2021).

It becomes evident that implicit theories about one's abilities play a determinant role in their motivation, willpower, self-regulation, learning strategies and academic achievement. But what is it that shapes a child's implicit theories at first place? One answer might be that parents' and teachers' implicit theories shape their co-regulatory strategies who in turn influence children's implicit theories (Karlen and Hertel, 2021).

Parental implicit theories are beliefs that parents hold regarding their children's abilities (Stern and Hertel, 2020). In research so far, there is evidence that parents' attitudes predict children's learning strategies and academic achievement as well as their social skills (Taylor et al., 2004). Pomerantz and Dong (2006) reported that mothers with high entity theories regarding their children's academic achievement influenced their children's academic functioning, while in the case of mothers who held low entity theories, children's academic achievement could not be predicted. Likewise, Moorman and Pomerantz (2010) showed that mothers who endorsed an entity theory were more unconstructively involved with their children than those with an incremental theory. Muenks et al., 2015 conducted two studies demonstrating that parents who believed that abilities are unable to develop, adopt a more controlling and performance-oriented approach, jeopardizing autonomy and mastery-oriented functioning. They also reported that parents with entity theories engaged less frequently with math and reading activities with their children. On the contrary, children's academic achievement seemed to be increasing when parents who held incremental theories adopted constructive learning-related approaches, thus

helping their children adopt incremental theories themselves (Matthes and Stoeger, 2018). Finally, Stern and Hertel (2020) explored parents' implicit theories of intelligence and self-regulation and, by using a person-centered approach, they identified three profiles of parents differing significantly in their failure beliefs, goal orientation and co-regulatory strategies. One of their findings was that parents with incremental theories about intelligence and self-regulation endorsed more adaptive behaviors compared to the other groups.

Findings reveal that different implicit theories, along the continuum from incremental to entity, can coexist within individuals, suggesting that they are relatively independent constructs (Dweck et al., 1995a; Haimovitz and Dweck, 2016; Schroder et al., 2016). This means, for example, that an individual holding an entity theory about a certain ability can at the same time endorse an incremental theory in another domain.

In a meta-analytic review, Costa and Faria (2018) sought to find the connection between implicit theories of intelligence and academic achievement. Findings suggest that implicit theories about one's own intelligence play a crucial role in their academic progress and emotional functioning. It is important to mention though that implicit theories of intelligence and general cognitive abilities are rather uncorrelated constructs (Dweck et al., 1995a).

Individuals holding entity theories believe that intelligence is unchangeable (Dweck and Leggett, 1988; Dweck, 1999) and consequently their performance is the result of that stability (Hong et al., 1999). On the other hand, incremental theorists believe that intelligence is an ability like any other which can increase with time and

effort. Thus, they are more likely to develop adaptive patterns of behavior to improve their skill and ability (Dweck and Leggett, 1988; Dweck, 1999).

As far as students' academic performance is concerned, research has shown that implicit theories of intelligence, either incremental or entity, play an important part on students' outcomes. Students who hold incremental theories focus on their intellectual and academic development (Elliott and Dweck, 1988; Robins and Pals, 2002), set learning goals (Dweck and Leggett, 1988) and adopt mastery-oriented behavioral patterns (Dweck and Leggett, 1988; Henderson and Dweck, 1990). More specifically, Hong et al. (1999) showed that students with incremental theories who received negative feedback tended to attribute it to lack of effort and were eager to take remedial action in order to improve their performance. These findings reveal the way effort is valued by incremental theorists and might also offer some insights into the mechanisms supporting motivation. In another study following students through college, Robins and Pals (2002) showed that students with incremental mindsets adopted learning goals and mastery-oriented strategies while their self-esteem steadily increased over college years. Additionally, findings suggest that students holding the belief that their intelligence is malleable received higher grades and were more eager to gradually take more advanced math courses (Romero et al., 2014).

On the contrary, students with entity theories, who believe that intelligence is innate and unchangeable by effort, have the tendency to adopt performance goals (Dweck and Leggett, 1988) and try to secure positive judgment instead of aiming for the increase of their skill (Elliott and Dweck, 1988; Robins and Pals, 2002). Moreover, they adopt helpless-oriented strategies (Robins and Pals, 2002) and accredit poor performance to lack of ability, making effort seem pointless (Stipek and Gralinski, 1996; Hong et al., 1999).

As for parents' implicit theories of intelligence initial studies show that they can predict children's academic performance as well as parental co-regulatory and learning-related strategies (Pomerantz and Dong, 2006; Moorman and Pomerantz, 2010; Rautiainen et al., 2016; Matthes and Stoeger, 2018; Stern and Hertel, 2020). The link, if there is any, between parents' implicit theories of intelligence and the different parenting styles has been explored yet.

Another important aspect of implicit theories is their relevance for success (Stern and Hertel, 2020). If parents consider an ability detrimental for their children's success, they will support its development. This means that only when parents believe that an ability is relevant for success will their implicit theories, incremental or entity, be activated (Spinath and Schöne, 2003).

Implicit Theories and Failure Beliefs

Early childhood is the time when children are in the process of developing their abilities and acquiring new skills. Unavoidably, they often find themselves in the face of failure. Equally, students describe their academic failures as the most unpleasant events in their daily lives (Mantzicopoulos, 1997). This is what makes the role of parents very important in supporting them and enabling them to overcome their challenges (Bernier et al., 2010). What individuals believe as the origin of failure is closely linked to the implicit theories they hold regarding the malleability of abilities (Dweck and Leggett, 1988).

Individuals holding incremental theories see failure as a lack of effort, which makes them more persistent through challenge and more receptive to negative feedback. Ultimately, failure is considered as an opportunity to deepen one's learning. On the contrary, individuals holding entity theories see failure as a sign of

incompetence and they attribute it to their limited skill or ability. As a consequence, entity theorists are more likely to give up when faced with failure (Dweck and Leggett, 1988; Blackwell et al., 2007; Haimovitz and Dweck, 2016). Interestingly though, research has demonstrated that children who avoid challenge have no less ability than those seeking challenge (Dweck and Leggett, 1988).

Based on research regarding parental implicit theories of intelligence and their inconsistent connection to their children's theories of intelligence (Gunderson et al., 2013), Haimovitz and Dweck (2016) argued that perhaps the notion of intelligence is quite abstract and therefore parental theories are not clearly perceived by their children. Instead, they suggested that maybe parental failure beliefs are more distinctly manifested through their behavior and thus more influential for their children's beliefs. In their research, Haimovitz and Dweck (2016) identified two types of parental failure mindsets: A failure-is-enhancing mindset, where parents see failure as an enhancing experience that supports learning and growth, and a failure-is-debilitating mindset where parents see failure as a debilitating and counter-productive experience that inhibits learning.

Inevitably, parents' beliefs regarding failure influence their parenting behaviors, as for example their reaction to their children's setbacks. Parents who regard failure as a debilitating experience adopt more performance-oriented practices because their children's performance is of most importance to them. They are also concerned about their children's lack of ability and they seem to provide less support for them. On the other hand, parents with failure-is-enhancing beliefs are more concerned about their children's learning experience (Haimovitz and Dweck, 2016). In the same research, Haimovitz and Dweck (2016) suggest that parents' implicit theories and parents' failure beliefs might be independent constructs. This means, for

example, that some parents might view failure as debilitating for certain self-regulatory abilities but enhancing for the development of intelligence.

Taking this issue one step further, Stern and Hertel (2020) tried to examine the link between parents' implicit theories of intelligence and self-regulation and parents' failure beliefs. They demonstrated that there is a strong connection between incremental theories and failure-is-enhancing mindsets.

Implicit Theories and Demographic Differences

There has not been enough evidence regarding demographic variables and how they are related to parents' implicit theories. Research so far has been scarce, focusing mainly on variables such as age, gender and educational background, but it remains quite unclear how these are linked to implicit theories.

As far as age in concerned, Chen (2012) explained that students who have been performing well in science might believe that their abilities are innate, holding therefore entity theories. Additionally, Stern and Hertel (2020) found that parents with entity theories were younger in age and had younger children than parents with incremental theories. These findings however were not statistically significant.

It seems that there is no significant connection between gender and implicit theories (Pomerantz and Dong, 2006; Burnette et al., 2013; Jiang et al., 2019). Nevertheless, mothers and fathers do not usually share the same principles regarding child rearing (Lareau, 2000), but there is evidence that their implicit theories are linked to their involvement in their children's education (Jiang et al., 2019). Additionally, girls are more likely to avoid difficult tasks and they consider failure as the result of limited ability, while boys are more eager to accept challenge (Dweck,

1986; Chen, 2012). There also seems to be a difference in parents' implicit theories regarding their child's gender. Eccles et al. (1990) pointed out that parents are more likely to view their daughters' achievement as the result of effort while they accredit their sons' achievement to talent.

As for parents' educational background, findings are contradictory. Some researchers suggest that the more educated an individual is the more likely it is that they hold incremental theories (Pomerantz and Dong, 2006; Jiang et al., 2019). These findings were verified by Stern and Hertel (2020) who revealed that in their sample, parents with the lowest educational level were entity theorists. Other findings contradict this idea, demonstrating that parents with an academic education believe that abilities are innate, holding therefore entity theories (Rautiainen et al., 2016).

Inconsistent findings regarding parents' implicit theories and variables such as age, gender and educational level call for more research that will shed some light on how these characteristics affect individuals' implicit theories.

