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## **Basic psychological needs' antecedents and outcomes: a contexts analysis from a Self-Determination Theory perspective**

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### ABSTRACT

Self-determination theory is a recently developed theoretical framework (Ryan & Deci, 2017) which considers organisms as active and intrinsically growth-oriented. It suggests that engaging in interesting activities, increasing one's skills, and being part of social groups are all elements that characterize the adaptive evolution of human organism. To realize these natural inclinations, a supportive environment is required, where three universal psychological needs can be satisfied: need for competence, autonomy, and relatedness. Social environments, such as family, school, and work, can encourage self-determination and intrinsic motivation through needs satisfaction, or on the contrary, harm self-determination and foster forms of extrinsic motivation through needs frustration. Through the examination of the most significant contexts, this paper identifies antecedents and outcomes that anticipate and follow satisfaction and frustration of basic psychological needs, to promote psychosocial well-being and prevent psychopathologies.

**Keywords:** *Self-Determination Theory; Psychological Need Satisfaction and Frustration; Intrinsic Motivation; Psychological Well-being*

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## **Self-Determination Theory: an organismic viewpoint**

Self-Determination Theory (SDT, Ryan & Deci, 2017) focuses on human personality and the underlying motivational processes. Self-determination can be defined as people's perception of their freedom of choice and action through personal knowledge and skills using for future projects. Authors developed an organismic dialectical approach that considers people as active organisms: they are self-regulating and can integrate new experiences with previous knowledge; this allows them to constantly face environmental challenges (Vansteenkiste et al., 2020). SDT proposed integration of six mini-theories focused on personality motivation and functioning: *Cognitive evaluation theory* (CET), *Causality Orientations Theory* (COT), *Organismic integration theory* (OIT), *Basic needs theory* (BPNT), *Goal Contents Theory* (GCT), and *Relationships Motivation Theory* (RMT) (Ryan & Deci, 2017).

The first *Cognitive evaluation theory* (CET) focuses on the link between motivation and central activities for human beings. CET explores the influence that cognitive processes have on motivation, considering the influence of environmental demands. It would seem that the interpretation of external rewards influences the type of motivation. If the causality locus is moved to external factors, the purpose of the individual will be to meet environmental requirements, consequently increasing extrinsic motivation (Deci & Ryan, 2002). To explain individual differences in motivation-related behavior authors proposed *Causality Orientation Theory* (COT), that highlights which individual differences can influence types of motivational orientation (Ryan & Deci, 2017). These differences depend on individual experiences, specifically based on the social context and how it influences the development of internal resources. The theory identifies three types of motivational orientation:

- *Autonomy Orientation*: people act by evaluating what happens and guided by interest;
- *Controlled Orientation*: the individual focuses on extrinsic reinforcements;
- *Impersonal Orientation*: it is also defined as "amotivation" because the individual acts based on the evaluation of his / her skills. All three types of orientation would coexist in each individual but the degree of presence is peculiar to each one (Deci & Ryan, 2002).

Considering the importance of motivation in daily activities Deci and Ryan have developed an *Organismic Integration Theory* (OIT) that explores the role of extrinsic motivation, generally characterized by a lack of sense of autonomy and therefore considered negative. However, according to the OIT, the individual can internalize and integrate activities that are not intrinsically motivating within his system of values. The way this process takes place will determine the perception of the level of autonomy during the activity. According to the OIT,

