Journal Plus Education, ISSN: 1842-077X, E-ISSN (online) 2068-1151 Vol XII (2015), No. 1. pp. 61 - 78

THE IMPACT OF PSYCHOLOGICAL CONTROL ON ACADEMIC MOTIVATION

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Abstract: *The main aim of our research was to analyze the relationship between different parental control strategies and the degree of parents` involvement in professional options in selecting academic specialization and their impact on academic motivation. We estimate that there is significant association between parental psychological control and parental involvement in option for career, and final decision; there is a negative association between Parental psychological control and intrinsic motivation and there is a positive association between Achievement-oriented psychological control and extrinsic motivation. In order to test the hypothesis we use, Academic Motivation Scale and the Dependency-oriented and Achievement-oriented Psychological Control Scale (DAPCS) (Soenens, Vansteenkiste, & Luyten, 2010). The research finding confirm the associations between Psychological Control of Family (PCF) and Parental involvement in career option, but not confirm the association between The Dependency-oriented Achievement-oriented Psychological Control and Academic Motivation*

Keyword: *Psychological control, Dependency-oriented Psychological Control, Achievement-oriented Psychological Control, Academic Motivation, self-determination*

Introduction

The concept of motivation is central in psychology, especially in educational psychology. This concept tries to explain the „what and why" of human action (Vallerand, Pelletier, Blais, Briere, Senecal & Vallieres, 1992, Deci & Ryan, 2000).

The concept of academic motivation has several meanings: the motivation to attend college, motivation to learn interesting things in the professional field, the motivation to achieve school performance, motivation to develop professional skills etc. The significance of this concept in the present study refers to the decision to attend college, to continue and complete their university studies. Academic motivation asks the question "Why do you go

to the university?" (Vallerand, Pelletier, Blais, Briere, Senecal & Vallieres, 1992, p. 1008), why did you choose this college/specialization? The question is especially relevant where admission methodology allows enrolling to several faculties in the same field of study or in different areas. This situation put into question the vocational bases of the option for the future profession. Also, we are wondering where the source of decision-making behavior is: internally, to the person involved in the decision, or externally, where some factors of coercion, pressure or persuasion could have an influence about the decision?

Self Determination Theory

The theoretical background which has influenced many researches in the field of motivation is Self-Determination Theory, developed by Deci and Ryan, 1985. Self-Determination Theory is specifically framed in terms of social and environmental factors that facilitate versus undermine intrinsic motivation. (Ryan, Deci, 2000). This is a theory that conceptualizes and explains how personality develops and functions in various social contexts, and posits that human being is an active organism, focused on personal growth and self-actualization.
Central to self-determination theory (SDT; Deci & Ryan, 1985, 2000) is the concept of autonomy, which is viewed as a universally significant human capacity that promotes healthy development. The Self Determination Theory includes other three subtheories: Basic psychological needs theory, Cognitive evaluation theory and Organismic Integration Theory.

Basic psychological needs theory addresses the three basic psychological needs of autonomy, competence, and relatedness which can influence the quality of motivation experienced by an individual. Autonomy means to make your own choices, to assume your own feelings, and decide about your own behavior. (Deci & Ryan, 2002). The need for relatedness means to establish the relationships based on mutual respect and trust, with others (Baumeister & Leary, 1995, Reis, 1994). Need for competence means desire to succeed, the need to obtain confirmation of the own resources, orientation toward performance (Skinner, 1995; Harter, 1978). Need for competence means desire to succeed, the need to obtain confirmation of the own resources, orientation toward performance

Cognitive Evaluation Theory (Deci, 1975) is a theory that is designed to explain the effects of external consequences (e.g. rewards, communications, feedback etc.) on internal motivation. Two external factors are analyzed

regarding their effects on internal motivation: presence or absence of a salient external reward, and a change in perceived competence.

The presence of a salient external reward or constraint can induce a change in the perceived locus of causality from internal to external, and may generate a decreasing of intrinsic motivation, whereas the absence of a salient reward or constraint and the presence of the possibility to make a choice can induce a change in the perceived locus of causality from external to internal, and may increase intrinsic motivation. Intrinsic motivation is undermined when external interventions are perceived as external control of the own behavior Frey and Osterloh (2002). E.g. a person, initially used to do a certain job enthusiastically because of the task itself and therefore intrinsically motivated, loses some of that interest when promised a financial reward. (Wilkesmann, Fischer & Virgillito, 2012)In other words, the external intervention is perceived as an external control mechanism that lowers autonomy and decreases intrinsic motivation. (Ryan, 1982)