Parenting Styles

Theoretical Framework

During the past decades, the parenting style construct has been in the center of attention for many researchers, particularly those specializing in socialization issues. It was well understood that parents' behavior plays a major role in children's development. On the one hand, Freudians supported the view that biology determines development, and therefore societal and parental demands are irrelevant, if not conflicting, to the human nature. Behaviorists, on the other hand, focused on how

development is influenced by reinforcing behaviors in the family environment (Darling and Steinberg, 1993).

However, documenting the ways in which individual practices influence development proved to be a complicated task. In order to assess parenting style, both qualitative and quantitative research was conducted based on three components: the emotional relationship between parent and child, parental practices and behaviors, and parents' belief systems. Research was conducted by researchers from different theoretical backgrounds and therefore, they used different approaches and concluded in different definitions of style.

Before proceeding to the different approaches, it is important to make a distinction between parenting style and parenting practice. Very often, researchers use the terms parenting style and parenting practice as equivalent, when in fact they are two different concepts. According to Baumrind (1966), parenting style is a set of attitudes through which parents interact with their children, creating an emotional climate in which the child develops and learns how to socialize. Parenting practices are specific behaviors of the parents, that are observable and purposefully directed to the socialization of their children, such as asking about their children's friends and attending school functions (Darling and Steinberg, 1993). The relationship between parenting typologies and parenting practices is complicated, since the latter are included in the former. As a whole, parenting style constitutes the general framework of attitudes and perceptions in which parenting practices are applied.

The psychodynamic model. The psychodynamic model places emphasis on the emotional relationship between parent and child and on the different ways in which it effects the child's psychosexual, psychosocial, and personality development. In order

to define the parent-child emotional relationship, researchers tried to establish the connection between specific parental behaviors and parental attitudes. Schaefer (1959) was the first who developed a framework for parenting styles by grouping specific parenting practices, based on their potential to influence the child's emotional development. His model was based on two dimensions of behavior: Autonomy versus Control and Love versus Hostility (A similar dimension was described by Symonds, 1939, placing at opposite ends Acceptance and Rejection). Autonomy would be at the positive end of the first dimension and the negative end would include intrusiveness, excessive control, excessive contact and emotional involvement, achievement expectations and nurture of dependency. Affection and positive evaluation of the child would be at the positive end of the second dimension and on the negative end would be disregard of the child, punishment, controlling behaviors, irritability and consideration of the child as a burden. These two dimensions of behavior were the results of a first attempt to create a typology of parenting styles.

The learning model. The learning model was the result of behaviorists' research supporting the idea that the learning environment in which children are raised is at the heart of their development. Therefore, emphasis was placed on parenting practices and not on parenting attitudes. Parenting style was not considered as an entity. It was rather considered as the sum of specific parenting practices (Darling and Steinberg, 1993).

Dimensions of style. Researchers from different theoretical backgrounds, who understood the importance of conceptualizing parenting styles, focused on different developmental and socialization processes. However, the dimensions they proposed were significantly similar. As mentioned before, Symonds (1939) proposed two dimensions including acceptance versus rejection and dominance versus submission.

Baldwin (1955), talked about emotional warmth versus hostility and detachment versus involvement. Similarly, Sears et al. (1957), introduced the dimension of warmth and permissiveness versus strictness, and Becker (1964), proposed the dimension of warmth versus hostility and that of restrictiveness versus permissiveness.

Baumrind's Typology

All previous findings prepared the ground for Baumrind (1966), to focus her research on the influence that parental authority has on child development. She specified the concept of control and identified three parenting styles based on that concept: authoritarian, permissive and authoritative style.

Authoritarian. Authoritarian parents base their efforts to mould, control and assess the behavior of their children on a set of values, quite obsolete, usually in accordance with theological standards (Baumrind, 1966). They are strict, they demand obedience and can be punitive when their children's actions are not in line with their perception of appropriate conduct (Gota, 2012). They do not show affection nor do they encourage open communication with their children. On the contrary, they believe that their word should be respected and followed for what it is. They are exceedingly demanding and they exert psychological control (Baumrind, 2013; Baumrind et al., 2010). This type of parenting has been related to children's rebellion (Baumrind, 1968), adolescents' maladjustment and incompetence (Baumrind et al., 2010), as well as externalized problems (Maccoby & Martin, 1983).

Permissive. Permissive parents behave in the exact opposite way from authoritarian parents. They are affectionate, nonpunitive and they respond affirmatively to their children's impulses and behaviors (Baumrind, 1966). They do not exert psychological

control, they rarely try to control their children's behavior, while they encourage them to express their feelings and act independently (Gota, 2012). Permissive parents allow their children to participate in decision making processes about rules (Maccoby & Martin, 1983) and have very few behavioral demands (Baumrind, 1966). This type of parenting has been related to lower competence (Baumrind, 1971), lower autonomy (Baumrind et al., 2010) and lack of impulse control (Maccoby & Martin, 1983).

Authoritative. Authoritative parents are warm, they express love and affection, and try to guide their children's behavior in a rational manner. They encourage verbal communication and explain the reasoning behind each rule (Maccoby and Martin, 1983). They promote independence and try to cultivate their children's self-will but at the same time they stay firm to their own perspective, keeping in mind their child's unique traits (Baumrind, 1966). Authoritative parents use reinforcement to encourage positive behavior and are not influenced by their child's desires nor by group consensus. Authoritative parenting style has been described as optimal by researchers (Baumrind, 2013; Maccoby & Martin, 1983) because it has been associated with many positive child outcomes such as independence, social responsibility, high achievement (Baumrind, 1971b), self-reliance (Baumrind, 1968) and maturity (Baumrind et al., 2010).

Baumrind's contribution is essential because she saw parenting style as an attribute of the parent alone and not a characteristic of the parent-child relationship. Additionally, she argued that parenting style influences children's openness to their parents' efforts to socialize them, unlike previous models who had not taken this dimension into consideration (Darling and Steinberg, 1993).

Maccoby and Martin's Framework

By the early 80's, Baumrind's typology played the leading role in all scientific discussions concerning parents' influence on child development. Her model described patterns of parental control and child socialization. In 1983, Maccoby and Martin reclassified parenting styles based on two dimensions: responsiveness and demandingness (Maccoby and Martin,1983). Responsiveness was about parental warmth, support and acceptance while demandingness was about control and power assertion. Their model did not contradict Baumrind's typology, it rather added to it. Authoritarian parents are demanding but not responsive when it comes to reinforcement. Authoritative parents are equally demanding and responsive, while permissive parents are responsive but not demanding. Parents who are neither demanding nor responsive constitute a fourth parenting style, the uninvolved parent. This style has also been referred to as neglecting (Steinberg et al., 1994) and disengaged (Baumrind et al., 2010).

Uninvolved. Uninvolved parents are rejecting and do not exert control over their children. They put minimum effort and give minimum time to their parenting role and they avoid monitoring their children's behavior (Baumrind, 1989). They can be hostile or not responsive at all to their children's needs.

Finally, Baumrind (2013) proposed that, instead of examining responsiveness and demandingness, a better definition of the four parenting typologies can be achieved by investigating the dimensions of acceptance versus rejection, psychological control and behavioral control that are distinctive to each style.

Factors influencing parenting style

Parenting practices are influenced by a number of factors which in turn shape parenting style. Some of these factors are the parents' personality and relationship to each other, the lack of social support, the child's personality and developmental history, the family's cultural context and the parents' socialization experiences (Breiner et al., 2016).

Child rearing is the way through which the values and ideals of each culture are transmitted from generation to generation. Parenting style emerges from a number of factors, including individual characteristics of the parent and the child, but also from the socioeconomic status and cultural background of the parent. Consequently, parental behaviors are influenced by the cultural context which occupies a prominent position in research on parenthood. Keshavarz & Baharudin (2009) explain that parental behaviors are influenced - directly or indirectly - by the collectivism or the individualism of each society. For example, in collectivistic societies parents promote values such as mutual aid, sociability, conformity, and commitment to social values in the socialization of the child. Conversely, in individualistic societies parents promote autonomy, individuality, self-restraint, emotional independence and children's self-confidence.

Vafaeenejad et al. (2018) reported that parenting style is influenced both by the psychological characteristics of the parent and the child. Specifically, the psychological characteristics of the parent are:

Mental health status. Parents experiencing psychological disorders may be hostile and rejecting towards their children. They are often harsh, using even physical

punishment. Parents with major depressive disorder, bipolar disorder, anxiety and schizophrenia adopt usually the authoritarian style of parenting.

Self-efficacy. Self-efficient parents have confidence in themselves, which makes them more persistent with positive parenting practices, even in difficult situations, such as limited social support and financial problems.

Parenting stress. Parental stress often surfaces because the requirements parents set for themselves in order to be considered successful in their role, often exceed their true potential. They become less protective and more punitive and rejecting of their children, while they usually adopt the authoritarian style.

Perfectionism. Perfectionist parents are overly critical of themselves and demand from their children to achieve everything they failed to achieve when they were younger. Their expression of love depends on whether their child obeys them completely or not. They adopt an authoritarian style.

Personality traits. Parents with agreeable personality traits such as extroversion, conscientiousness and openness to new experiences are more socially accepted, have more stable personalities and are therefore less prone to developing depression. They are more likely to adopt positive parenting strategies compared to parents with personality traits such as introversion, nervousness, who opt for more restrictive parenting styles.