this process is influenced by the social contexts that can promote or inhibit it (Deci & Ryan, 2002). In consideration of the empirical data referring to the mini theories proposed previously, Deci and Ryan decided to formulate a theory that encompasses the importance of three basic psychological needs. *Basic needs theory* (BPNT) has been elaborated on the concept of basic psychological needs and how they relate to psychological health and well-being. BPNT claims that psychological well-being is based on three needs: autonomy, competence, and relatedness. Need for competence concerns people's possibility to express their skills in environmental contexts and interacting with them. Need for relatedness concerns people's feelings to belong and be integrated into a community or group. Lastly, the need for autonomy concerns being able to make life choices and actively engage in pursuing activities related to one's will and values scale (Ryan & Deci, 2017). Basic psychological needs' satisfaction would increase intrinsic motivation in the subject, unlike frustration which inhibits intrinsic motivation in favor of extrinsic one. To explain this relationship in 1996, Kasser, Ryan and colleagues investigated why people were motivated to act in terms of goals and aspirations by formulating the *Goal Contents Theory* (GCT) distinguishes between intrinsic and extrinsic objectives and how this difference impacts motivation and well-being. Goals may or not meet basic psychological needs, which is why goals are associated with varying degrees of well-being. The latest theory formulated by Ryan and Deci (2017) considered the elements that lead individuals to establish satisfying relationships. *Relationships Motivation Theory* (RMT) deals with the development and maintenance of close personal relationships and group membership. The theory supposes that many relationships are not desired by individuals but remain essential for well-being and adaptation in the context of life because they satisfy one of the basic psychological needs that relate to the relatedness. However, it is important how individuals experience relationships. Both autonomy and competence must be satisfied with the relationship. These factors are nothing more than the three basic psychological needs postulated in the last mini-theory (Ryan & Deci, 2017).

### **SDT as a macro-theory of human motivation**

From the description of mini-theories, it emerges that SDT is a macro-theory of human motivation that pays attention to both quantity and quality of motivation (Ryan & Deci, 2017). Quantity is characterized by A-motivation: a-motivated people perform behaviors without clear intention. A-motivation may have different origins, including a perceived inability to achieve desired outcomes (i.e. amotivation resulting from feelings of incompetence) or a lack of

perceived association between current actions and aspired-to goals (i.e., amotivation resulting from devaluation of outcomes related to behavior).

Conversely, quality of motivation concerns Autonomous Motivation and Controlled Motivation. Autonomous Motivation includes Intrinsic Regulation, which refers to behaviors that are emitted out of pleasure and enjoyment, and Identified Regulation, an orientation in which people accept and support the importance of an activity, they identify with the value of the activity and accept responsibility for regulating behaviors. Controlled Motivation includes Introjected Regulation, a more controlled form of regulation in which the activity engagement is driven by internal pressuring forces (feeling of shame, anxiety) and External Regulation, represents what people “have to do”, behaviors and activities performed to satisfy external pressures.

All the types of autonomous and controlled motivation reflect people intention to act, although they may result in different quality and autonomy outcomes. According to SDT these kinds of motivation can be placed on a continuum of decreasing autonomy. At two poles of this continuum it is possible to see Intrinsic motivation and A-motivation, while in the other points there are the different types of autonomous and controlled motivation (Ryan & Deci, 2017).

Satisfaction of psychological needs for autonomy, relatedness, and competence plays a prominent role in motivational processes (Deci & Ryan, 2002). The beneficial effect of autonomous motivation derives from the satisfaction of basic psychological needs: this means that the more one's psychological needs are satisfied, the more the likelihood of acting according to intrinsic and personal motivations increases (Kanat-Maymon et al., 2016; Ryan & Deci, 2017). However, being motivation and needs interconnected, high quality and high-quantity of motivation contribute to need satisfaction, because people with different levels of autonomous motivation may self-select different activities or extract different levels of need satisfaction from the same activities (Vansteenkiste et al, 2020). Deci & Ryan (2002) have found that social contexts that make easy satisfaction of three basic psychological needs will support people's inherent activity, promote more optimal motivation, and yield the most positive psychological, developmental, and behavioral outcomes. In contrast, social environments that thwart satisfaction of these needs yield less optimal forms of motivation and have deleterious effects on a wide variety of well-being outcomes.

Many more studies have examined the effects of other extrinsic motivators on intrinsic motivation, and several of these motivators, including threats of punishment (Deci & Cascio, 1972), deadlines (Amabile et al., 1976), and surveillance (Plant & Ryan, 1985), were found to

decrease intrinsic motivation. In contrast, the provision of choice was found to enhance intrinsic motivation (Zuckerman et al., 1978). So, regard to these studies, when people are intrinsically motivated, they feel their basic needs are satisfied. When people are rewarded, threatened, or evaluated, they feel a diminished satisfaction of their needs and this may have undesirable outcomes (i.e. maladaptive coping strategies, less determination) (Deci & Ryan, 2002).

