

Construction and Validation of the First Scale that Measures Family Organizational and Administrative Functionality

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Construction and validation process of the first scale that measures Family Organizational and Administrative Functionality aims to identify the administrative styles applied during the young human capital development in their household setting within their family. The test frequencies scale uses always (4), almost-always (3), sometimes (2), and never (1), in thirty-four reactivities. Two areas have ten reactivities each (Organizational Culture and Leadership), and the other two areas have seven reactivities each (Communication and Environment). Twenty judges that evaluate the reactive judge the scale. After the judges' analysis, they select 38 reactivities from 61 (just 34 from 38 are in the scale) using Lawshe's (1975) formula. This group selected 34 of the 61 reactivities giving that 90% of general value. The internal consistency and the factor analysis are calculated after submitting the test to a group of a hundred children. These samples showed a consistency of .89 (Cronbach Alpha). In addition to that, the Factor Analysis shows that every area that the Family Organizational and Administrative Functionality Scale pretends to measure can be recognized like independent factors aligning most items as the judge's did during the reactive process validation. During this process also tabulated the results to calculate the percentage of the general level of FOAF in two different groups: 50 children with low GPA (2.49 to down) in school and 50 with High GPA (2.50 to up) in school. The young human capital with lower academic GPA identify their family without or low FOAF percentage and the young human capital with high academic levels identify their families with moderate or high FOAF percentage. This result assumes that the administrative and organizational functionality in the family have influences in the levels of academic productivity of their young human Capital.

Keywords: Administrative, Construction, Family, Functionality, Measure, Organizational, Scale, Validity.

Introduction

The notion of human capital includes individual intangible assets, seen as something valuable that an organization or country can make use of it. Otherwise, it is clear that the human capital has an infinite and varying set of properties (Cornali 2018). Most research regarding this subject has mainly explored things such as Intelligence Quotient (IQ), academic achievement, and work outcomes without exploring other key domains in the so-labeled, "vulnerable population" (Chawla and Trejos 2018). The measurement of intangibles and human capital, important for both the goods-producing and service-producing industries, has always been a difficult challenge for the statistical system. Therefore, the growth

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of the new economy has made responding to this challenge even more urgent. Both are trying to understand how such inputs affect the value chain of productivity, growth and firm value, which now surpasses the need to measure the impact of bricks, mortar, and equipment. Yet, the changes that have brought the new economy into existence have simultaneously highlighted the need for improvements to traditional measures of input and output; this is particularly true for human capital. Finding new measures of human capital and quantifying them in such a manner that they can be introduced into a production function and produced on a scale that provides sufficient sample size for use in official economic statistics is a formidable challenge (Abowd et al. 2002). The household organizational functionality and the environmental circumstances where the young human capital grow up and develop their physical conditions, social skills and productive behavior, are also a measurement challenge (Vélez-Candelario 2011).

Measuring the organizational behavior during the household administration is easier in order to understand how the young human capital is affected or influenced in their emotional, productive and physical health by their household management activity (Vélez-Candelario 2011). The World Health Organization defines health as a state of complete physical, mental, and social well being and not merely the absence of disease or infirmity. They also exposed that smoking, is the most common teenage experiment, and has serious long-term consequences such as disease and premature death. Over 480,000 annual deaths are attributable to tobacco use. Nearly 90% of smokers start smoking by age 18. In addition to that, alcohol is the most common psychoactive substance used during adolescence. Alcohol use tends to be connecting with motor vehicle accidents, injuries and deaths; problems in school and in the workplace; and fighting, crime and other serious consequences (Federal Interagency Forum on Child and Family Statistics 2017).

Although in the contrary, binge drinking declined from the most recent peaks of 13% in 1996 to 3% in 2016 for 8th-grade students, 24% in 2000 to 10% in 2016 for 10th-grade students, and 32% in 1998 to 16% in 2016 for 12th-grade students. Marijuana use presents both cognitive and health risks, particularly damage to pulmonary functions resulting from chronic use. Moreover, hallucinogens, such as MDMA, can affect brain chemistry and may result in problems with memory and learning new information. From 2015 to 2016, reports of illicit drug use in the past 30 days decreased for 8th-graders (from 8% to 7%) but remained in the same level for 10th and 12th-grade students at 16% and 24%, respectively (Federal Interagency Forum on Child and Family Statistics 2017).

Otherwise, the influence is the ability to exercise power over someone, on the part of a person, a group or an event in particular. Among the factors influencing the social and emotional development of the child and the teenager, there are biological factors, which refer to the cognitive system, involving many structures of the nervous system, responsible for the collection and sending of information. The environmental factors (which refer to the environment) must take into account the stimulation of emotional standards of breeding, from an early age. Equally importance, the cultural and socio-economic factors refer to the place where each child is, influenced and belongs to, according to the culture of their family, the

social and religious values (Garcia 2018). Consequently, the first years of life are essential, as they are an influence in the health and emotional development of the person life. According to the Robert Wood Johnson Foundation, many problems during early childhood development early are link to emotional, physical and intellectual health in adulthood. It is also important to note, that specifics topics such as nutrition, economics, community and social environment of the child during the first years of life will have a permanent impact on them (Jameson 2016).