Childhood trauma. Any form of abuse during childhood can be considered as a risk factor for negative parenting practices. Parents who have experienced trauma tend to be more hostile and neglectful towards their children and they experience greater stress when it comes to their parenting role.

Marital satisfaction. Parents who have a good relationship, behave positively to their children, while when they are not happy in their marriage, they transfer their negative feelings to their relationship with the children.

Parents' attachment style. Past family conditions and relationships between the immediate family members can determine ones parenting style. Parents who maintained strong and secure relationships with their own parents, are more intimate and responsive towards their children, usually adopting warm parenting styles. On the contrary, parents with more insecure attachment to their parents show more anger and less intimacy towards their children.

Perceived parenting style. As parents, individuals usually adopt the parenting style of their own parents. When children experience love and responsiveness from their parents, they will develop an emotional security and ability for intimacy which will be later transferred to their own children. On the contrary, parents with a background of restriction and punishment are more likely to follow the same path with their children.

Substance use. Substance use is a risk factor for psychological disorders, marital problems and abuse, all leading to poor parenting practices.

The psychological characteristics of the child that influence parenting style are (Vafaeenejad et al., 2018):

Developmental and mental disabilities. A child's disability may cause emotional distress and psychopathological difficulties in parents, due to their tendency to overprotect their children or their inability to manage their children's differences. As a result, they tend to adopt negative or inappropriate parenting practices.

Child temperament. Parents may become hostile and less affectionate when their child is maladaptive, gets angry easily, is hyperactive, shy or emotionally immature. This is due to the fact that they might feel challenged or inadequate and therefore they adopt more negative parenting practices and the authoritarian parenting style.

Anxiety. Child anxiety disorder leads to the adoption of negative parenting practices because, as in the case of physical and mental disabilities, the parental stress is high and this leads to overprotection and less independence.

Parenting Styles and Beliefs about Intelligence

So far, we have tried to present the efforts made by the scientific community to define the different parenting styles and the ways in which each one of them influences child development. We have also presented the different characteristics, known so far in literature, that influence parenting style. Darling & Steinberg (1993) assume that specific social representations about child development, as well as specific goals that parents have for their children's education might also influence their parenting style. As mentioned before, the idea of intelligence is of particular interest for both parents and educators, who explicitly try to influence its development. Based on an initial study by Mugny & Carugati (1985), who suggested that representations of development may influence parental behaviors, Miguel et al. (2013) explored the relationship between social representations of the development of intelligence and parenting styles. They concluded that what parents desire for their children as well as their representations about the development of intelligence seem to determine parental behaviors and parenting style. However, the way parents respond to their children is the result of a combination of numerous factors and their beliefs about intelligence is only one of them. Parents' implicit theories of intelligence (as far

as malleability is concerned), and the way they relate to different parenting styles is an area that remains unexplored and this study aims to shed some light on this relation.

The Current Study

The current study seeks to explore the relation between parents' implicit theories of intelligence (regarding malleability and relevance for success) and demographic variables, such as gender and educational level, using data collected from a Greek sample. Moreover, previous research has shown that parents who hold incremental theories (intelligence is malleable) see failure as an enhancing experience, while parents holding entity theories (intelligence is fixed) consider failure as a debilitating experience. Thus, a further aim of this study is to explore the relation between parental implicit theories of intelligence and parents' failure beliefs. Finally, the relation between parenting styles and theories of intelligence has not been explored in literature. Therefore, the final aim of this study is to investigate whether different parenting styles can predict parental theories of intelligence.

More precisely, the following research questions and hypotheses will be explored:

1) How implicit theories of intelligence, as far as their malleability and relevance for success are concerned, vary regarding different demographic variables, such as gender and level of education?

Hypothesis 1: There is not going to be a difference in the mean scores between male and female participants' implicit theories of intelligence.

Hypothesis 2: There is going to be to be a difference in the mean scores between participants' implicit theories of intelligence and different levels of education (high school diploma, bachelor's, master's, PhD)

2) How parental implicit theories of intelligence (incremental or entity) are related to parents' failure beliefs (failure-is enhancing, failure-is-debilitating)?

Hypothesis 3: It is hypothesized that there is going to be a relationship between incremental theories of intelligence and failure-is-enhancing mindsets as well as entity theories and failure-is-debilitating mindsets.

3) Can the different parenting styles – authoritarian, authoritative, permissive – predict parents' implicit theories of intelligence?

Hypothesis 4: It is hypothesized that there will be a linear relation between each of the three parenting styles and incremental theories of intelligence (intelligence is malleable).

Chapter Two

Method

Participants

For the needs of this study, a convenience sample of 105 participants was recruited. The survey was created with Google Forms, a survey administration software, and was distributed through social-network platforms. Participants had to be at least 18 years old and ought to have a very good command of the Greek language since the survey was administered in Greek. They also had to be parents of children aged from four to 12 years old. These were the only inclusion criteria. After the data collection, all participants were included in the analysis. Most participants were female (72,4%) and the majority of parents had at least a bachelor's degree from a Technical University (81%). Parents were asked to think about their child when answering the questions. 54,3% of the parents thought about their daughter and 45.7% thought about their son.

Instruments

For the purpose of this study, a survey was composed by a brief demographics' questionnaire, developed by the researcher, and three validated questionnaires testing for the constructs in question: The "Skalen zur Erfassung subjektiver Überzeugungen zu Bedingungen von Erfolg in Lern- und Leistungskontexten," SE-SÜBELLKO-ST (Spinath and Schöne, 2003), testing for parents' implicit theories of intelligence, the Haimovitz and Dweck (2016) scale assessing parents' failure beliefs, and the "Parenting Styles and Dimensions Questionnaire" (short version) – PSDQ (Robinson et al., 2001), exploring different

parenting styles (see Appendix A). Here follows a description of the abovementioned questionnaires.

Demographics

The first part of the survey was a questionnaire aiming at the collection of demographic information. Participants were asked to report on their gender, highest diploma received, age and gender of the child for which they filled in the survey.

Implicit Theories of Intelligence

A translated version, from German to Greek, of the "Skalen zur Erfassung subjektiver Überzeugungen zu Bedingungen von Erfolg in Lern- und Leistungskontexten," SE-SÜBELLKO-ST scale (Spinath and Schöne, 2003) has been used to assess parents' implicit theories of intelligence. The original scale was requested by their creators and translated, with the back-translation method, from German to Greek (see Appendix B). Items were modified so that parents would refer specifically to their child (e.g., "To succeed academically, my child not need to be particularly intelligent" modified as "To succeed academically, one does not need to be particularly intelligent"). Two dimensions of intelligence were assessed by three items each: malleability and relevance for success. Items were modified so that parents would refer specifically to their child. Using a five-point-scale, parents assessed the malleability of their children's intelligence (e.g., "When my child learns new things, his/her intelligence… stays the same/ changes") and the relevance for success of their children's intelligence (e.g., "To succeed academically, high intelligence… is not/ is necessary"). Higher values designated more agreement regarding the malleability of intelligence and its relevance for success.

Failure Beliefs

A translated version, from English to Greek, of the scale by Haimovitz and Dweck (2016) assessing parents' failure beliefs, has been used. The original scale was requested from their creators and translated, with the back-translation method, from English to Greek (see Appendix B). Items were modified so that parents would refer specifically to their child (e.g., "Experiencing failure debilitates learning and development" modified as "Experiencing failure debilitates my child's learning and development"). Two mindsets were assessed by three items each: a failure-is-enhancing mindset (e.g., "Experiencing failure enhances my child's performance and productivity" and a failure-is-debilitating mindset (e.g., "Experiencing failure debilitates my child's performance and productivity". Using a five-point-scale, parents assessed their beliefs from extremely untrue (1) to extremely true (5). The items assessing the debilitating mindset were reverse-scored and averaged with all items to a composite score. Higher values designated a more enhancing belief regarding failure.

Parenting Styles and Dimensions Questionnaire (PSDQ) – Short Version

The PSDQ - short version by Robinson et al. (2001) consists of 32 items. This is the short version of the Parenting Practices Questionnaire – PPQ (Robinson et al., 1995) which was constructed by the same authors and consisted of 62 items (Kimbley, 2014). The authors based their work on Baumrind's typology (1966) – authoritarian, authoritative and permissive parenting styles – and they tried to create an instrument that would be appropriate to use by both mothers and fathers and that would refer to both preschool and school aged children (Robinson et al., 1995).

The short version was obtained by applying Confirmatory Factor Analysis - CFA and Structural Equation Modeling – CEM (Robinson et al., 2001). The process highlighted three groups of questions – factors – corresponding to the different parenting styles. The first factor, the authoritative parent, consists of 15 questions, with a Cronbach's alpha reliability index of .86 referring to (a) the degree of warmth and support (questions 7, 1, 12, 14, 27), (b) the degree of control and reasoning (questions 25, 29, 31, 11, 5) and (c) the degree of autonomy and children's participation in decisions (questions 21, 9, 22, 3, 18). The second factor, the authoritarian parent, consists of 12 questions, with a Cronbach's alpha reliability index of .82 referring to (a) the physical coercion of children (questions 2, 6, 32, 19), (b) the degree of verbal hostility (questions 16, 13, 23, 30) and (c) the degree of punishment imposed without reasoning (questions 10, 26, 28, 4). The third factor, the permissive parent, consists of 5 questions, with a Cronbach's alpha reliability index of .64, referring to the degree of tolerance and indulgence (questions 20, 17, 15, 8, 24) (Robinson et. al., 2001).