SDT also focuses on interpersonal environments and the effects of that environment on autonomous and controlled motivation. Autonomy-supportive contexts enhance autonomous motivation whereas controlling contexts diminish autonomous motivation and enhance controlled motivation (e.g., Deci et al., 1994). In contrast to autonomy support, psychological control, which is a form of manipulative control, is thought to undermine intrinsic motivation, actively thwarts psychological basic needs (Costa et al., 2019) and produce non-optimal forms of internalization, especially in parenting context. Psychological control may predict maladaptive perfectionism (Costa et al., 2019) and internalizing and externalizing behavioral problems in offspring (Flamant et al, 2020).

### **Psychological needs' satisfaction and frustration: the role of different contexts**

Basic psychological needs satisfaction and frustration are important to investigate in different social contexts such as sport, school, and work, the main contexts in which human beings growth and relate to each other. In all these contexts, when need for autonomy is satisfied, people experience a strong sense of volition and coherence between their behaviors and values. When it is frustrated, people feel a sense of pressure, conflict and coercion. Regarding the need for relatedness, when it is satisfied people experience a sense of closeness, warmth and understanding from who they care about. When this need is frustrated, however, people can experience feelings of loneliness and social isolation. Finally, when people perceive their need for competence satisfied, they experience a feeling of effectiveness in facing daily challenges. On the other hand, when competence is frustrated, people feel inferior and inadequate in their activities (Ryan & Deci, 2017).

In particular, Li et al. (2019) investigated potential sports injury risk factors focusing on the role of sport in satisfying and frustrating basic psychological needs. According to SDT, it is expected that athletes who feel autonomy, competence and support by significant others will be able to appraise and respond positively to stressful events. Instead, when psychological needs are frustrated athletes may appraise the demands as a threat to oneself and provide

maladaptive responses and increased stress levels. Li et al. (2019) have proven that basic psychological needs satisfaction/frustration was a significant predictor of stress and suggest training pathways to meet basic psychological needs to prevent stress and therefore sports injuries.

In scientific literature, school is also considered a great context that could frustrate or foster basic psychological needs depending on whether students feel a sense of freedom of choice and a positive relationship with classmates and teachers (Vasconcellos et al, 2020). SDT distinguishes three teaching dimensions that are universally effective because they nurture psychologically fundamental needs in students: autonomy support, structure, and involvement (Soenens et al, 2012). In Cronin et al.'s (2019) study emerged that students' perceptions of teacher autonomy support were positively associated with their basic need satisfaction and development of all eight life skills. Additionally, basic needs satisfaction was positively related to students' life skills development and with increased intrinsic motivation (Haerens et al., 2018), and self-esteem (Standage & Gillison, 2007).

Freer and Evans' s (2019) research investigated the role of satisfying basic psychological needs in the motivation to choose a studied school discipline in future, indeed, study successfully found that satisfaction of basic psychological needs was strong in the music class for future intentions whether to continue the music subject in high school. Thus, students who experience basic psychological needs satisfaction are more likely to choose music as a subject. Therefore, when students perceive in their class a sense of will and choice, when they have the opportunity to experience their competence and are related to their companions, they will be able to internalize the value of learning music and will be self-motivated (Freer & Evans, 2019). Finally, in Zhang et al.'s (2011) research, basic psychological needs satisfaction of teachers of physical education is positively correlated with students intrinsic motivation in the activity they carried out.

Especially adults spend most of their daytime in workplace, where, according to some SDT scholars (Baard, et al., 2004; Kasser, et al., 2004; Vansteenkiste, et al., 2007) it is important to assess basic psychological needs satisfaction or frustration, and intrinsic motivation of workers. According to Baard et al. (2004) it is important to strengthen the satisfaction of basic psychological needs in work context because this will have positive effects such as: work commitment, job attitude, self-esteem and health in general. Kasser et al. (2004) argues that intrinsically motivated workers feel their basic psychological needs more satisfied than those who are extrinsically motivated. Indeed, Vansteenkiste et al. (2007) argue that intrinsically

motivated workers can engage more often in activities that meet their basic psychological needs, to increase their working role as well.