Family, considered as an informal organization and exclusive human factory, not only has the assignment of reproducing the human race, it also has a significance challenge to develop healthy and competitive human beings in accordance to their community's socio-economic needs. The family also has the assigned goal to letting them out of a high-risk behavior and poor physical and psychological health (Vélez-Candelario 2018). Thus, more physical and emotional ailments are also contributing to create intra-family conflicts; such as less mental wellness, low productivity, and more risky behavior between adolescents that often have a link to divorced families (Breidablick and Meland 1999: as cited in Valdes 2018). The teenagers from divorced parents show more relations that are social issues and unemployment experiences than others who come from intact and stable families (Spruijt and Goede 1997: as cited in Valdes 2018). That is why contemporary changes in the family only need to seek new perspectives; thought, the new successive reforms and the proposed changes in this area have not yielded the expected results. Otherwise, these changes do not include many essential aspects such as the principle of subsidiary, the empowerment of families, economic changes (especially in the labor market) and the mutual implications of family policy and the economy (Szczepaniack-Sienniak 2014).

Young Human Capital School's Productivity Issue

Human Capital has as one of the crucial determinants of growth and development of every nation (Mankiw, Romer and Weil 1992, Benhabid and Spiegel 1994, Knowles and Owen 1995, Obialor 2017: as cited in Dauda 2018). In the modern economy, the Grade Point Average (GPA) is a primary determining factor in order to have the possibility to dominate new scientific creations. Furthermore, this is not working because the dysfunctional social environment is affecting the productivity levels in educational settings, as well as decreasing the academic productivity (Rosende 2008).

As a considerable dilemma the transformation and disintegration of the family, manifested in such phenomena as the decrease of married population, mainly as a result of divorces or postponing decisions of married woman and men. These indicators are manifestations of de-institutionalization (de-traditionalization) of the family, standing for the devaluation of the traditional family consisting of spouses and children as a basic social unit (Szczepaniack-Sienniak 2014). An example of that is today's divorce rate which seems to be rapidly increasing causing more illness, emotional issues, poor school adjustment, low productivity,

and high risk behavior in teenagers (Breidablick and Meland 1999: cited in Valdés 2018). Hence, the young human capital from this specific family composition presents a lot more human relationship problems and unemployment issues than those with stable and intact families (Spruijt and Goede 1997: as cited in Valdes 2018).

The human relationship and emotional matters (self-regulation) are what help to increase or decrease productivity in school and work (Bar-On 2004). It is also important to note that self-regulation includes impulse control and the management of short-term desires. That is why one of the routes for such people to find their way to jail as many criminal acts, occur in the heat of the moment. For non-violent people, it can lead to losing friends through careless outbursts, or financial problems caused by making too many impulse purchases (Changingminds 2017). The self-regulation is considered a system process, supporting relevant to the conditions, changeability, and flexibility of a person's life activity (Sedova 2014). Some researchers suppose that forms of self-regulation are not the beginnings of this ability, they are based on the previous stages (Bezrukhih and Loginova 2002: as cited in Sedova 2014). Sedova (2014) explained that the development of regulatory systems starts during the prenatal period (inside their household environment).

Organizational Psychology a Science for the Household Functionality

Industrial-organizational psychology is the branch of the psychology that applies psychological theories and management principles to organizations. Often referred to as I-O psychology and this field focuses on increasing workplace productivity and related issues such as physical and mental well-being. Industrial-organizational psychologists perform a wide variety of tasks, including studying worker attitudes and behavior. But, It is also important to note that it has two major sides: the industrial side, which involves looking at how to match the individuals to specific job roles, and the organizational side, which is more focused on understanding how organizations affect individual behavior, organizational structures, social norms, management styles, and role expectations. These are all factors that can influence how people behave within an organization (Cherry 2017). This specialization is scientifically defined as the study of human behavior in organizations and the workplace. The specialty focuses on deriving principles of individual, group and organizational behavior and applying this knowledge to the solution of problems at work. It is a specialized knowledge and requires in-depth understanding of organizational development, attitudes, career development, decision theory, human performance and human factors, consumer behavior, small group theory and process, criterion theory and development, job and task analysis and individual assessment (American Psychological Association 2018).