A change in perceived competence is another factor that affect intrinsic motivation. If an environmental event enhances people's perceptions of competence, their intrinsic motivation will increase; if it diminishes their perceptions of competence, their intrinsic motivation will decrease. (Ryan, 1982)
The third subtheory of SDT is Organismic Integration Theory (OIT), which conceptually differentiates different forms of extrinsic motivation, and identifies contextual factors that influence the level of internalization / integration of the behavioral regulation. (Deci & Ryan, 1985)

SDT and Motivation

Through its three theories, STD clarifies which are the processes through a person acquires the motivation for initiating of behaviors and maintaining them over time. Self Determination Theory distinguishes between different types of motivation based on the different reasons or goals that give rise to an action. The most basic distinction is between intrinsic motivation, which refers to doing something because it is inherently interesting or enjoyable, and extrinsic motivation, which refers to doing something because it leads to a separable outcome. (Deci & Ryan, 1985, So & Ryan, 2000; Ryan & So, 2000)

SDT distinguish between autonomous and controlledreasonsfor acting, which explains the differenttypes of regulations, according tointernal or externallocusof causality. The central concept that describes how one's

motivation for behavior can range from amotivation (non-involvement), to passive compliance, and to active personal commitment is internalization.

Therefore, different types of motivation that support behavior are placed along a self- determination continuum, ranging from amotivation to extrinsic motivation, to intrinsic motivation. The degree of autonomy of a behavior is determined by internalization and integration of values and behavioral regulations. (Deci, 1985). On this continuum we can identify six types of motivation which differ from the theoretical, functional, and contextual point of view, according Organismic Integration Theory. (Alivernini & Lucidi, 2008)

Amotivation is characterized by the lack of intention to act, and by „the individual's perception of lack of control over events, incompetence and absence of purpose" (Stover, De la Iglesia, Boubeta, Liporace, 2012). Amotivatia occurs when the individual not valuing the activity (Ryan, 1995), or do not feel competent to perform the activity (Deci, 1975). On the continuum of motivational style, amotivation represents the lowest level of autonomy. It is followed by extrinsic motivation which is externally regulated, and the behavior that is supported by this type of motivation is oriented to obtaining external rewards, and reinforcements. (Deci & Ryan, 1985). „People behave to attain a desired consequence such as tangible rewards or to avoid a threatened punishment." (Deci & Ryan, 2000, p. 236).

In extrinsic motivation, the goal constitutes the main driving force of behavior. But, considering the level of autonomy and the value of the goals, SDT distinguish between varied types of extrinsic motivation, some of which, indeed, represent impoverished forms of motivation, but others represent active agents of human behaviors.
A type of external regulation, that is still quite controlling, is introjection. People perform behaviors with the feeling of pressure, in order to avoid guilt or anxiety, to attain ego-enhancements or pride, or to improve their own self-esteem.A more autonomous, or self-determined, form of extrinsic motivation is regulation through identification. A more autonomous, or self-determined, form of extrinsic motivation is regulation through identification. In Identified regulation, activity is supported by an extrinsic motivation, but the individual has identified the social value of behavior, and has assumed its regulation as his own.

The most autonomous form of extrinsic motivation is integrated regulation. Integration would appear only in adulthood, when individual needs and values converge with those expected by the social context The more one

internalizes the reasons for an action and assimilates them to the self, the more one's extrinsically motivated actions become self-determined.

Intrinsic motivation is a prototype of self-determined activity, which reflect the natural human need to learn and action. A person is Intrinsically motivated when carrying out an action for the pleasure of performing that. Intrinsic motivation " refers to doing an activity for the inherent satisfaction of the activity itself". (Ryan & Deci, 2000, p. 71).

For a person which is intrinsically motivated, the activity represents a challenge and an opportunity to prove their competencies and creativity . (Koestner, Otis, Powers, Pelletier, Gagnon, 2008). Intrinsic motivation represents the highest level of self-determination, and depends on the stimulating and supportive environment
Vallerand, Blais, Briere and Pelletier (1989, 1993) developed and validated the „Echelle de Motivation en Education" (in French). In this scale, they introduced a classification of intrinsic motivation in the academic milieu, in three subtypes: IM orientated towards knowledge (to do something for the pleasure and satisfaction experimented while learning), IM orientated towards accomplish things (to do something for the pleasure and satisfaction experimented while trying to accomplish something), and IM oriented towards stimulating experiences (to do something in order to experience aesthetics, intellectual or sensorial sensations).