Deci and colleagues' (2001) research shows that support for autonomy in work context would always be a predictor of basic psychological needs satisfaction, promotes intrinsic motivation, improves psychological health and increases worker wellbeing.

So, it is important to evaluate different life contexts in which individuals live such as school, work and family, because these contexts can have a certain influence on the satisfaction of basic psychological needs. Indeed, as emerges from scientific literature, needs satisfaction in these contexts would guarantee greater self-perceived well-being, greater intrinsic motivation and a good quality of health.

### **A brief focus on parenting context**

Among social contexts that may frustrate or satisfy basic psychological needs, predicting different outcomes for each of them, a prominent place is assumed by parenting (Joussemet et al., 2008). Particularly, in SDT theoretical framework, Skinner et al. (2005) identified three dimensions of parenting that can be considered as basic characteristics. These are Warmth *versus* Rejection, Structure *versus* Chaos, and Autonomy support *versus* Coercion. Warmth refers to affection, acceptance, appreciation and includes emotional availability and support. The conceptual opposite of warmth is the rejection that includes: hostility, harshness and open communication for negative feelings in the child as criticism and disapproval (Skinner et al., 2005). The structure represents the social contexts that help children to achieve their goals, helping them to avoid side effects. The opposite of the structure is chaos which refers to parenting characterized by inconsistency, unpredictability (Skinner et al., 2005). Coercion or psychological control is the opposite concept of Autonomy support. Autonomy support is characterized by a lack of psychological control and by children's freedom of choice and expression, interactions from which children are expected to express their opinions freely (Skinner et al., 2005). Psychological control, on the other hand, is characterized by intrusive, over-controlling and authoritarian control by parents who expect parental obedience (Skinner et al., 2005).

Parental need frustration seems to be transmitted to adolescent children through psychologically controlling behaviors. In parenting context, Costa and colleagues' (2019) study identified an antecedent of basic needs in the intergenerational transmission of mental health and subjective well-being within families (Chen et al., 2008; Duriez et al., 2008;

Powdthavee & Vignoles, 2008). This kind of transmission may also concern psychological needs: parents whose needs are satisfied are more likely to promote the satisfaction of their children's needs (and vice versa for needs frustration) (Ryan & Deci, 2017). Costa and colleagues (2019) confirmed the positive association between parents and children's psychological needs, stressing that a significant level of intergenerational transmission of needs passes through educational practices.

So, parents who have had their needs frustrated will use parental practices, such as psychological control to frustrate their children's needs. Instead, parents who have perceived their needs as satisfied will use parental practices, such as autonomy support, to meet their children's basic psychological needs (Costa et al., 2019). Those parents who experience high levels of need satisfaction are more likely to express high levels of autonomy support because they can promote their children's voluntary functioning (autonomy satisfaction), to be effective in daily challenges (competence satisfaction) and to respond adequately to needs and emotions (relatedness satisfaction).

### **Needs satisfaction and frustration's outcomes in parenting context**

Scientific literature in parenting domain (Costa et al., 2019; Joussemet et al., 2008; Skinner et al., 2005) has highlighted the consequences that needs satisfaction and frustration may have on parents' educational styles and practices adopted. Soenens and Vansteenkiste (2010) suggest that parents are likely to engage in psychological controlling practices when they feel pressured themselves by not having their needs for autonomy, competence, and relatedness satisfied. Both satisfaction and frustration of parental needs would play another important role in the relation between six dichotomous parenting dimensions as defined by Skinner and colleagues (2005) (i.e. warmth vs. rejection, structure vs. chaos, autonomy support vs. psychological control), and adolescent psychological adjustment in terms of positive outcomes (positive affect and prosocial behaviors) and negative outcomes (negative affect and aggressive behaviors) (Costa et al., 2019). Specifically, it emerged that frustration of parents' need for autonomy mediated only the negative association between maternal rejection and adolescents' prosocial behavior. Satisfaction/frustration of need for competence mediated only the relation between maternal and paternal parenting and adolescents' effects (positive and negative). Finally, satisfaction/frustration of need for relatedness mediated the association between maternal and paternal parenting dimensions, adolescents' behaviors (prosociality and aggressiveness) and their negative effects. All these findings confirmed the hypotheses about