Otherwise, the Industrial Organizational Psychology is currently a practice foreign to informal social organizations properly known in the social sciences as those not created in a systematic and intentional to achieve a particular purpose

(Guillen and Guil 2000). This science was managed to work within formal organizations where it can talk about objectives spontaneously not planned with rigid structures and relations among members designed beforehand. In this way, it can meet the goals of the organization, in definitive in these organizations there is an institutionalization of tasks, spheres of activity and authorities (Pugh 1973: as cited in Guillen and Guil 2000). It is for this reason that it has maintained its Industrial District, which was defining the place of practice. According to the literature (Muchinsky 1997: as cited in McCarthy 2007), it has been award for a spelling error. Even so, there is arguably the critical thing that was and has been applying psychology to the new system of economic development industry during the end of the eighteenth century and early nineteenth century up to the present. Opening the doors, as a result, of the exhibitions of the early exponents of the Industrial Organizational Psychology to psychological practice aimed at business and enterprise development.

Hannan (2018) exposed that contemporary organizational analysis and management science, owe much of their early development to the German sociologist Max Weber (1864–1920) who originated the scientific study of organizations. For Weber, the term authority applies to situations in which one person willingly accepts the direction of another. He also affirms that until modern times, authority was inherited. Weber identified the institutional structure of a new "rational-legal" authority, observing that rights of control increasingly derived from expertise rather than lineage. He documented how this development, which he called rationalization, underlaid the rise of the modern state bureaucracy. According to him, organizations were able to develop unparalleled calculability and efficiency by combining two structures: (1) *a system of explicit rules*, upheld by clearly marked jurisdictions between offices and by permanent files documenting the processing of cases and (2) *a unique division of labor*. the latter structure gave rise to the modern bureaucrat—a person who was required to be an expert in the relevant rules and who had to be shielded from inappropriate influences to guarantee fairness and objectivity.

In the area titled organizational, it refers to the study and application of knowledge about the way in which people (both individually and in groups) act in organizations, formal and informal ones (Newstrom and Davis 2002). This area incorporates into the industrial vision, with the collaboration of observations and research conducted by other experts of the time such as sociologists (McCarthy 2007). Those made their contribution in expanding the areas of expertise of the Industrial psychologists at the beginning of the 20th century to one that would measure and develop skills, personality, and the members of group psychosocial skills. They use this training and information to locate and organize them making it possible to improve the functionality and productivity in both in the individuals and the organization. The organizational analysis in management science is the study of the processes that characterize all kinds of organizations, including business firms, government agencies, labor unions, and voluntary associations such as families, sports clubs, charities, and political parties. Any organization is a social unit with three properties: (1) *it is a corporate* (or group) actor; (2) *it claims a special and limited purpose* and (3) *its creators intend it to last beyond the*

accomplishment of a single action, if not indefinitely (Hannan 2018). Industrial/Organizational psychology is the organization of working groups with common goals for the training of their members for the good development of the organization to which they are affiliated, influencing its human capital with tools of psychosocial category, and broadening their possibilities of management and success toward achieving their goals as an organization (Muchinsky 1997: as cited in McCarthy 2007).

Vélez et al. (2009), in Vélez, dissertation research applied by first time the I/O psychology skills and tools to the informal organization named family. This study was title *Development of the human capital from family organization with the intervention of the I/O Psychology in a group of families in south and north of Puerto Rico*, published by Interamerican Journal of Psychology on April, 2016. It is a qualitative study that observed the administration style and organizational behavior of the human capital within their household setting. In this research could be possible found that families with adult and young human capital with high productivity levels in work and school are being administered and organizing how administrative and organizational theories recommend, even when they do not do this consciously. Otherwise, the families that have a low productivity in school and work are not administering and organizing according with the administrative and organizational theories recommend even when they do not do this consciously either.

Vélez et al. (2009) observed the Human Capital Theory exposed by Gary Becker. This theory explained that the capabilities of the individuals are not innate. Instead, they are mostly at school or inside the family, by learning or by experience. Knowledge acquired by education is an investment not a consumer (Oliver 2008). It allows improving wages, better consumption habits, healthy lifestyles and adequate appreciation of the resources that we have. From the economic point of view we will not take on education if this does not provide benefits more significant than their cost. Education or training cannot be separate from the individual who acquires it (Oliver 2008).

Administrative, Organizational and Others Management Theories Definitions and Tools

Administration or management is a daily human activity. We all practice it, regardless of our condition of school education. It does not have the same character of mathematics, biology or anthropology, which you can live well without being a regular practitioner of those or other sciences; it is not as well with the administration. Since we wake up until we go back to sleep you need administrate optimizing our resources, beginning with the time, i.e. you need manage always all (Torres-Hernández 2014). The General Administration Theory is the rational conduct of the activities of an organization, with or without profit. It involves *planning*, *organization* (structure), the *direction* and *control* of all activities differences by the division of labor, running on an organization. The Administration Theory is the field of human knowledge that works with the

general study of administration, regardless of whether this applies to organizations for-profit or not. The TGA (for its acronym in English), studying the administration of organizations (Chiavenato 2000). The Human Relations theory speak about motivation, leadership, communication, group's dynamic organization within other essential subject and harshly criticized the old classical concepts of authority, hierarchy, rationalization of work, departmentalization and general principles of management. Suddenly, it begins to explore the other side of the coin; engineers and technicians yield the place to the psychologist and sociologist (Chiavenato 2000).