The questions are answered on a 5-point Likert scale, where 1= Never, 2= Rarely, 3= Sometimes, 4= Very Often and 5= Always. The mean score of the responses to the questions for each parenting style gives a separate score for each factor and the largest mean score of the three styles indicates increased use of parenting practices associated with the respective style of parenting (Robinson et. al., 2001).

The Greek version of the PSDQ has been adapted to the Greek population by Maridaki-Kassotaki (2009). Cronbach's alpha reliability index ranged between .63 and .88, confirming the reliability of the adaptation of the specific questionnaire to a population of Greek fathers (Maridaki-Kassotaki, 2009). The reliability of the

adaptation of the parental typology questionnaire to a population of Greek mothers was also confirmed, with a Cronbach alpha reliability index ranging from .65 to .88 (Antonopoulou and Tsitsas, 2011).

Procedure

Participants were recruited during a ten-day period, between the 20th and 30th of September 2022. They were asked to complete an online survey created for the purposes of this research. A brief description of the study was included in the online invitation together with some guidelines for the completion of the survey, a note that the whole process would take less than 10 minutes to complete, and a reminder of the inclusion criteria (Adult, Greek-speaking parents of children between four and 12 years old). Finally, prior to their participation, parents were asked to submit an online informed consent form by clicking the 'next' button appearing on the screen (see Appendix C). After this step, the questionnaire was available for completion (see Appendix A). Every question had to be answered in order for the participants to be able to submit their final answers. Upon completion, a debriefing form followed, summing up the purposes of this research and thanking the participants for taking the time to complete the survey (see Appendix D). Participants' anonymity was ensured because, other than their gender and level of education, no personal identifiers were collected.

Data analysis

The data collected were processed by using the IBM® SPSS® Statistics software. First, the internal consistency of the translated questionnaires weas investigated by running Cronbach's alpha. Then, in order to describe the sample of this study, descriptive statistics were applied. For the first research question,

investigating the relation between parental implicit theories of intelligence and demographic variables, a t-test was used to compare the means of the different demographic variables (parent's gender and level of education) in terms of their scores in: intelligence – malleability, intelligence – relevance for success, For the second question, Pearsons correlation was applied to reveal possible associations between parents' implicit theories of intelligence – incremental or entity – and their failure beliefs – failure-is-enhancing, failure-is-debilitating. For the third question, a linear regression analysis was used to explore whether the different parenting styles (authoritarian, authoritative, permissive) could predict incremental theories of intelligence.

Chapter Three

Results

Descriptive Statistics

For the first part of the statistical analysis, descriptive statistics were calculated to describe the characteristics of the sample. 105 individuals completed the survey, 72.4% (76) of which were female and 27.6% (29) were male. As for their level of education, 19% (20) had a high school diploma, 9.5% (10) had a bachelor's degree from a technical university and 28.6% (30) a bachelor's degree from a higher institution. 36.2% (38) had obtained a master's degree and 6.7% (7) a PhD. Parents were asked to think about their child while completing the survey. 54.3% (57) thought about their daughter and 45.7% (48) thought about their son. The survey was addressed to parents with children from the age of four until the age of 12. 32.4% (34) of the children were between four and six years old, 40% (42) were between seven and nine years old and 27.6% (29) were between ten and 12 years old. All the above-mentioned demographic characteristics of the sample are presented in Table 1.

The "Skalen zur Erfassung subjektiver Überzeugungen zu Bedingungen von Erfolg in Lern- und Leistungskontexten," SE-SÜBELLKO-ST questionnaire (Spinath and Schöne, 2003), used to measure parents' implicit theories of intelligence, showed that the mean values of parental implicit theories regarding malleability of intelligence and its relevance for success were 2.69 (SD = 0.75) and 1.32 (SD = 0.52) respectively.

Parental failure beliefs assessed by the Haimovitz and Dweck (2016) scale, revealed a mean value of 2.61 (SD = 0.58) for the failure-is-enhancing mindset and a mean value of 2.68 (SD = 0.67) for the failure-is-debilitating mindset.

Finally, descriptive statistics for the "Parenting Styles and Dimensions Questionnaire" (short version) – PSDQ (Robinson et al., 2001), exploring different parenting styles, revealed a mean value of 3.11 (SD = 0.42) for the authoritative parenting style, a mean value of 0.95 (SD = 0.41) for the authoritarian parenting style and a mean value of 1.59 (SD = 0.57) for the permissive parenting style.

Internal Consistency of Translated Questionnaires

To evaluate the internal consistency of the SE-SÜBELLKO-ST scale (Spinath and Schöne, 2003) which was translated from German to Greek and of the Haimovitz and Dweck (2016) scale which was translated from English to Greek, the Cronbach's alpha coefficient was used. For the first factor of the first scale (SE-SÜBELLKO-ST) testing for the malleability of intelligence (3 questions), Cronbach's alpha was α=0.796, and for the second factor, testing for intelligence's relevance for success, it was α=.695. For the second scale about failure beliefs, Cronbach's alpha for the first factor, failure-is-enhancing (3 questions), was α=.670 and for the second factor, failure-is-debilitating (3 questions) it was α=.773. For a questionnaire to be considered reliable, α should be >0.6. In the case of these particular questionnaires, the reliability is satisfactory as α is above 0.65, which makes the questionnaires and their results reliable.

Hypotheses Testing

First Hypothesis

The first hypothesis of the study states that there is not going to be a difference in the mean scores between male and female participants' implicit theories of intelligence. In order to investigate this hypothesis, a t-test was conducted and the statistical analysis confirmed this hypothesis. There was no significant difference

between female (*M* = 2.70, *SD* = 0.78) and male (*M* = 2.67, *SD* = 0.70) participants' mean scores regarding their beliefs about the malleability of intelligence (t = -0.186, p = 0.853). Also, there was no significant difference between female (*M* = 1.33, *SD* = 0.55) and male (*M* = 1.30, *SD* = 0.43) participants' mean scores regarding their beliefs about intelligence's relevance for success (t = -0,303, p = 0.763). The above results confirm that parents' gender does not influence their beliefs regarding malleability of intelligence and its relevance for success (see Table 2).

Second Hypothesis

The second hypothesis of this study states that there is going to be a difference in the mean scores between participants' implicit theories of intelligence and different levels of education (high school diploma, bachelor's degree from a Technological Education Institute or a University, master's, PhD). To investigate this hypothesis, an ANOVA test was used to determine if there was a statistically significant difference between parents' implicit theories of intelligence regarding a) malleability and b) relevance for success and their different educational levels. The test did not yield statistically significant results neither regarding malleability of intelligence, *F* (4.104) = 0.631, p = 0.642, nor regarding its relevance for success, *F* (4.104) = 0.119, p = 0.975. The above results do not confirm the hypothesis that parents' level of education influences their beliefs on malleability of intelligence (see Table 3a). and its relevance for success (see Table 3b).

Third Hypothesis

In order to investigate the third hypothesis which states that there is going to be a relationship between incremental theories of intelligence (intelligence is malleable) and failure-is-enhancing mindsets as well as entity theories of intelligence

(intelligence is fixed) and failure-is-debilitating mindsets, the Pearsons correlation coefficient was employed. However, the analysis did not confirm the hypothesis concerning the relation between incremental theories of intelligence (intelligence is malleable) and failure-is-enhancing mindsets, $r\ (103) = .010$, $p = .916$, neither the hypothesis concerning the relation between entity theories of intelligence (intelligence is malleable) and failure-is-debilitating mindsets, $r\ (103) = .083$, $p = .398$ (see Table 4).

Fourth Hypothesis

In order to investigate the fourth hypothesis which predicts that permissive, authoritative and that authoritarian parents will hold incremental theories of intelligence (intelligence is malleable), we first employed the Pearsons correlation coefficient in order to test for correlations between the three parenting styles and malleability of intelligence. Findings suggest that malleability of intelligence is negatively correlated with the authoritarian parenting style ($r = -.297$, $p = .002$) and that there is no correlation between malleability of intelligence and authoritative ($r = .089$, $p = .366$) and permissive ($r = -.176$, $p = .072$) parenting styles, $p>0.05$.

After exploring the correlation between the variables, a linear regression analysis was carried out to determine whether each one of the three parenting styles (permissive, authoritative and authoritarian) predicted incremental theories of intelligence. The linear regression analysis showed that the permissive and authoritative parenting styles did not predict incremental theories of intelligence. However, there was a significant linear relationship between the authoritarian parenting style and incremental theories of intelligence, $F(1,103) = 9.987$, $p<0.002$. Consequently, the fourth hypothesis was partially confirmed (see Table 6).

Chapter Four

Discussion

Implicit theories regarding abilities that individuals hold play a major role in the way they perceive failure, set goals and ultimately, they achieve in life. Inevitably, implicit theories influence one's attitudes and in the case of parents, their attitudes and behaviors can shape their children's development (Taylor et al., 2004; Rautiainen et al., 2016). Research exploring parental implicit theories of intelligence is not extensive and dates back a few decades only. Therefore, the main aim of the present study was to add to the efforts examining parents' implicit theories of intelligence and the ways they are related to other domains, such as failure beliefs and parenting styles.

More specifically, the intention was to explore the relation between aspects of parents' implicit theories of intelligence, such as malleability and relevance for success, and certain demographic variables, such as parents' gender and level of education, within a Greek sample. It was also intended to investigate the relation between implicit theories and parents' failure beliefs as well as the relation between implicit theories of intelligence and parenting styles. Research on these domains constituted the framework on which these constructs were examined. Reviewing the relevant literature, provided indices that there was indeed a relationship among the above-mentioned constructs and thus the different hypotheses were formed and investigated.