STD presume that social and environmental factors facilitate the self-determinated regulations of behaviors (eg. identified motivation, and especially intrinsic motivation). The most central distinction in SDT is between autonomous motivation and controlled motivation. Autonomous motivation comprises both intrinsic motivation and identified motivation (the types of extrinsic motivation in which people have identified with an activity's value). When people have autonomously motivated, they demonstrate initiative and involvement in their action. Controlled motivation, in contrast, consists of external regulation, and introjected regulation, (the type of extrinsic motivation in which the regulation of action has been partially internalized and is determined by factors such as approval, avoidance of shame, contingent self-esteem, pressure to think, feel, or behave in a particular ways. (Deci, Ryan, 2008)

Many research on Intrinsic motivation has highlighted that an important social factor influencing subordinates' motivation (children, students, patients, athletes) is the interpersonal style displayed by their supervisors (parents, educators, doctors, coaches). (Deci & Ryan, 1987, 2008, Moreau & Mageau, 2013)

An autonomy-supportive style facilitate internalization, and encourages students' self-regulation by allowing them to make choices, thus supporting their need for autonomy, while a controlling style prevents the individual to think,feel and act in a personal manner.

Autonomy- supportive style has been operationalized such as (a) nurturing inner motivational resources (Stefanou, Perencevich, DiCinto, & Turner, 2004), (b) providing rationales (Reeve, Jang, Hardre, & Omura, 2002), and giving useful advice to students(Black & Deci, 2000; Mageau & Vallerand, 2003; Reeve, 2009) (c) using a non-controlling and informational language (Reeve & Jang, 2006, Amoura, Berjot, Gillet, Caruana, Finez, 2015), d) displaying patience (Reeve & Jang, 2006), (e) acknowledging and accepting expressions of negative affect (Reeve, 2009), (f) adopting students' perspectives and feelings, and supporting students' choice and self-regulation (Reeve & Jang, 2006 ; Jang, Reeve, & Deci, 2010) etc.

Controlling style has been operationalized through behaviors such as: controlling statements (Assor, Kaplan, Kanat-Maymon, & Roth, 2005), ignoring the needs and feelings of students (Ryan, 2005), using of coercive strategies, random reinforcements, and overtly controlling language (e.g., the use of “have to,” “should,” and “ought”) (Vansteenkiste, Lens, & Deci, 2006). Internally controlling techniques use guilt-inductions, shaming, love withdrawal, and performance goals and affect people's basic psychological needs for autonomy, competence, and relatedness (Soenens & Vansteenkiste, 2010; Moreau & Mageau, 2012).

Soenens and Vansteenkiste (2010) distinguished between two different ways in which parents can put pressure on their children that are internal pressure and external pressure. External pressure refers to overt, or even tangible actions that make children feel as if they are pressured from without (e.g., physical punishment, controlling rewards, and removal of privileges) or even a set of rules as parental attempts to regulate, structure and monitoring the child’s behavior (e.g., manners, study activities, and involvement with peers).

Internal pressure refers to parental behaviors such as engendering a sense of guilt, shame, and separation anxiety. Internally controlling strategies consist in a conditionally love and approval, in relation to the compliance of the teenagers to parental standards (Soenens & Vansteenkiste, 2010)

Soenens and Vansteenkiste (2010) put in connection the two concepts:

internal pressure and psychological control. This style of psychological control has been considered in this research.

Psychological Control

Parental control strategies have received widespread empirical attention over the past few decades. Barber (1996) proposed a distinction between behavioral control and psychological control.

The behavioral control provides adolescents with a clear set of guidelines for appropriate behavior. In this sense, this parenting dimension has a particularly important adaptive function in protecting adolescents against externalized or antisocial behavior, and serves a positive socializing function. The exception is the coercive control (as a form of excessive behavioral control), that may be related to peer interaction and aggressive behaviors.
In contrast to behavioral control, psychological control has, from its inception as a construct (Schaefer, 1965; Barber, 1996), almost exclusively been construed as a negative form of control, interfering with the developing child's need for psychological autonomy and self-direction., by keeping the child emotionally dependent on the parent.
Barber (1996, p. 3299) defined psychological control as "socialization pressure that is non-responsive to the child's emotional and psychological needs [but instead] stifles independent expression and autonomy".

By manipulative strategies that intrude upon children's thoughts and feelings, such as guilt induction, shaming, love withdrawal, and invalidating feelings, psychological control interfere with the establishment of a secure, stable, and positive sense of self (Barber & Harmon, 2002), and attempts to control the child's psychological experiences (e.g., feelings, aspirations, and identity choices).

There are many parental strategies that promote the psychological control. Soenens et al. (2007), for instance, distinguish promotion of independence and promotion of volitional functioning as two ways of conceptualizing parental autonomy support, and they analyze the link between this kind of parental strategies and psychological control.

Promotion of independence is a parental strategy that encourages the children to learn think, and solve problems without support or intervention from others and from their parents in particular. The ultimate goal of this parental promotion of independence is to raise adolescents who make decisions for themselves, rather than relying on others (behavioral independence), who do

not depend on their parents for emotional support (emotional independence), and who believe they have control over their own life (cognitive independence) (Soenens & Vansteenkiste, 2010). The opposite strategie is parental encouragement of dependence.