Otherwise, the Organizational Development theory is the practice of planned, systematic change in the attitudes, beliefs, and values of the human capital, through the creation and reinforcement of long-term training programs (OD is action oriented). It starts with a careful organization-wide analysis of the current situation and future requirements, and employees techniques of behavioral sciences such as behavior modeling, sensitivity training, and transactional analysis. Its objective is to enable the organization in adapting-better to the fast-changing external environment, new markets, regulations, and technologies (Business Dictionary 2018). A movement brings together several authors seeking applied sciences (especially the theory of behavior) behavior management. This theory was born from the evolution of developing organizational (DO), focused on organizational change and flexibility (Chiavenato 2000). It is the systematic application of knowledge of the behavioral sciences at various levels; *group*, *intergroup*, and *organizational* for the practical realization of a planned change. Its objectives are a higher quality of life, productivity and efficiency. It also, pursues the use of your behavioral knowledge for modification of opinions, attitudes, values, strategies, structures, and practice so that the organization can better adapt to their competitive actions, technological advances and the accelerated pace of other changes in the environment (Newstrom and Davis 2002).

Likewise, to analyze groups it is necessary to understand that the group is not only a group of people, but they are also people who are integrating between it and are psychologically perceive themselves as members of a group (it is named Group's Dynamic). The members of a group communicate directly face-to-face, the reason which each member, influence others and as these influence them. The group has the following characteristics: purpose (i.e., a common goal), dynamic structure of communications, and internal cohesion. Meanwhile, the administrative function depends on the planning, direction, and control to form the regulatory process (Chiavennato 2000).

Otherwise, the human capital groups having a formal organization are based on the rational division of labor, which specialized organs and people in certain activities. Therefore, the planned organization defined in the organizational structure, instituted by the Directorate and communicates to everyone through the craft of organization (Chiavennato 2000). The groups as an informal organization emerge spontaneously and naturally among the people who occupy positions in the formal organization, from human relationships established to perform in their areas (pairs, families, associations, and clubs). They are configuring from the relations of friendship (or antagonism) and the emergence of informal groups

(acquaintances or friends, coworkers, among others) that do not appear in the organization chart or any other formal document (Chiavenato 2000). The network of personal and social relations not established or required by the formal organization, arises spontaneously as a result of the association between individuals. The emphasis and the purpose of these organizations lie in people and relationships, while the formal organization emphasizes official positions regarding authority and responsibility (Newstrom and Davis 2002). Family possesses informal and formal characteristics. The family organization applies the informal characteristics that include the spontaneous actions and behavior in their first formations stages, making these actions the main reason to be constructed. But at the same time, when the group is already formatted and organized as a formal social group acquired the formal characteristics as the rational division of labor, which specialized organs and people in certain activities with specific goals, vision, and mission to achieve (Vélez et al. 2015).

The family organization is a set of people living under the same roof, arranged in fixed roles (father, mother, and brothers) with consanguineous ties or not, with a mode of existing economic and social standards, and powerful feelings that unite them and stick together. Naturally, it goes through birth, then growth, multiplication, decadence, and transcendence. The life cycle of family life is this process called. It also has a purpose of generating new individuals to the society. They are an organization or system because they have a set of rules and principles on a matter, related among if a set of things neatly linked to contributing to a particular purpose, it is characterized by the interaction and the order to a goal (Inter-American Children's Institute 2008). Becker (1992) exposed that the human capital is the one that exhibits all those skills at the person's birth, which accumulates during life and qualities that help to carry out its work efficiently increasing productivity. The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel (1992) explained that Gary Becker applied economic theories and approaches to areas that had previously only being address in sociology, demography, and criminology. His starting point was that actors act rationally to maximize specific goals, like advantage or wealth. In the 1950s and 1960s, he applied his models in several areas: investments in people's competence (or human capital), behavior in households and families, crime and punishment, and discrimination in labor and other markets.

The Inter-American Children's Institute (2008) recognizes two types of functions in the family: the *nutritious* and *regulations*. The nutritious include satisfaction of primary needs of rewarding survival by one or both parents, are more unstable and abdicable, have greater permissiveness and reduce the authority and hierarchy of the parents. Regulations have secondary needs that are frustrating for parents and children, are limiting pulse, create habits and self-control, rules/regulations, agreements between parents with differentiation, mutual responsibility and respect among the members (by age, features, location, and interests). Then there is dysfunctional there must be the absence of these features or characteristics of each of the primary functions of the family. In the nutritional purposes must be blocking the process of emancipation or individualization, overprotection, confusion between authority and difficulty to say no. Also, in the case of the

regulatory function should be there; rigidity and blockage in the process of emancipation and autonomy, overprotection or authoritarianism and difficulty to say if. Concerning dysfunctional communication, maybe give in the severe disruption type of established exchanges, double messages, lockups, displacement and dual link (Inter-American Children's Institute 2008).