The first hypothesis of the current study supported the view that parents' gender does not influence their implicit theories of intelligence. The results confirmed the hypothesis because the mean scores of male and female participants regarding the two dimensions explored, malleability of intelligence and relevance for success, were

not significantly different. This finding is in line with earlier literature on implicit theories of intelligence (Dweck et al., 1995b).

In their study, Haimovitz and Dweck (2016) tried to examine whether it was parents' theories of intelligence or their failure beliefs that influenced more their children's mindsets. Amongst other variables, the effect of parental gender was tested and no significant relation was found. Similarly, Rautiainen et al. (2016), explored the association between parents' implicit theories of intelligence and several factors, including parents' gender. Results concluded that there was no association between parents' views regarding malleability of intelligence and their gender. Finally, Stern and Hertel (2020), using Latent Profile Analysis (LAP), came up with three profiles of parents based on their implicit theories of intelligence. They found that there was no statistically significant difference regarding gender between the three profiles.

It is common in literature on implicit theories of intelligence not to find a distinction between male and female participants. Against the popular fascination with gender differences, some early researchers tried to explain that psychological differences between males and females were in fact less important than within-gender variations (Thorndike, 1914). Therefore, a possible explanation for the non-significant difference between mothers' and fathers' views regarding their implicit theories of intelligence might be found in the gender similarities hypothesis, proposed by Hyde (2005). In order to test this hypothesis, she performed a meta-analysis including all research that had been conducted on psychological gender differences until that time. She found that 78% of gender differences were either too small or close to zero, even in areas, such a mathematics performance or verbal skills, where differences between genders were traditionally considered reliable. Large gender differences were noted in the areas of motor performance, sexuality and physical aggression. Hyde also

emphasized that the context in which gender differences are studied has the power to create, diminish or change these differences.

The second hypothesis of this study suggested that parents' educational level influences their implicit theories of intelligence. The results did not confirm the hypothesis because the mean scores between participants' level of education and the two dimensions explored, malleability of intelligence and relevance for success, were not statistically significant.

The review of the literature regarding the relation between implicit theories of intelligence and parents' educational level revealed contradictory findings. Most researchers linked higher levels of education to incremental theories of intelligence (Pomerantz and Dong, 2006; Jiang et al., 2019; Stern and Hertel, 2020). Based on these findings, the second hypothesis was formed. However, data analysis showed that within this particular sample, beliefs about the malleability of intelligence were unrelated to parents' educational level, and so were their beliefs about its relevance for success.

Similar findings were reported by Rautiainen et al. (2016). In their research, they supported the opposite idea than most researchers, that parents with a higher academic education would lean towards entity theories of intelligence. Their view was based on the idea that well educated parents are more likely to support the theory of natural giftedness (Räty and Snellman, 1998), which states that abilities are innate. However, their hypothesis was not confirmed, demonstrating no relation between parents' educational level and implicit theories of intelligence. The explanation they provided for this outcome was that although educated parents value cognitive

abilities, less educated parents consider their children more resilient and able to face failure thanks to their inner potential (Räty et al., 2014).

Another possible explanation for the non-significant relationship between implicit theories of intelligence and parents' level of education might be the socioeconomic status of this particular non-probabilistic sample. Participants were recruited through an invitation published on social media accounts, with a request to forward it to other parents meeting the inclusion criteria. It is possible that, educational level aside, most participants belonged to a middle or higher socioeconomic status, thus having more time and access to resources for their children. In a recent study, carried out by List et al. (2021), it was demonstrated that parents with high and middle socioeconomic status were more inclined to support the view that parental investments are beneficial for the development of their children's skills than parents with low socioeconomic status. The majority of the current study's sample leaned towards incremental theories, considering intelligence as malleable. This tendency might be explained through List et al.'s (2021) findings. Parents with middle or high socioeconomic status, provide support for their children because they believe that this effort will bring a change to the development of their children' skills. Adding to this idea, most parents leaned towards the belief that intelligence is not absolutely relevant for success, which is something that would make them invest more time and resources for their children's progress. Parents' level of education was not related to their implicit theories but it is possible that their socioeconomic status was responsible for this inclination towards incremental theories. However, this variable was not accounted for in this study.

The third hypothesis of this study aimed to examine the relation between parents' implicit theories of intelligence and their failure beliefs. More specifically, it

was hypothesized that there would be a relationship between incremental theories of intelligence and failure-is-enhancing mindsets as well as between entity theories of intelligence and failure-is-debilitating mindsets. The Pearsons correlation did not reveal a significant relation between the above-mentioned variables, thus the hypothesis was not confirmed.

A similar finding was reported in a recent study by Tao and Wu (2021), who, within a sample of university students, investigated the effects of failure beliefs on implicit theories of intelligence. Their data collection was conducted in two phases, in baseline and after one year, in follow up. Although parents' failure-is-debilitating mindset at baseline predicted their children's failure-is-debilitating mindset and entity theories of intelligence at follow-up, students with failure-is-debilitating mindset at baseline did not necessary hold entity theories of intelligence at follow-up.

A probable explanation for the results cited above could be found in Dweck et al. (1995a). In their article, they argue that it is possible for an individual to hold both incremental and entity theories. For example, they might believe that intelligence is malleable but mathematic abilities are fixed. Adding to this idea, Stern and Hertel (2020) argued that perhaps the relation between implicit theories and failure beliefs is domain-specific. This means that some parents might believe that failure is debilitating for the development of certain skills, and at the same time it might also be enhancing for the development of others. To explain this discrepancy between parents' failure beliefs and parents' implicit theories, certain researchers suggest that they might be independent constructs (Schroder et al., 2016; Stern and Hertel, 2020).

The inconsistent findings regarding the relation between implicit theories of intelligence and failure beliefs make it clear that it is a domain not yet understood.

Therefore, it is important to explore these constructs in more detail to gain a better understanding of their relation.

The fourth hypothesis of this study tried to shed some light on whether the different parenting styles (permissive, authoritative and authoritarian) could predict parents' incremental theories of intelligence. The results partially confirmed the hypothesis. No linear relation was found between permissive or authoritative parents and incremental theories of intelligence. However, it could be predicted that authoritarian parents would hold such theories.

The lack of previous research connecting parenting styles to implicit theories of intelligence makes it challenging to explain the above findings on the grounds of a theoretical framework where the two constructs are studied together. Nevertheless, the characteristics of each parenting style have been extensively studied during the past decades and it is our assumption that some of these characteristics might explain the findings of this study regarding beliefs on the malleability of intelligence.

Baumrind (1966)'s typology on parenting styles is based on the different kinds of control that parents exert on their children. It might be possible that the beliefs guiding, more or less controlling, parental behaviors are responsible for the outcomes of this hypothesis. Permissive parents are acceptant and avoid the exercise of control. They do not have a lot of expectations from their children and they let them express freely their impulses (Baumrind, 1966). This lack of control and expectation might be rooted in the belief that abilities are innate and rather fixed. Action to shape the behavior of one's child is activated by the belief that abilities are malleable. This might explain why the permissive parenting style did not predict incremental theories of intelligence.

Authoritative parents use control but also reason to discipline their child. They do not punish, rather reinforce positive behavior (Baumrind, 1966). On the other hand, authoritarian parents exert control in an effort to change their child's attitudes. They impose discipline and use punishment as a way to shape their child's behavior (Baumrind, 1966). Both styles are high in control but authoritarian parents are particularly restrictive (Darling and Steinberg, 1993). Perhaps, it is the belief that behaviors can change that explains why authoritarian parents were found to hold incremental theories of intelligence in the current study. Afterall, there is evidence that academic achievement is linked to more controlling parenting styles (Dornbusch et al., 1987; Watabe and Hibbard, 2014), which might explain why the parents of this sample did not think of intelligence as particularly relevant for success, but they did think that it was malleable, changeable with effort.

Miguel et al. (2013), in an article connecting social representations of intelligence to parenting styles, revealed that the latter are indeed influenced by the first. However, they emphasized that such representations influence only partially the ways that parents respond to their children.

Limitations and Future Directions

There are several limitations in this study that could be addressed in future research. The first limitation has to do with the sample. Although it was adequate, regarding the number of participants (105), it was possibly not representative because of its non-probabilistic nature. Participants were recruited through social media accounts. Therefore, it can be assumed that parents who responded were somehow connected to each other, thus belonging to a certain socioeconomic group. Moreover, there was an important overrepresentation of mothers (72,4%) which might have

jeopardized the findings of the first hypothesis regarding implicit theories of intelligence and their relation to gender. It might be possible that the findings would be different if the sample consisted equally of both men and women (Muenks et al., 2015). Therefore, future research could consider a higher percentage of fathers. Finally, because the survey was made public online and the identity of the respondents remained private, there was no way to verify whether participants were indeed parents of children belonging to that particular age group.

Second, due to time constrains, the data collected for this study was exclusively based on parents' self-reports. Future research could also include qualitative methods for data collection, such as interviews or observations of the parent-child interactions. Additionally, the current study was cross-sectional and data was collected at a specific point in time, designing a picture that was representative of that time. A longitudinal study on the topic could provide insights as to whether parents' implicit theories and failure beliefs are stable or change over time. Alternatively, it could be interesting to include in the sample parents of adolescents and investigate their similarities and differences to parents who have younger children.