Promotion of volitional functioning is a parental strategy that encourages the children to take initiative, to behave on the basis of authentic preferences, to make relevant choices whenever possible, and provide a meaningful rationale in case no choice can be allowed (Deci & Ryan, 2000). The opposite strategy is psychological control, because parents high on parental psychological control deny the child's perspective and instead pressure the child to think, behave, and act in ways dictated by the parents. All the decisions of adolescent or emergent adult are influenced by the psychological control, including the decision for academic specialization and professional career.

The Blatt model of personality (Blatt, 1974, 2004, posits that individuals develop along two dimensions: that of interpersonal relationships and that of identity and self definition. The self-enhancing aspect of the interpersonal dimension is intimacy and connection, and the downside is a sense of loneliness and helplessness. The second dimension, which is also a lifespan developmental vector, is self-definition. The self-enhancing aspect of the self dimension is a sense of identity, of purpose and of achievement. The downside is extreme self-criticism (Zohar, 2007).

For individuals to whose development is more invested in the interpersonal dimension, well being is associated with issues of relatedness and dependency. Individuals with high levels of self-criticism or self-critical perfectionism mainly attempt to obtain approval and praise by meeting high performance standards, especially in the areas of school and work. Their high personal standards result in harsh self-scrutiny and a constant striving for excessive achievement and perfection (Soenens, Vansteenkiste & Luyten, 2010).

Psychologically controlling parents have been described as overprotective, and possessive (Barber & Harmon, 2002), with a great intolerance on the independence and the own decision of their children. Driven by separation anxiety, parents restrict attempts by children to obtain some degree of independence because they consider such attempts as a threat to the bond between parent and child (Barber & Harmon, 2002).
Apart from being dependency oriented, psychologically controlling parents have also been described in many researches as achievement oriented, perfectionist, and with an acute feeling of fear failure. Achievement-oriented parents, as they pressure themselves to achieve high performance and as they

perceive poor performance as a threat to their self-worth, are likely to behave in a controlling way toward their children (Gurland, & Grolnick, 2005).

The main aims of our research was to analyze the relationship between different parental control strategies and the degree of involvement of parents in professional options in academic specialization decisions and their impact on academic motivation.

The assumptions we intended to test in our study are: (1) Parental psychological control influence the emergent adults' options to university specialization; (2) Parental psychological control affects young peoples' final decision regarding their professional career; (3) There is a negative association between Parental psychological control and intrinsic motivation; (4) Achievement-oriented psychological control is greater involved in young peoples' final decision regarding their professional career than Dependency-oriented psychological control; (5) There is an association between Achievement-oriented psychological control and extrinsic motivation;

Method

Participants

The study was conducted on a sample of 111 students from the first year of study, aged 19-25 years, in the field of social sciences (45 students - 40.5%) and the humanities (66 students - 59.5%) . The sample was unbalanced regarding the genre of the subjects, due to the specific field of study. Only 6% of the subjects are boys.

Procedure

Data were gathered by collective administration of the AMS scale in the classrooms of each institution. Prior to distribution of the questionnaires, students were informed that they would be asked to complete a questionnaire that asks them to list their most important academic motivations and to express their perceptions about the behavior of their parents, and about parents' involvment in their academic option, and in their final decision regarding academic specialization and professional career. Students were assured that their responses would remain confidential. Then, they signed the informed consent.

Measures

Academic motivation scale (AMS). In order to measure students' motivation we use the Academic Motivation Scale (AMS) from Vallerand et al. (1992, 2008). The original AMS contains 28 items originally. In our study the AMS

was reduced to 19 items. The scale consisted of three subscales of assessing motivation (3 items), extrinsic motivation (8 items), and intrinsic motivation (3 items).

In the extrinsic motivation and intrinsic motivation were differentiated, subsequently, three micro-scales. For extrinsic motivation were distinguished: external regulation (2 items), introjected regulation (3 items), and identified regulation (3 items). For intrinsic motivation were differentiated: IM orientated towards knowledge, IM orientated towards achievement, and IM oriented towards stimulating experiences. Response choices for each item were rated on a 5-point Likert scale from 1 (does not correspond at all) to 5 (corresponds exactly). Reliability for the whole scale was .762

Dependency-oriented psychological control and achievement-oriented psychological control Scale (Soenens, Vansteenkiste, & Luyten, 2010). „The Dependency-oriented (DPC) and Achievement-oriented (APC) Psychological Control Scale (DAPCS)" was developed to assess adolescents' perceptions of parental DPC and APC. The Scale was built on the basis of Blatt's (2004) and Barber's (1996) theories. These two domains of psychological control define two fundamental developmental lines of personality: interpersonal relatedness and self-definition. DPC was defined as a type of psychological control that is used as a means to keep children within close physical and emotional boundaries. APC was defined as a type of psychological control that is used as a means to make children comply with excessive parental standards for performance (Soenens, Vansteenkiste, & Luyten, 2010). In order to asses the two dimensions of psychological control, on the basis of these operational definitions, 10 items were formulated for each scale. The scale was administrated, both for the mother, and for the father. Each item was evaluated on a 5 point Likert scale, from 1 (strongly disagree) to 5 (strongly agree). Finally, a total score for family was calculated, which is the means of the scores of parents.