The Four Basics: Communication, Leadership, Environment and Organizational Culture

To learn how to develop self-control during the childhood by decreasing a high-risk social behavior, the leader in charge should work hard to teach their trainee. In addition to that, the family leader (or leaders) should know how to apply a healthy subordination process using the management and organizational theories in the four basics: *communication, leadership, environment and organizational culture*. Also, the organizational and administrative process has to be according to the lesson that the leaders pretend to use, in order to build the rapport between them and their human capital or human intelligence management (Vélez 2018). To reach this goal (the rapport) the communication is very relevant. Communication is considered to be the sharing of meaningful information between two or more people with the goal of the receiver understanding the sender's message (Business Dictionary 2018). The word communication also means pooling, communion, participation, and mutual interaction etymologically. It refers, therefore, to a process involving all components of a system. Its main elements are (a) transmitter/receiver, which through feedback, continuously alternate their roles; (b) message, channel and code; (c) context and interference (Guillen and Gil 2000). On the other hand, Bateson and Ruesh (1984: as cited in Guillen and Gil 2000), indicate that the concept of communication includes all the processes through which people influence each other.

On the contrary, Werther and Davis (2000) number three communications types. Those are: *upward* communication (originates in medium or low hierarchical levels of organization and aims to object to the top), *downward* communications (is the information that begins in some medium or high point of the Organization and it spreads to lower hierarchical levels or any structured communication style), and *lateral* communication (is what passes through the chains of command). This last communication type is less formal and occurs through networks, which, in turn, are groups of people that establish and maintain contact with each other for the informal exchange of information; usually on a shared interest. A participant alert network can have access to influential people and centers of power based on a shared history, friendships, complementary organizational roles or community relations (Weither and Davis 2000).

Another management basic process is the leadership. It includes individuals who are leaders in an organization, regarded collectively. It is the activity of leading a group of people, an organization or the ability to do this. Leadership also involves establishing a clear vision, sharing that vision with others (influencing), so that they will follow willingly, providing the information, knowledge, and

methods to realize that vision, and coordinating and balancing the conflicting interests of all members and stakeholders. A leader steps up in times of crisis and can think and act creatively in stressful situations (Business Dictionary 2018). Leadership is also defined by González (2008) as: *instrumental* and *expressive* administration (the group expects the leader to organize tasks to meet their objectives), *demonstrative* leadership (is it exercised taking into account the welfare of the collective, the leader focuses on maintaining joined the group and reducing tensions or internal differences). Besides, Chiavenato (2000) defined three types of leadership; *authoritarian*, *democratic*, and *Laissez Faire*. According to Chiavenato (2000), an authoritarian leadership is purely instrumental; the leader makes decisions, and subordinates must obey without question, so he believes that it will keep the respects. Here the leader assigns tasks, an unpredictable mode for the group; it's the dominant praises and criticizes the individual duty of each member of the organization that determines the steps to follow and the techniques to be used in the execution (Chiavenato 2000). He also exposed that democratic leadership is expressive because it tries to involve all members in the decision-making; participatory deliberations strengthen the Group expected. However it has also observed that this kind of leadership has its limitations to make urgent decisions (González 2008). The Group outlines the steps and techniques to achieve the goal and requests technical Council leader when it is necessary, exposes two or more alternatives, and they choose bone gives direction. Meanwhile, the Laissez Faire leadership has the full liberty in an individual or group decision, with minimal participation from the leader. In this case, the leader does not attempt to evaluate or regulate the course of events and sticks to only making sporadic comments on the activities of the members when asked to (Chiavenato 2000).

Otherwise, the environment consists in the total of all surroundings of a living organism, including natural forces and other living things, which provide the conditions for development and growth, as well as of danger and damage (Business Dictionary 2018). Chiavenato (2000) defined environment as an equals social and physical characteristics of the one room or place. The environment generates a climate and is it the set of attributes that describe an organization (Forehand and Gilmer 1964, cited in Guillen and Guil 2000). The environment is also a relatively long-lasting quality of the overall atmosphere that is experienced by its occupants. It can describe concerning values of a particular set of characteristics of the environment (Tagiuri 1968: cited in Guillen and Guil 2000).