Third, the results can only be interpreted in the light of the Greek cultural context, which could explain certain outcomes. Research has shown that cross-cultural differences do exist and should be accounted for. For example, Stern and Hertel (2020) conducted their research using a German sample and found significant associations between parents' level of education and implicit theories of intelligence, which was not the case with the Greek sample. Equally, in their study, Stevenson and Stigler (1992) compared the achievement beliefs of American students and their parents with those of Asian students and their parents. Results revealed that Asians

valued effort and were more likely to hold incremental theories of intelligence compared to Americans. More studies, concluding to similar results, reinforce this idea (Chiu et al., 1997; Kim et al., 2000). Racial differences were also reported by Good et al. (2003), who showed that Black students were more respondent to incremental theories of abilities than White students. Taking all the above into account, it might be important for future research to consider different cultural contexts when exploring parental beliefs and theories of intelligence.

Fourth, two of the three questionnaires used for the purposes of this study, the "Skalen zur Erfassung subjektiver Überzeugungen zu Bedingungen von Erfolg in Lern- und Leistungskontexten," SE-SÜBELLKO-ST (Spinath and Schöne, 2003), testing for parents' implicit theories of intelligence and the Haimovitz and Dweck (2016) scale assessing parents' failure beliefs, were translated from their original languages, German and English respectively, into Greek. A suggestion for future research would include factor analysis for the translated versions of these scales in order to investigate their properties in more detail. Also, a pilot study could be conducted with a Greek sample in order to check and confirm the clarity of the items.

Lastly, the lack of prior research concerning the fourth hypothesis of this study, regarding the relation between parents' implicit theories of intelligence and parenting styles, might have restricted the extent of this study, but the results can be utilized as a starting point for future research to explore these constructs in more depth.

Conclusion

During the past few decades, parents' implicit theories of intelligence have been studied by the scientific community because there is important evidence that

they are responsible for parental behaviors that influence children's development. The current study aspired to contribute to this domain by further exploring the issue with a Greek sample. More precisely, we examined the relation between parents' implicit theories of intelligence and certain demographic characteristic, failure beliefs and parenting styles. Neither gender nor academic level seemed to influence parents' implicit theories and no relation was revealed between incremental theories and failure-is-enhancing mindsets, or entity theories and failure-is-debilitating mindsets. Finally, it seems that only authoritarian parents are predicted to hold the belief that intelligence is malleable. Since parents' behaviors are influenced by their beliefs, it is important for more research to be conducted in order to reach clearer conclusions as to the different ways in which implicit theories of intelligence are responsible for certain parental behaviors. Such findings will contribute to parents' education so that they in turn can adopt better parenting strategies. Parents' education could take the form of seminars or workshops taking place in school settings or community centers. For more efficient outcomes, prevention efforts could target especially parents of very young children, as they are new to their role and have more time to consider their role and practices. Altering ones beliefs is not an easy task, but perhaps bringing more awareness to the fact that certain beliefs can influence the way we behave could in turn bring some change, small or big, to the kind of strategies parents choose to adopt for the benefit of their children.

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Table 1

Socio-demographic Characteristics of the Sample

	N (%) (*n*=105)	Mean	SD
Parent's Gender			
Female	72.4% (76)		
Male	27.6% (29)		
Education			
High school Diploma	19% (20)		
Bachelor's Degree (Technical)	9.5% (10)		
Bachelor's Degree (University)	28.6% (30)		
Master's Degree	36.2% (38)		
PhD	6.7% (7)		
Child's Gender			
Female	54.3% (57)		
Male	45.7% (48)		
Child's Age			
4-6	32.4% (34)		
7-9	40% (42)		
10-12	27.6% (29)		

Table 2

T-test Analysis Exploring Relations Between Gender and Implicit Theories of Intelligence

	Female		Male		t-test analysis	
Variables	Mean	SD	Mean	SD	t	p
Malleability	2.70	0.78	2.67	0.70	-0.186	0.853
Relevance for Success	1.33	0.55	1.30	0.43	-0.303	0.763

Table 3a

ANOVA Analysis between Level of Education and Implicit Theories of Intelligence on Malleability

	Malleability		F	p
Variables	Mean	SD		
High school Diploma	2.72	0.75		
Bachelor's TEI	2.70	0.71		
Bachelor's University	2.51	0.79	0.631	0.642
Master's	2.80	0.79		
PhD	2.76	0.46		

Table 3b

ANOVA Analysis between Level of Education and Implicit Theories of Intelligence on Relevance for Success

	Malleability		F	p
Variables	Mean	SD		
High school Diploma	1.33	0.51		
Bachelor's TEI	1.33	0.54		
Bachelor's University	1.33	0.43	0.119	0.975
Master's	1.33	0.61		
PhD	1.19	0.50		

Table 4

Pearson Correlations r between Malleability of Intelligence and Failure Beliefs

	Failure-is-enhancing	Failure-is-debilitating
Malleability	.010	.083

Table 5

Pearson Correlations r between Malleability of Intelligence and Parenting Styles

	Authoritative	Authoritarian	Permissive
Malleability	.089	-.297	-.176

Table 6

Linear Regression Analysis for Predicting Malleability of Intelligence

Variable	B	SE	Beta	p
(Constant)	3.206	.178		.000
Authoritarian	-.542	.172	-.279	.002

Note. * p<.05.

Appendix A

Current Study's Questionnaire

Demographics Questionnaire

Οι παρακάτω ερωτήσεις στοχεύουν στη συλλογή δημογραφικών πληροφοριών.

Παρακαλώ σημειώστε την απάντηση που περιγράφει καλύτερα τα παρακάτω:

Φύλο:

- Άνδρας
- Γυναίκα
- Άλλο
- Δεν απαντώ

Ανώτατος τίτλος σπουδών:

- Απολυτήριο Μέσης Εκπαίδευσης
- Πτυχίο Ανώτερης Τεχνολογικής Επαγγελματικής Εκπαίδευσης.
- Πτυχίο Ανωτάτων Σχολών
- Μεταπτυχιακό
- Διδακτορικό

Ηλικία παιδιού για το οποίο συμπληρώνω το ερωτηματολόγιο:

Φύλο παιδιού για το οποίο συμπληρώνω το ερωτηματολόγιο:

- Αγόρι
- Κορίτσι
- Άλλο
- Δεν απαντώ

“Skalen zur Erfassung subjektiver Überzeugungen zu Bedingungen von Erfolg in Lern- und Leistungskontexten,” SE-SÜBELLKO-ST

Άδηλες θεωρίες γονέων για την ευφυΐα

Παρακαλώ σημειώστε το βαθμό συμφωνίας σας με τις παρακάτω δηλώσεις, κάνοντας χρήση της διαβαθμισμένης κλίμακας που ακολουθεί.

1: Διαφωνώ απολύτως, 2: Διαφωνώ, 3: Ούτε διαφωνώ /Ούτε συμφωνώ, 4: Συμφωνώ, 5: Συμφωνώ απολύτως

Μεταβλητότητα ευφυΐας

1. Το παιδί μου έχει έναν ορισμένο δείκτη ευφυΐας, ο οποίος δεν μπορεί να αλλάξει.
2. Όταν το παιδί μου μαθαίνει καινούρια πράγματα η ευφυΐα του αλλάζει.
3. Η ευφυΐα είναι κάτι, το οποίο δύσκολα μπορεί να αλλάξει.

Σημασία της ευφυΐας για την επιτυχία

4. Για να έχει το παιδί μου καλές επιδόσεις στις σπουδές του δεν χρειάζεται να είναι ιδιαίτερα έξυπνο.
5. Για την επιτυχία στις σπουδές, η υψηλή ευφυΐα είναι απαραίτητη προϋπόθεση.
6. Οι καλές επιδόσεις στις σπουδές απαιτούν κυρίως υψηλή ευφυΐα.

Failure Beliefs Questionnaire, Haimovitz & Dweck, 2016

Πεποιθήσεις γονέων σχετικά με την αποτυχία

Παρακαλώ σημειώστε το βαθμό στον οποίο θεωρείτε ότι η κάθε μια από τις παρακάτω δηλώσεις είναι αληθής, κάνοντας χρήση της διαβαθμισμένης κλίμακας που ακολουθεί. 1: Απολύτως αναληθής, 2: Αναληθής, 3: Ούτε αληθής ούτε αναληθής, 4: Αληθής, 5: Απολύτως αληθής

- Οι επιπτώσεις της αποτυχίας είναι θετικές και θα πρέπει να αξιοποιούνται.
- Το βίωμα της αποτυχίας διευκολύνει την μάθηση και την ανάπτυξη του παιδιού μου.
- Το βίωμα της αποτυχίας ενισχύει την επίδοση και την παραγωγικότητα του παιδιού μου.
- Το βίωμα της αποτυχίας παρεμποδίζει την μάθηση και ανάπτυξη του παιδιού μου.
- Το βίωμα της αποτυχίας μειώνει την επίδοση και την παραγωγικότητα του παιδιού μου.
- Οι επιπτώσεις της αποτυχίας είναι αρνητικές και θα πρέπει να αποφεύγονται.