Cronbach's Alpha was .89, for the paternal ratings for the whole scale, .75 for APC, and .89 for DPC. Cronbach's Alpha for the maternal ratings was .82 – whole scale, 0.81 – DPC, and .83 – APC.

In addition, to assess students' options for academic specialization was formulated the following question: "Your option for the admission to the university was: only at the chosen specialization; at several specializations of the same faculty; at more specialization in different faculties, but the same scientific field; at more specialization in different faculties, and different scientific fields."

To assess the involvement of parents in students' choices for specialization, and the final decision in case of admission to more specialization, other two items were formulated: "To what extent were your parents involved in your career options?" and "To what extent, do you think, your parents influenced your final decision?" The both items have been built as 5 point Likert-type scales, from 1 (Not at all) to 5 (completely).

Statistical analyze

Options for admission

First we performed descriptive statistics for the three items that characterize the sample in terms of career options, and the degree of involvement of parents in option and decision.

Regarding students' options for academic specialization Table 1 display the results.

Table 1 The option for the admission to the university

		Frequency	Per-cent	Valid Percent	Cumulative Percent
Valid	Only at the chosen specialization	50	45,0	47,2	47,2
	At several specializations of the same faculty	16	14,4	15,1	62,3
	At more specialization in different faculties, but the same scientific field	16	14,4	15,1	77,4
	At more specialization in different faculties, and different scientific fields	24	21,6	22,6	100,0
	Total	106	95,5	100,0	
Missing	NR	5	4,5		
	Total	5	4,5		
Total		111	100		

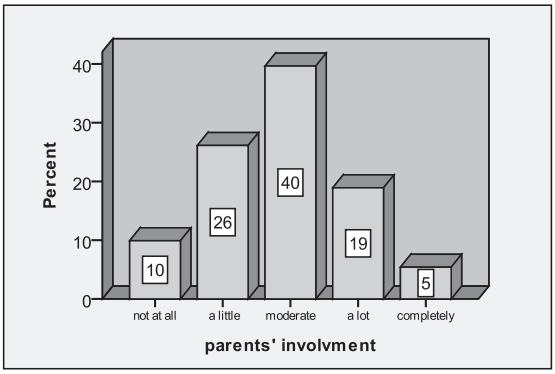
As can be seen in Table 1, 45% of students had a single option. We consider, that is a relevant percentage that truly expresses interest in a certain profession. Those 14.4% of students who opted for different specializations in the same faculty enroll in the same category.

As far as it concerns the students who have opted for different specializations in different scientific areas, we believe that such an option tends to capitalize on chance, and do not express a vocational orientation.

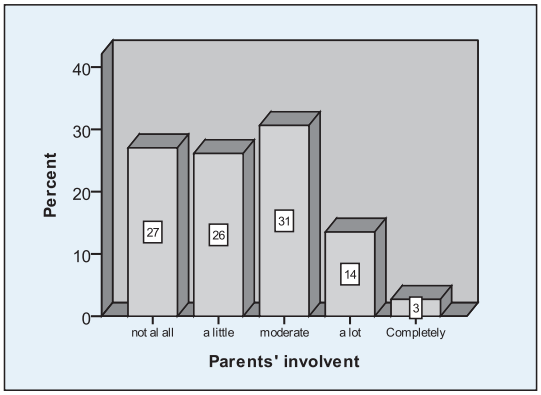
Parental involvement

Analyzing the data in graphs 1 and 2, we find that parental involvement in career choices and decision is significant: 64% of parents were involved moderately or greatly in the options for specialization, and 48% of parents have influenced the final decision, in case of admission to several specialties.

Graph 1. The involvement of parents in career option



Graph 2. The involvment of parents in final decizion



Academic Motivation Scale

In order to analyze the types of academic motivation and their subscale, Table 2 display means, standard deviations, and coefficient alphas for the whole sample. Cronbach's coefficient for the three main scales ranged from .73 (Amotivation) to .82 (Intrinsic Motivation).

Analysis of the results revealed high means for all kinds of regulations. The highest values were obtained for intrinsic motivation oriented toward knowledge and identified regulation, which demonstrates a high level of self-determination and autonomy. We can explain these results by the specific of the sample. To all the three faculties where students included in the sample come, the grade to the admission exam is very high.