The Business Dictionary (2018) defined organizational culture as the values and behaviors that contribute to the unique social and psychological environment of an organization. It includes an organization's expectations, experiences, philosophy, and values that hold it together. It expresses in its self-image, inner workings, interactions with the outside world, and future expectations. Therefore, it is based on shared attitudes, beliefs, customs, and written/unwritten rules that have been developing over time and are considered valid. The organizational culture, according to with Guillen and Guil (2000) is the regulatory and social glue that allows its members to have an identity and be able to communicate and cooperate around a joint project. The conceptual fields covering organizational

culture are values, ethics management, ideology, and behavior systems. These values function as lighthouses and regulations that guide the conduct of group members in certain situations. It designates what is right or is right for the organization, and that is not good for it. For example, an organization could take as value respecting the environment. Concerning ideology, it refers to the set of implicit assumptions, even when they're not aware in regards to the nature of the person and their place in the world that operates in the organization and determines such aspects as leadership, management styles and systems of reward, among other mechanisms of development and organizational performance.

On the other hand, Newstrom and Davis (2002), define it as a set of assumptions, beliefs, values, and standards shared by members of an organization. It can be created consciously or unconsciously by its leading members or may merely have evolved. That culture cannot see it or touch it but its present, and very penetrating.

Communication, leadership, environment and organizational culture are a human being continuous creation and expression, while organizing their formal and informal organizations. Those areas are the ones that make possible to develop human capital with regulated behavior that permits them become successful or not in their socio-economic goals (Vélez 2011). That is why today's economy makes it urgent to redirect the research and the intervention to the informal organization calls families. For that reason, it is necessary to develop functional family leaders, attractive domestic environment, a better internal communication system and a defined organizational culture within an informal organization that has the prime responsibility of developing human capital from their first live stages. The data collected by this scale makes possible a better understanding of the family's organization member abilities, influences, and development possibilities. This data will also get closer to the disrupted administrative and organizational functionality tendency, according to the theories, inside the household setting. The mathematic results make possible identifying a specific family leader behavioral tendencies to administer their family group and their leadership strengthens and weaknesses to manage human intelligence (Vélez 2011).

Objective

The objective of this project is to present the construction and validation process of the first scale that measures mathematically in the informal organization named family, and their organizational and administrative functionality. Using the observations of Vélez et al. (2016) and the Administrative and Organizational theories recommendations, this instrument will be used as a calibrator to quantify the quality of the four essential management areas during intrafamiliar human being intelligence management. Therefore, those areas include: communication, leadership, environment, and organizational culture. This scale also works as a mathematical guide to quantify the quality of the family's leader administrative skills. It also can help to manage their internal physical and social environment; preventing a high-risk social behavior in their household subordinated young

human capital. The FOAF Scale also can make able to become assertive during this organize human being group organizational development (DO).

Method

The FOAF Scale (Family Organizational and Administrative Functionality) was created to measure the functionality of the four primary administrative and organizational areas within the family organization: leadership, environment, organizational culture, and communication. It currently has 34 reactivities and a frequency scale from one (1) to four (4) as options. For the reactive selection, a validation document is created and later submitted to 21 judges, with 61 items to evaluate using the Lawshe (1975) formula. After the judge's analysis, they select 38 reactivities. Finally, only 34 are used, considering 10 in each area of Leadership and Organizational Culture, and 7 in the areas of Communication and Environment. In addition to that, using the Statistical Package of Social Science (SPSS), 2003, version, it was confirmed that the internal consistency validity is that of .9 (Cronbach Alpha); meanwhile, the Factor Analysis had adequacy of .8, Kaiser-Meyer-Olkin (KMO by the English acronyms) measure. This test can be administered to the young human capital from the age of 6 to 17 years old, under supervision of an adult leader. It also can be administered to adults 18+ years. Finally, six different percentages of quality categories that define Family Organizational and Administrative Functionality are created to name the families administrative and organizational functions. With this categories, is possible to clarify the administrative and organizational tendency styles of family leaders during their family's organizational and administrative process; Effective Functionality (100% to 90%), Adequate Functionality (89% to 85%), Moderate Functionality (84% to) (80%), Moderated Low Functionality (79 to 70%), and Low or Any Functionality (69 to 25%).

Meanwhile, during the validation process, the sample selected counts with unique characteristics that help visualize the percentage of the FOAF scale in different situations. The size of the study is divided into two categories: 50 children with a low GPA in school (2.49 and down) and 50 with high GPA (2.50 and Up). In the group of children with a GPA below 2.49, the FOAF scale shows that 64% of the sample tended to a Low Functionality, dividing the results into three categories of Low tendency: Moderately Low (20%), Too low(20%) and Not Functional (24%). The not functional trend was the majority. Only 10% of the sample have a practical tendency of functionality, 12% have an adequate, and 16% have a moderate feature.