Parenting Styles & Dimensions Questionnaire (PSDQ) – Short Version

Παρακαλώ σημειώστε τη συχνότητα με την οποία θεωρείτε ότι η κάθε μια από τις παρακάτω δηλώσεις εφαρμόζεται, κάνοντας χρήση της διαβαθμισμένης κλίμακας που ακολουθεί και έχοντας στο μυαλό σας το παιδί για το οποίο συμπληρώνετε το ερωτηματολόγιο. 1: Ποτέ, 2: Σπάνια, 3: Μερικές φορές, 4: Πολύ συχνά, 5: Πάντα

1. Κατανοώ τα συναισθήματα του παιδιού μου.

2. Χρησιμοποιώ την τιμωρία ως μέσο πειθαρχίας.

3. Λαμβάνω υπόψη μου τι θέλει το παιδί μου πριν του ζητήσω να κάνει κάτι.

4. Όταν το παιδί μου ζητάει να μάθει το λόγο για τον οποίο πρέπει να υπακούσει σε κάτι, του απαντώ ως εξής: «Γιατί είμαι ο πατέρας/ μητέρα σου και σου το ζητάω»

5. Λέω στο παιδί μου πως νιώθω, όταν συμπεριφέρεται καλά ή όταν συμπεριφέρεται άσχημα.

6. Μαλώνω το παιδί μου όταν δεν είναι υπάκουο.

7. Παροτρύνω το παιδί μου να συζητάει μαζί μου τα προβλήματά του.

8. Πιστεύω ότι είναι δύσκολο να μάθω στο παιδί μου να πειθαρχεί.

9. Ζητώ από το παιδί μου να εκφράζει τη γνώμη του ακόμα και όταν διαφωνώ μαζί του.

10. Το τιμωρώ απαγορεύοντάς του να κάνει κάτι που του αρέσει, χωρίς να του δίνω εξηγήσεις.

11. Λέω στο παιδί μου πόσο σημαντικό είναι να ακολουθεί τους κανόνες της οικογένειας.

12. Δείχνω στο παιδί μου κατανόηση όταν είναι αναστατωμένο.

13. Το μαλώνω και του φωνάζω όταν φέρεται άσχημα.

14. Το επαινώ όταν είναι καλό και υπάκουο παιδί.

15. Υπακούω στις επιθυμίες του παιδιού μου όταν επιμένει έντονα σε αυτές.

16. Ξεσπάω το θυμό μου πάνω του.

17. Περισσότερο απειλώ με τιμωρία το παιδί μου, παρά το τιμωρώ.

18. Λαμβάνω υπόψη μου τις επιθυμίες του παιδιού μου όταν κάνω οικογενειακά σχέδια.

19. Δέρνω το παιδί μου όταν δεν υπακούει.

20. Λέω στο παιδί μου με ποιο τρόπο θα το τιμωρήσω αλλά δεν εφαρμόζω την τιμωρία.

21. Ζητάω τη γνώμη του για τον τρόπο με τον οποίο θα πρέπει να λειτουργεί η οικογένεια.

22. Επιτρέπω στο παιδί μου να πει τη γνώμη του για τους κανόνες που υπάρχουν στην οικογένεια.

23. Του κάνω συστάσεις για να βελτιωθεί η συμπεριφορά του.

24. Κακομαθαίνω το παιδί μου.

25. Του εξηγώ τους λόγους για τους οποίους πρέπει να τηρούνται οι κανόνες της οικογένειας.

26. Χρησιμοποιώ απειλές για να το τιμωρήσω χωρίς να του δίνω εξηγήσεις.

27. Δείχνω στο παιδί μου τρυφερότητα.

28. Τιμωρώ το παιδί μου στέλνοντάς το στο δωμάτιό του χωρίς να του δίνω εξηγήσεις.

29. Το βοηθώ να καταλάβει τις συνέπειες μιας κακής πράξης του μέσα από διάλογο και συζήτηση.

30. Μαλώνω το παιδί μου όταν με απογοητεύει με τη συμπεριφορά του.

31. Συζητώ με το παιδί μου για τις συνέπειες των πράξεών του.

32. Χαστουκίζω το παιδί μου όταν δεν συμπεριφέρεται σωστά.

Appendix B

Questionnaire Translations

Original Scale 1

Skalen zur Erfassung von subjektiven Überzeugungen bezüglich Erfolgsfaktoren in Lern-Leistungskontexten - Studierenden-Version (SE-SÜBELLKO-ST)

Veränderbarkeit von Intelligenz

VI.01 Jeder besitzt ein bestimmtes Ausmaß an Intelligenz, das... nicht verändert werden kann / verändert werden kann.

VI.02 Wenn man neue Dinge lernt... bleibt die Intelligenz gleich / verändert sich die Intelligenz.

VI.03 Intelligenz ist etwas, das... kaum verändert werden kann / verändert werden kann.

Bedeutsamkeit von Intelligenz für Erfolg

BI.01 Um im Studium gute Leistungen zu erbringen, muss man ... nicht besonders intelligent sein / sehr intelligent sein.

BI.02 Für Erfolg im Studium ist hohe Intelligenz..... keine notwendige Voraussetzung / eine notwendige Voraussetzung.

BI.03 Gute Leistungen im Studium erfordern ... nicht viel Intelligenz / vor allem hohe Intelligenz.

Translation 1 (German-Greek)

Άδηλες θεωρίες γονέων για την ευφυΐα

Μεταβλητότητα της ευφυΐας

VI.01 Ο καθένας έχει έναν ορισμένο δείκτη ευφυΐας, ο οποίος… δεν μπορεί / μπορεί να αλλάξει.

VI.02 Όταν κανείς μαθαίνει καινούρια πράγματα… η ευφυΐα του παραμένει ίδια / η ευφυΐα του αλλάζει.

VI.03 Η ευφυΐα είναι κάτι, το οποίο… δύσκολα μπορεί να αλλάξει / μπορεί να αλλάξει.

Σημασία της ευφυΐας για την επιτυχία

BI.01 Για να έχει κανείς καλές επιδόσεις στις σπουδές του…

δεν χρειάζεται να είναι ιδιαίτερα έξυπνος / χρειάζεται να είναι ιδιαίτερα έξυπνος.

BI.02 Για την επιτυχία στις σπουδές, η υψηλή ευφυΐα…

δεν είναι απαραίτητη προϋπόθεση / είναι απαραίτητη προϋπόθεση.

BI.03 Οι καλές επιδόσεις στις σπουδές…

δεν απαιτούν υψηλή ευφυΐα / απαιτούν κυρίως υψηλή ευφυΐα.

Translation 2 (German-Greek)

Μεταβλητότητα ευφυίας

VI.01 Όλοι μας έχουμε έναν ορισμένο δείκτη ευφυΐας που δε μπορεί / μπορεί να αλλάξει.

VI.02 Όταν μαθαίνει κανείς καινούρια πράγματα, η ευφυΐα του αλλάζει / δεν αλλάζει.

VI.03 Η ευφυΐα είναι κάτι που δε μπορεί / μπορεί να αλλάξει.

Σημασία της ευφυΐας για την επιτυχία – Ειδική απόδοση σχετική με παιδιά

BI.01 Έτσι ώστε να υπάρχουν καλές επιδόσεις στις σπουδές δεν είναι/ είναι αναγκαίο να είναι κανείς ιδιαίτερα ευφυής.

BI.02 Για επιτυχία στις σπουδές δεν είναι / είναι απαραίτητη η υψηλή ευφυΐα.

BI.03 Η καλή επίδοση στις σπουδές δεν απαιτεί προπαντός υψηλή ευφυΐα / απαιτεί ιδιαίτερα υψηλή ευφυΐα.

Back Translation 3 (Greek-German)

Veränderbarkeit von Intelligenz

VI.01 Jeder besitzt ein bestimmtes Ausmaß an Intelligenz, das... nicht verändert werden kann / verändert werden kann.

VI.02 Wenn man neue Dinge lernt, verändert sich seine Intelligenz / verändert sich nicht.

VI.03 Intelligenz ist etwas, das kaum verändert werden kann / verändert werden kann.

Bedeutsamkeit der Intelligenz für den Erfolg

BI.01 Um im Studium gute Leistungen zu erbringen, soll man nicht sehr intelligent sein/ soll man intelligent sein.

BI.02 Hohe Intelligenz ist nicht / ist für den Erfolg im Studium erforderlich.

BI.03 Gute Leistungen im Studium erfordern keine besonders hohe Intelligenz / erfordern vor allem hohe Intelligenz.

Back Translation 4 (Greek-German)

Variabilität der Intelligenz

VI.01 Wir alle haben einen bestimmten Intelligenzquotienten, der nicht verändert werden kann/verändert werden kann.

VI.02 Wenn man etwas Neues lernt, verändert sich die eigene Intelligenz / verändert sich die eigene Intelligenz nicht.

VI.03 Intelligenz ist etwas, das nicht verändert werden kann/das verändert werden kann.

Die Bedeutung von Intelligenz für den Erfolg

BI.01 Um gute Leistungen im Studium zu erbringen, ist es nicht notwendig/ist es notwendig besonders intelligent zu sein.

BI.02 Um im Studium erfolgreich zu sein, ist es nicht notwendig/ist es notwendig hochintelligent zu sein.

BI.03 Um gute Leistungen im Studium zu erbringen, bedarf es keiner besonders hohen Intelligenz/bedarf es besonders hoher Intelligenz.

Original Scale 2

Parents' failure beliefs (Haimovitz & Dweck)

The effects of failure are positive and should be utilized.

Experiencing failure facilitates learning and growth.

Experiencing failure enhances my performance and productivity.