Table 2 Reliability, means, medians, standard deviations, for the AMS subscales

	Mean	Median	Std. Deviation	Minimum	Maximum	Crombach Alpha
MI	3,7128	3,8750	,65639	1,75	4,88	.82
IMK	4,1532	4,0000	,66330	2,67	5,00	.65
IMA	3,6937	3,5000	,86909	1,00	5,00	.61
IMS	3,3243	3,5000	,89099	1,00	5,00	.73
ME	3,8232	4,0000	,72289	1,38	4,88	.77
ER	3,6351	4,0000	1,10360	1,00	5,00	.78
MIN	3,6276	4,0000	1,01974	1,00	5,00	.71
Mid	4,1441	4,3333	,78961	1,00	5,00	.71
AM	1,4414	1,0000	,73466	1,00	4,00	.73

Legend: IM - intrinsic motivation, IMK - IM orientated towards knowledge, IMA – IM orientated towards achievement, IMS - IM oriented towards

stimulating experiences, ME- extrinsic motivation, ER – extern regulation, MIN-introjected regulation, Mid, Identified regulation, AM- motivation

The correlations matrix between the AMS scales and sub-scales are displayed in Table 3. As we can see, there are the strong associations between intrinsic motivation and their subscale and between the subscales of intrinsic motivation which confirms the specific types of associations based on self-determination theory. Also, there is a strong negative association between intrinsic motivation and a motivation (-.362, at the 0.01 level), and especially between intrinsic motivation oriented toward knowledge and motivation (-.4118), which confirm the existence of a continuum between a motivation and intrinsic motivation. Strong positive correlations are registered between extrinsic motivation and their sub-scales, too.

A relevant association we consider that exist between extrinsic motivation and intrinsic motivation oriented toward achievement (.479, $p < .001$) , and especially between interjected regulation and intrinsic motivation oriented toward achievement (.475, $p < .001$), which means that the awareness of the goals' value, and the need to achievement reinforce each other.

Table 3 Correlations between the AMS subscales

		MI	IMK	IMA	IMS	ME	ER	MIN	MId	AM
MI	Pearson Correlation	1	,798**	,818**	,808**	,373**	,016	,393**	,388**	-,362**
	Sig. (2-tailed)		,000	,000	,000	,000	,864	,000	,000	,000
IMK	Pearson Correlation	,798**	1	,529**	,433**	,220**	-,111	,222**	,353**	-,418**
	Sig. (2-tailed)	,000		,000	,000	,021	,245	,019	,000	,000
IMA	Pearson Correlation	,818**	,529**	1	,567**	,479**	,174	,475**	,394**	-,301**
	Sig. (2-tailed)	,000	,000		,000	,000	,068	,000	,000	,001
IMS	Pearson Correlation	,808**	,433**	,567**	1	,248**	-,033	,321**	,222**	-,209**
	Sig. (2-tailed)	,000	,000	,000		,009	,728	,001	,019	,028

ME	Pearson Correlation	,373**	,220*	,479**	,248**	1	,729**	,808**	,719**	-,180
	Sig. (2-tailed)	,000	,021	,000	,009		,000	,000	,000	,059
ER	Pearson Correlation	,016	-,111	,174	-,033	,729**	1	,379**	,358**	,002
	Sig. (2-tailed)	,864	,245	,068	,728	,000		,000	,000	,980
MIN	Pearson Correlation	,393**	,222*	,475**	,321**	,808**	,379**	1	,327**	-,058
	Sig. (2-tailed)	,000	,019	,000	,001	,000	,000		,000	,548
MId	Pearson Correlation	,388**	,353**	,394**	,222*	,719**	,358**	,327**	1	-,367**
	Sig. (2-tailed)	,000	,000	,000	,019	,000	,000	,000		,000
AM	Pearson Correlation	-,362**	-,418**	-,301**	-,209*	-,180	,002	-,058	-,367**	1
	Sig. (2-tailed)	,000	,000	,001	,028	,059	,980	,548	,000	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The Dependency-oriented (DPC) and Achievement-oriented (APC) Psychological Control Scale (DAPCS). Descriptive statistics for the DAPCS are provided in Table 4.

Table 4 Means, medians, standard deviations, for the DAPCS scale

	N		Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing					
DPCT	111	0	1,8333	1,6000	,90748	,00	4,10
APCT	111	0	1,9099	1,7000	,94983	,00	4,70
DPC	111	0	2,003	1,8000	,74124	1,00	4,20

M			6				
APCM	111	0	1,9423	1,8000	,76105	1,00	4,80
DPCF	111	0	1,9185	1,7000	,74927	,55	3,85
APCF	111	0	1,9261	1,7500	,75795	,70	4,75

The research results reveal that parental psychological control scores are very low, with similar values between mother and father.