In the sample of children with a GPA of 2.50 and up, the results show a different percent of functionality tendency in the FOAF scale. This sample showed fewer results in the three categories of Low Functionality: Moderately Low (18%), Too Low (4%), and Not Functional (6%). The majority of this group displayed a high tendency of functionality: Effective Family Functionality (44%), Adequate Functionality (18%), and Moderate Functionality (10%).

Table 1. Reliability Statistics

Cronbach's Alpha	N of Items
.891	34

Table 2. KMO and Bartlett Complete Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.755
Bartlett's test of Sphericity approx... Chi-Square	1454.875
Mexico City GIS.	561 .000

Table 3. General Percent of the Family Organizational Functionality Test

Family Organizational Functionality Categories	Sample of 50 Children's (6 to 18) Low GPA 2.49 and down	Percent
Effective	5	10%
Adequate	6	12%
Moderate	8	16%
Low Moderate	10	20%
Too Low	10	20%
Not Functional	11	22%
Family's Organizational Functionality	Sample of 50 Children's (6 to 18) High GPA 2.50 and up	Percent
Effective	22	44%
Adequate	9	18%
Moderate	5	10%
Low Moderate	9	18%
Too Low	2	4%
Not Functional	3	6%

Conclusions

During this FOAF scale construction and validation process, the functionaries have demonstrated an accurate measurement process. The sample results are corroborate the finding of the qualitative research created by Vélez et al. (2016) published as *Family, Human Capital and I/O Psychology* on 2016. This study observed a low productivity level of the young and adult human capital from the families without a strong organizational characteristics according with the administrative and organizational theories. Some of those observations include poor communication or non-communication, an authoritarian or laissez- faire

leadership, poor household hygienic and many un-common organizational culture characteristics as members of the same organization, within others. Otherwise, they observed in the families with better productivity and healthier organizational characteristics, according with the administrative and organizational theories that include; open communication styles, a household hygienic and a lot of common characteristics, as members of the same organization within others. On the other hand, they observed that families with better productivity and healthier organizational features according to the administrative and organizational theories include: open communication styles, a hygienic household, and more common characteristics as members of the same culture, within others. Those results are also constantly confirming the findings of the first stage of this scale construction, in which a group of 18 children with low academic GPA was measured (Vélez-Candelario 2009) and demonstrate the same tendencies of low functionality. This instrument is making possible evaluate mathematically using a percent as a metric to analyze the family's leader management skills to organize and administer, their income, their daily live, their social interactions, their house physical environment, their goals and their human resources intelligence management under their charge.

References

- Abowd JM, Haltiwanger J, Jarmin R, Julia L, Lengermann P, McCue K, McKinney K, Sandusky K (2002) *The relation among human capital, productivity and market value: building up from micro evidence*. Retrieved from <https://urbn.is/2FRvWVH>. [Accessed 16 April 2018].
- American Psychological Association (2018) *Industrial and organizational psychology*. Retrieved from <https://bit.ly/1nvBNyz>. [Accessed 16 April 2018].
- Bar-On Z (2004) *A Wide Productive Human Capital Look: A Hole Review to the Productive Human Capital*. ProQuest Dissertations and thesis, part 0501, p. 72, Berkeley University, California, US. Publication; No. AAT331466785.
- Becker GS (1992) *The economic way of looking at life*. Retrieved from <https://bit.ly/2zAs99q>. [Accessed 25 April 2018].
- Boslaugh S (2013) *Statistic in a nutshell*, 2nd edition. Gravenstein Highway North, Sebastopol: Or ' Really Media Inc., 1005.
- Business Dictionary (2018) *Communication*. Retrieved from <https://bit.ly/2rDpNnm>. [Accessed 18 April 2018].
- Business Dictionary (2018) *Environment*. Retrieved from <https://bit.ly/2rDpNnm>. [Accessed 18 April 2018].
- Business Dictionary (2018) *Leadership*. Retrieved from <https://bit.ly/2rDpNnm>. [Accessed 18 April 2018].
- Business Dictionary (2018) *Organizational development (OD)*. Retrieved from <https://bit.ly/2rDpNnm>. [Accessed 18 April 2018].
- Changingminds.Org (2018) *Self-Regulations Theory*. Retrieved from <https://bit.ly/2E52TvR>. [Accessed 10 April 2018].
- Chawla M, Trejos E (2018) *Human Capital and Substance Use: A Lifescan Perspective*. In L Margaret, F Murray (eds), *Human Capital: Perspectives, Challenges and Future Directions* Chapter Four. New York: Nova Science Publishers.
- Cherry K (2017) *The Basics of Industrial-Organizational Psychology*. Retrieved from <https://bit.ly/2Qqidcl>. [Accessed 1 November 2017].