the influence of basic psychological needs satisfaction and frustration in family relationship dynamics (Costa et al., 2019), within which intergenerational transmission of needs realizes. Generally, needs satisfaction and frustration have a variety of positive (e.g. vitality, empathy) and negative outcomes (e.g. binge eating, aggression, self-criticism) on children and adolescents (Vansteenkiste & Ryan, 2013). Need-supportive parenting has been linked to an increase in empathic functioning by adolescents and needs satisfaction can predict their enhanced brain functioning (e.g. Miklikowska et al., 2011). It would seem that higher levels in children's basic needs satisfaction lead to higher levels of healthy behavior (e.g. healthy eating, exercising), greater vitality, improved quality of life, greater life satisfaction, fewer unhealthy behaviors (e.g. smoking, alcohol-abusing), and lower levels of depression and anxiety (Ng et al., 2011). On the contrary, parents who hinder children basic needs can elicit appearance and maintenance of externalizing and internalizing problems: it has been discovered that children of parents who rely on intrusive strategies such as guilt induction, shaming and love withdrawal (forms of parental need-thwarting) may report more depressive symptoms, aggressive behaviors and eating problems (Soenens et al., 2008), compared to peers.

This would suggest that people living in environments that support autonomy, competence and relatedness may be more likely to engage in healthy behaviors that reduce their depression, despair and other factors that can also increase the risk of suicidal thoughts and behaviors (Britton et al., 2014). Looking at one by one needs, children whose psychological needs are satisfied to experience a greater sense of volition and personal choice in everyday life (autonomy satisfaction), they feel competent in the activities they undertake in the main contexts of socialization, such as family and school (competence satisfaction) and they feel they are loved by people who are significant to them and return their affection (relatedness satisfaction) (Costa et al., 2015). Children whose psychological needs are frustrated can experience a sense of coercion on their autonomous activities (autonomy frustration), they feel personal incompetence in different contexts of life (competence frustration) and may experience feelings of social isolation, loneliness and abandonment by significant others (relatedness frustration) (Costa et al., 2015).

### **Conclusion**

In light of what is written and analyzed in this paper, organismic perspective of Self-Determination Theory (Ryan & Deci, 2017) has allowed us to investigate different contexts capable of promoting intrinsic motivation, to satisfy and frustrate basic psychological needs

(autonomy, competence, relatedness) and to analyze their effects on individuals' well-being and ill-being. This review presents, in a synthetic way, some of the research carried out over decades within SDT theoretical framework, with the aim of highlighting how it is possible to apply this theory to different significant life contexts (such as family, school, and work) (Costa et al., 2019; Kasser, et al., 2004; Vansteenkiste, et al., 2007; Vasconcellos et al, 2020). Universality of psychological needs and intrinsic motivation, as theorized by Ryan and Deci (2017), can be applied not only to different life contexts but also to the various stages of life cycle (from developmental age, to adolescence, adulthood and senile age), allowing to explain both adaptive outcomes (in terms of need satisfaction and intrinsic motivation) and maladaptive outcomes (in terms of need frustration and external motivation) (Ryan & Deci, 2017; Vansteenkiste et al., 2020). Given motivation and psychological needs' transversality, it would be desirable that these constructs will be deepened and extended to other fields as well. From an applicative point of view, these constructs could influence projects implementation for the promotion and prevention of psychological health both in family, school, work, and sports fields, as well as in clinical settings, intervening on frustrating and controlling contexts (Costa et al., 2019; Vansteenkiste & Ryan, 2013) and consequently on maladaptive or psychopathological behaviors elicited by these ones. What is certain is that scientific research in this field will not stop, as Self-Determination Theory tends to always ask itself new questions and to seek the most suitable tools and interventions to support well-being and counter psychological malaise.

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All authors take responsibility for the integrity of the data and the accuracy of the data analysis. All authors contributed to and have approved the final manuscript.

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