Analyzing the correlations between the scores of mothers and fathers, on the one hand, and the correlations between the scores of each parent and the scores of family, we can find that the values are very high. These correlations high significant reveals the existence of a coherent family parenting style, which we might call the "pedagogy of the family". (Table 5)

Table 5 Correlations between the scores of each parent and the scores of family for DPC and APC

		DPCT	APCT	DPCM	APCM	DPCF	APCF
DPCT	Pearson Correlation	1	,812**	,649**	,488**	,926**	,754**
	Sig. (2-tailed)		,000	,000	,000	,000	,000
APCT	Pearson Correlation	,812**	1	,473**	,565**	,726**	,910**
	Sig. (2-tailed)	,000		,000	,000	,000	,000
DPCM	Pearson Correlation	,649**	,473**	1	,780**	,887**	,688**
	Sig. (2-tailed)	,000	,000		,000	,000	,000
APCM	Pearson Correlation	,488**	,565**	,780**	1	,681**	,856**
	Sig. (2-tailed)	,000	,000	,000		,000	,000
DPCF	Pearson Correlation	,926**	,726**	,887**	,681**	1	,797**
	Sig. (2-tailed)	,000	,000	,000	,000		,000
APCF	Pearson Correlation	,754**	,910**	,688**	,856**	,797**	1
	Sig. (2-tailed)	,000	,000	,000	,000	,000	

**. Correlation is significant at the 0.01 level (2-tailed).

Hypothesis testing

We estimate that *there is significant association between parental psychological control and parental involvement in option for career (Hyp.1) and final decision (Hyp.2).* (Table 6)

Table 6 Correlations between parental psychological control and parental involvement in option for career (Hyp.1) and final decision

	DPCF	APCF	PCF	Parental involvement in career option	Parental involvement in final decision
DPCF	1	,797**	,947**	,256**	,260**
		,000	,000	,007	,006
APCF	,797**	1	,948**	,230*	,240*
	,000		,000	,015	,011
PCF	,947**	,948**	1	,256**	,264**
	,000	,000		,007	,005
Parental involvement in career option	,256**	,230*	,256**	1	,675**
	,007	,015	,007		,000
Parental involvement in final decision	,260**	,240*	,264**	,675**	1
	,006	,011	,005	,000	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

We have found that there are significant associations between Psychological Control of Family (PCF) and Parental involvement in career option ($r = .256$, $p < .01$), on the one hand, and Parental involvement in final decision ($r = .264$, $p < .01$), on the other hand. Unexpectedly, the correlation value is greater for Dependency-oriented Psychological Control (significant at the 0.01 level), than for Achievement-oriented Psychological Control (significant at the 0.05 level).

We presumed that: (Hyp. 3) *there is a negative association between Parental psychological control and intrinsic motivation* and *(Hyp.4) there is an*

association between Achievement-oriented psychological control and extrinsic motivation;

Table 7. Correlations between Parental psychological control and Academic Motivation

	DPCF	APCF	PCF	MI	ME	AM
DPCF	1	,797**	,947**	,058	,085	,020
		,000	,000	,547	,375	,837
APCF	,797**	1	,948**	,072	,116	-,029
	,000		,000	,455	,226	,762
PCF	,947**	,948**	1	,068	,106	-,005
	,000	,000		,476	,268	,958
MI	,058	,072	,068	1	,373**	-,362**
	,547	,455	,476		,000	,000
ME	,085	,116	,106	,373**	1	-,180
	,375	,226	,268	,000		,059
AM	,020	-,029	-,005	-,362**	-,180	1
	,837	,762	,958	,000	,059	

As we can see in Table 7, the research findings demonstrate that there is no association between Parental psychological control, The Dependency-oriented (DPC) and Achievement-oriented (APC) Psychological Control and Academic motivation.

This result was expected after the descriptive analysis of the variables. High scores for academic motivation and low scores for psychological control suggest the absence of a significant association between these variables. These scores can be understood with reference to the particular characteristics of the sample: a large number of students who demonstrate interest in the chosen specialization, high grades of the admission exam to the specializations analyzed.

To test, however, if there is a relationship between psychological control and academic motivation, we selected a sample composed of subjects who had obtained high scores for parental involvement in career option and final decision.

We believe that these parents demonstrate a directive attitude, and we anticipate that they will have higher scores for psychological control.

Table 8 displays the correlations between psychological control and academic motivation for the selected sample.