- Chiavennato (2001) *Introducción a la Teoría General de la Administración*, 5ta edición. Méjico C.
- Cornali F (2018) Rethinking Human Capital: Definition and Operationalization of a Controversial Notion, chapter IV. In M Lawrence, F Murray (eds) *Human Capital: Perspectives, Challenges and Future Directions*, 1-30. New York: Nova Science Publishers Inc.
- Dauda RS (2018) Brain Drain: The Bane of Human Capital Development and Utilization in West Africa. In *Human Capital: Perspectives, Challenges and Future Directions*, 83-106. New York: NOVA Sciences Publishers, Inc.
- Federal Interagency Forum on Child and Family Statistics (2017) *America's Children: Key National Indicators of well-being*. Retrieved from <https://bit.ly/2E5JGu3>. [Accessed 18 Mars 2018].
- Garcia N (2018) *Factors social that influence in the development*. Retrieved from <https://bit.ly/2BJROOv>. [Accessed 19 April 2018].
- González M (2008) *Grupos y Organizaciones*. Retrieved from <https://bit.ly/2FLeSjU>. [Accessed 19 November 2008].
- Guillen C, Guil R (2000) *Psicología del trabajo para las relaciones laborales*. McGraw Hill, Interamericana de España, S.A.U.
- Hannan MT (2018) *Organizational Analysis: Management Science*. Retrieved from <https://bit.ly/2PbzPEf>. [Accessed 4 June 2018].
- Interamerican Children Institute (2008) *Concepto de Familia*. Retrieved from <http://iin.oea.org>. [Accessed 7 June 2008].
- Jameson M (2016) *Issues that affect children in early childhood development*. Retrieved from <https://bit.ly/2FOGZi5>.
- McCarthy P (2007) *Brief outline of the history of I/O psychology*. Retrieved from <https://bit.ly/2Q3wqMN>. [Accessed 9 December 2007].
- Newtron JW, Davis K (2002) *Organizational behavior: human behavior at work*. McGraw Hill/Irwin.
- Rosende F (2008) *Human capital and family: the missed connection*. Retrieved from <https://bit.ly/2ACLVB2>. [Accessed 7 June 2008].
- Sedova E (2014) *Stages of sensorimotor correction in self-regulation development of junior schoolchildren*. Atiner Conference Paper Series no: PSY2014-0958. ISSN: 2241-2891.
- Szczepaniak-Senniak J (2014) *Demographic and socio-economic conditions of the restructuring of family policy in Poland*. Athens Journal of Social Sciences 1(4).
- The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel (1992). *Gary Becker - Facts*. Retrieved from <https://bit.ly/2E556HF>. [Accessed 25 April 2018].
- Torres-Hernández Z (2014) *Teoría general de la administración*. Instituto Politécnico Nacional. Centro de Investigaciones Económicas, Administrativas y Sociales (CIECAS). 2da Edición EBOOK. México, 2014. Grupo Editorial Patria. Retrieved from <https://bit.ly/2QxF4Tc>. [Accessed 18 April 2018].
- Oliver X (2008) *La teoría del capital humano; economía de la educación*. Retrieved from <https://bit.ly/2P5tiuJ>. [Accessed 17 November 2008].
- Valdes N (2018) *Psychological well-being of adolescents according to its familiar structure*. [Psychollogical Wellbing of Adolescents in Function of the Family Structure]. Retrieved from <https://bit.ly/2Ufqmzw>. [Accessed 21 Mars 2018].
- Vélez-Candelario S (2009) *Construcción Primera Escala de Medición de la Funcionalidad Organizacional Familiar*. Poster section, XXXII Puertorrican Association of Psychology Annual Conference, El Señorial Convention Center, Ponce, Puerto Rico.

- Vélez-Candelario S (2011) *First Scale that Measure Organizational Family Functionality*. Proceedings: Interamerican Society of Psychology Congress, 1568, Medellín, Colombia.
- Vélez-Candelario S (2018) Human Capital Productivity: A Family Challenge. In M Lawrence, F Murray, *Human Capital: Perspectives, Challenges and Future Directions*, 145-159. New York: Nova Science Publishers.
- Vélez, S, Rosario I, Méndez V, Vargas L (2009) *Development of the human capital from family organization with the intervention of the I/O psychology in a group of families in south and north of Puerto Rico*. Dissertations, Pontifical Catholic University of Puerto Rico, Ponce. 15-05-2009.
- Vélez S, Rosario I, Méndez V, Vargas L (2015) *Family, Human Capital and I/O Psychology; Tending Bridges*. Proceedings: XXXV Interamerican Society of Psychology Congress, Page 339. PUCP, Lima, Perú. 12/16-07-2015
- Vélez S, Rosario I, Méndez V, Vargas L (2016) Familia, Capital Humano y Psicología Industrial/Organizacional. *Interamerican Journal of Psychology* 50(3): 2016.
- Werther W, Davis K (2000) *Administración del Personal y Recursos Humanos*. 5ta edic, McGraw -Hill Interamericana Editores, S.A de C.V.