Experiencing failure inhibits my learning and growth.

Experiencing failure debilitates my performance and productivity.

The effects of failure are negative and should be avoided.

Translation 1 (English-Greek)

Πεποιθήσεις γονέων σχετικά με την αποτυχία

Οι επιπτώσεις της αποτυχίας είναι θετικές και θα πρέπει να αξιοποιούνται.

Το βίωμα της αποτυχίας διευκολύνει την μάθηση και την ανάπτυξη του παιδιού μου.

Το βίωμα της αποτυχίας ενισχύει την επίδοση και την παραγωγικότητα του παιδιού μου.

Το βίωμα της αποτυχίας παρεμποδίζει την μάθηση και ανάπτυξη του παιδιού μου.

Το βίωμα της αποτυχίας μειώνει την επίδοση και την παραγωγικότητα του παιδιού μου.

Οι επιπτώσεις της αποτυχίας είναι αρνητικές και θα πρέπει να αποφεύγονται.

Translation 2 (English-Greek)

Άποψη των γονέων για την αποτυχία

Τα αποτελέσματα της αποτυχίας είναι θετικά και πρέπει να αξιοποιηθούν.

Το βίωμα της αποτυχίας διευκολύνει την εκμάθηση και την εξέλιξη του παιδιού μου.

Το βίωμα της αποτυχίας ενισχύει την απόδοση και την παραγωγικότητα του παιδιού μου.

Το βίωμα της αποτυχίας περιορίζει την εκμάθηση και την εξέλιξη του παιδιού μου.

Το βίωμα της αποτυχίας αποδυναμώνει την απόδοση και την παραγωγικότητα του παιδιού μου.

Τα αποτελέσματα της αποτυχίας είναι αρνητικά και πρέπει να αποφευχθούν.

Back Translation 3 (Greek-English)

Parents' failure beliefs (Haimovitz & Dweck)

The effects of failure are positive and should be used.

Experiencing failure facilitates my child's learning and growth.

Experiencing failure enhances my child's performance and productivity.

Experiencing failure debilitates my child's learning and growth.

Experiencing failure debilitates my child's performance and productivity.

The effects of failure are negative and should be avoided.

Back Translation 4 (Greek-English)

Parents' failure beliefs (Haimovitz & Dweck)

The effects of failure are positive and should be utilized.

Experiencing failure facilitates my child's learning and growth.

Experiencing failure enhances my child's performance and productivity.

Experiencing failure inhibits my child's learning and growth.

Experiencing failure inhibits my child's performance and productivity.

The effects of failure are negative and should be avoided.

Appendix C

Informed Consent

ΕΝΗΜΕΡΗ ΣΥΓΚΑΤΑΘΕΣΗ ΓΙΑ ΣΥΜΜΕΤΟΧΗ ΣΕ ΕΡΕΥΝΗΤΙΚΗ ΕΡΓΑΣΙΑ

Σκοπός της έρευνας: Να μελετηθεί ο τρόπος με τον οποίο οι πεποιθήσεις των γονέων για την ευφυΐα των παιδιών τους σχετίζονται με τις πεποιθήσεις τους για την αποτυχία και το πώς αυτές επηρεάζουν τις γονεϊκές πρακτικές τους.

Τι θα κάνετε σε αυτήν την έρευνα: Εάν αποφασίσετε να συμμετάσχετε, θα συμπληρώσετε κάποια ερωτηματολόγια. Μερικές από τις ερωτήσεις θα αφορούν τις πεποιθήσεις σας για την νοημοσύνη, άλλες τις πεποιθήσεις σας για την αποτυχία και άλλες θα αφορούν τις γονεϊκές πρακτικές σας.

Απαιτούμενος χρόνος: Για την συμπλήρωση της έρευνας θα χρειαστούν περίπου 10 λεπτά.

Οφέλη: Δεν υπάρχουν άμεσα οφέλη, αλλά μπορεί να σας ενδιαφέρει να αναλογιστείτε τις πεποιθήσεις σας για την νοημοσύνη και την αποτυχία, καθώς και τις γονεϊκές πρακτικές σας.

Εμπιστευτικότητα: Οι απαντήσεις σας θα παραμείνουν εμπιστευτικές. Τα δεδομένα και η ταυτότητά σας θα είναι προσβάσιμα μόνο στην κύρια ερευνήτρια της παρούσας μελέτης. Τα αρχεία και τα δεδομένα θα αποθηκευτούν εμπιστευτικά σε ασφαλές χώρο του cloud, για την είσοδο στον οποίο θα απαιτείται χρήση μυστικού κωδικού. Για την αναφορά των αποτελεσμάτων της έρευνας, οι απαντήσεις θα συγκεντρωθούν και θα παρουσιαστούν συνοπτικά.

Συμμετοχή και αποχώρηση: Η συμμετοχή σας στην έρευνα είναι εντελώς εθελοντική και μπορείτε ανά πάσα στιγμή να αποχωρήσετε από αυτή. Αν αποφασίσετε να συμμετάσχετε, παρακαλείστε να μην παραλείψετε να απαντήσετε σε όλα τα ερωτήματα καθώς η ολοκλήρωση του ερωτηματολογίου είναι απαραίτητη για την επίτευξη των στόχων της έρευνας.

Για να επικοινωνήσετε με την ερευνήτρια: Εάν έχετε ερωτήσεις ή ανησυχίες σχετικά με αυτήν την έρευνα, επικοινωνήστε με: Χάρις Κούσουλα, email: c.kousoula@acg.edu Μπορείτε επίσης να επικοινωνήσετε με το μέλος ΔΕΠ που επιβλέπει αυτήν την εργασία: Dr. Mari Janikian, mjanikian@acg.edu

Η παρούσα ερευνητική μελέτη έχει αναθεωρηθεί και εγκριθεί από την Επιτροπή Θεσμικής Αναθεώρησης του Αμερικανικού Κολλεγίου Ελλάδος.

Ακολουθώντας τον παρακάτω σύνδεσμο, δηλώνετε ότι έχετε διαβάσει και κατανοήσει τις πληροφορίες που παρέχονται παραπάνω, ότι είστε άνω των 18 ετών, ότι συμφωνείτε πρόθυμα συμμετέχετε στην έρευνα, ότι κατανοείτε πως μπορείτε να αποσυρθείτε από αυτήν ανά πάσα στιγμή χωρίς ποινή και ότι δεν διατηρείτε καμία νομική αξίωση.

Appendix D

Debriefing Form

Σας ευχαριστώ για την συμμετοχή σας στην παρούσα έρευνα, της οποίας ο βασικός στόχος είναι η μελέτη των γονεϊκών πεποιθήσεων σχετικά με την ευφυΐα. Παλαιότερες έρευνες έχουν δείξει ότι οι γονείς που βλέπουν την ευφυΐα σαν κάτι που μπορεί να αλλάξει, αντιμετωπίζουν την αποτυχία των παιδιών τους σαν μια εμπειρία που ευνοεί την εξέλιξη και την πρόοδό τους, ενώ οι γονείς που θεωρούν την ευφυΐα σαν κάτι εγγενές και συγκεκριμένο, αντιμετωπίζουν την αποτυχία σαν κάτι το αποθαρρυντικό. Επίσης, οι πεποιθήσεις των γονέων σχετικά με τις ικανότητες των παιδιών τους φαίνεται πως επηρεάζουν τις γονεϊκές πρακτικές τους.

Το πρώτο ερώτημα που έχει στόχο να εξετάσει αυτή η έρευνα έχει να κάνει με το αν οι διάφορες πεποιθήσεις σχετικά με την νοημοσύνη σχετίζονται κατά κάποιο τρόπο με το φύλο και την ακαδημαϊκή μόρφωση του γονέα. Στη συνέχεια, θα μελετηθεί η σχέση μεταξύ των διάφορων πεποιθήσεων περί νοημοσύνης και των αντιλήψεων περί αποτυχίας. Τέλος, θα διερευνηθεί αν τα διάφορα γονεϊκά στυλ μπορούν να προβλέψουν και τις διάφορες πεποιθήσεις για την ευφυΐα.

Τα αποτελέσματα αυτής της μελέτης θα επιτρέψουν τόσο σε ερευνητές όσο και σε γονείς να κατανοήσουν καλύτερα τον τρόπο με τον οποίο οι πεποιθήσεις των γονέων καθορίζουν το γονεϊκό στυλ τους και κατά συνέπεια την ανάπτυξη των παιδιών.

Για οποιαδήποτε ερώτηση σχετικά με την παρούσα έρευνα και τη συμπλήρωση του ερωτηματολογίου, επικοινωνήστε με την κύρια ερευνήτρια της μελέτης, Χάρις Κούσουλα, e-mail: c.kousoula@acg.edu. Τα στοιχεία επικοινωνίας της επιβλέπουσας καθηγήτριας είναι: Δρ. Μάρι Τζανικιάν, e-mail: mjanikian@acg.edu.

Τα αποτελέσματα της μελέτης αναμένεται να είναι διαθέσιμα τον Οκτώβριο του 2022. Εάν επιθυμείτε να λάβετε μια αναφορά σχετικά με αυτά, επικοινωνήστε με την κύρια ερευνητή μέσω της διεύθυνσης ηλεκτρονικού ταχυδρομείου που αναφέρεται παραπάνω.

Σας ευχαριστώ και πάλι για την πολύτιμη συμμετοχή σας στην έρευνα.

Με εκτίμηση,

Χάρις Κούσουλα