	MI	IMK	IMA	IMS	ME	ER	MIN	MId	AM
DPCF	,178	,170	,056	,095	,095	-,081	,154	,108	-,041
	,138	,156	,640	,431	,432	,504	,200	,372	,735
	71	71	71	71	71	71	71	71	71
APCF	,164	**,261***	-,039	,059	,124	-,092	**,277***	,042	-,084
	,172	,028	,749	,624	,303	,446	,019	,729	,487
	71	71	71	71	71	71	71	71	71
PCF	,180	,226	,010	,082	,115	-,091	,226	,079	-,065
	,132	,058	,933	,499	,339	,451	,058	,510	,587
	71	71	71	71	71	71	71	71	71

Research data reveals a statistically significant correlation, but not very relevant, between APCF and intrinsic motivation oriented to knowledge ($r = .261$, $p<.05$), and between APCF and interjected regulation ($r = .277$, $p<.05$). (Table 8)

A more detailed analysis of the relationship between the scores for psychological control for both mother and father and academic motivation reveals some significant differences. (Table 9)

Table 9 Correlations between APC and DPC of mother and father and academic motivation for the selected sample

	MI	IMK	IMA	IMS	ME	ER	MIN	MId	AM
DPCT	,214	,229	,090	,120	,063	-,096	,122	,084	-,131
	,073	,055	,453	,318	,601	,427	,310	,489	,276
APCT	,149	**,247***	-,029	,044	,024	-,118	,155	-,027	-,098
	,215	,038	,813	,718	,839	,329	,197	,821	,415
DPCM	,100	,069	,007	,047	,111	-,047	,159	,113	,069
	,405	,568	,956	,695	,355	,696	,184	,347	,566
APCM	,136	,204	-,040	,061	,206	-,036	**,344****	,111	-,044
	,258	,087	,743	,613	,084	,764	,003	,356	,717

There is a positive association between the scores for Achievement-oriented Psychological Control (APC) of father and intrinsic motivation oriented to knowledge($r = .247$, $p<.05$), which would suggest that the high standards set by father are focused on the cognitive development of the child.

Regarding the mother, we have found that there is a significant association between the scores for APC and introverted motivation ($r = .344$, $p<.01$),. This result would suggest that the mother uses, rather, psychological control techniques, that would lead the adolescent to certain decisions, in line with her expectations, in order to avoid feelings of guilt and anxiety

3. Discussions and conclusions

The results of the present study indicated that there are significant associations between Psychological Control of Family (PCF) and Parental involvement in career option ($r =.256$, $p<.01$), on the one hand, and Parental involvement in final decision ($r =.264$, $p<.01$), on the other hand, but there is not an association between Parental psychological control, The Dependency-oriented (DPC) and Achievement-oriented (APC) Psychological Control, and Academic motivation.

These presumed correlations can be highlighted on a sample selected on the basis of the high degree of parental involvement in academic options, and in the final decision. Also, you can find differences between the ways in which mother and father exert psychological control.

Knowledge of these mechanisms could mitigate the negative effects of psychological control and could guide preventive actions.

Limitations

The most important limitation of this study is derived from the particularities of the sample. We have tried to test our hypotheses on a homogeneous sample, which includes students who are interested in the field of study, and have a high socio-cultural and educational level, proved even by the grade obtained to baccalaureate, and to the admissions exam to college. These performance indicators were not considered in our study, but they are a feature of scientific field of study and of the specializations that were analyzed.

Another limitation is the lack of representativeness of male individuals (6%), which derives also from the particularities of the sample,

because this field of study is very attractive, especially for the female population.

A third limitation consists in the use of self-reports to measure DPC and APC.

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Journal Plus Education, ISSN: 1842-077X, E-ISSN (online) 2068-1151 Vol XII (2015), No. 1. pp. 61 - 78

EVALUATING THE DEVELOPMENT OF THE VISUAL PERCEPTION LEVELS OF 5-6 YEAR-OLD CHILDREN IN TERMS OF SCHOOL MATURITY AND "DRAW A PERSON" TECHNIQUE

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Abstract

In this study, the relationship between the visual perception levels of 5-6 year-old children and school maturity as well as their drawings of human picture is investigated. The participants of the study are 53 5-6 year-old children attending the Preschool Application Center at Marmara University. In order to collect data, the Frostig Visual Perception Test (FVPT), Goodenough-Harris Draw a Person Test and Marmara Primary School Readiness Test (MPRT) were used. The effect of the visual perception development level on the school maturity and the drawing of human pictures are analyzed by means of the simple linear regression analysis technique. Concerning the results, it was realized that the ability of visual perception is strongly explanatory of the school readiness and the developmental level assessed by the Goodenough-Harris Draw a Person Test. Also, it was found that the development of drawing a picture assessed by the Draw a Person Test significantly predicts school readiness. The predictive strength of the FVPT's sub dimension of "hand-eye coordination" was found to be significantly meaningful in predicting MPRT's "labyrinth" and "line" sub dimensions. The findings yielded in the study are compared to both national and international research findings and the predictive value of these instruments in predicting school readiness is discussed.

Keywords: *Visual perception, school maturity, children pictures, 5-6 year old children*

Introduction

School maturity means reaching a certain level of physical, mental, social and emotional development and being ready to successfully fulfill the