



## Explaining the Relation between Basic Psychological Need Satisfaction and Emotional Intelligence

Jeny Rapheal\* & Varghese Paul, K\*\*

\*Research Scholar, Bharathiar University, Coimbatore

\*\*Head, Department of Psychology, Prajyoti Niketan College, Trichur, Kerala

### Abstract

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The main objective of the paper was to evolve a theoretical frame work to present a rational model capable of expounding need—emotion connection. Backed by past findings in the area of psychological need satisfaction and emotion, the study probed into the suitability of “well-being homeostasis” in explaining the trajectory. To this end, it explored the nature of association between basic psychological needs and emotional intelligence in a sample consisting 170 college going students. The mean age of participants was 19.63. Assessing Emotions Scale by Schuttle and colleagues and Basic Need Satisfaction Scale by Deci & Ryan were used in data collection. The data analysis revealed that significant positive association existed between three Basic psychological needs and Emotional Intelligence and its components. Study claims that the observed relation between need satisfaction and emotional intelligence if viewed through subjective well-being homeostasis theory will yield more practical implications for future researches and various therapeutic/preventive interventions as well

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Living things have needs which must be fulfilled in order to persist and thrive (Jacob, 1973). According to Murray (1963) anything that can be motivated is a need. Need crave for satisfaction by create disequilibrium in the organism. In the unsatisfied mode a need has inherent potential to hurl the organism into a state that may range from momentary uneasiness to prolonged pathological condition. In the case of biological needs the potentiality of unsatisfied needs to disrupt the equilibrium is unquestionable. Homeostasis --a concept in vogue for explaining the course of biological needs, described need deficit in a concrete manner acknowledging all bodily functions including hormonal-neural biological mechanisms. However in 1983 Erickson and colleagues opined that in human beings all subsystems--biological, psychological, cognitive and social – work together and imbalance created by stress in one subsystem results in the taxation of other subsystems. So disruption of balance in any sense includes emotional, cognitive or affective disturbances which individual must resolve. In the process of restoring the lost stability person’s natural resources are called for and the state of consuming it can be viewed as a state in stress.

### Basic psychological needs

In 20<sup>th</sup> century, humanistic perspectives in psychology (e.g. Maslow) were vying to propagate the importance of psychological needs in the overall well-being and well-functioning of humanity. Similar attempts have gathered momentum recently. Boosted by empirical evidences proponents of Self Determination Theory (SDT) in tandem with Basic psychological need theory elevated the three basic psychological needs –autonomy, competence and relatedness-- to the level of physiological drives (thirst, hunger, sex etc) by elucidating on the effects of satisfaction or dissatisfaction of these needs on various aspects of human life. They addressed these needs as essential psychological nutriments posing themselves as antecedents for human well-being. In this sense psychological need satisfaction surpasses the idea of any motivating force and they are unavoidable nutriments essential to psychological growth, integrity and well-being (Ryan & La Guardia, 2000).



Of the three basic psychological needs as envisaged by Self Determination Theory (SDT), autonomy is defined as a need for regulating one's behavior and experiences in order to become the agent and locus of causality of one's own world and life in general (Deci & Ryan 1985). Autonomous actions are held in high regard as they stem from one's true self (Sheldon, Ryan, Rawsthorna, & Ilardi, 1997). Autonomy is postulated as central criterion of mental health (Jahoda, 1958). Relatedness is the need to feel connected and make meaningful relationships (Baumeister & Leary, 1995) Competence refers to feeling effective in one's interactions with social environment and experiencing opportunities to exercise and express one's potentialities (Deci, 1975; White, 1963).

Innumerable studies vouch for the inexorable role of satisfaction/dis-satisfaction of psychological needs in the psychological well-being (Reis, Sheldon, Gable, Roscoe, & Ryan 2000) and ill-being or psychopathology (e.g., Bartholomew, Ntoumanis, Ryan, Bosch, & Thogersen-Ntoumani, 2011; Shapiro, 1981; Winnicott, 1965). SDT's paradigm expounding on psychological need satisfaction – well being (ill-being) connection is tantamount to homeostasis imbalance explained in the context of biological need satisfaction.

Adaptation according to SDT is a state of well-being enhanced by psychological need satisfaction. To explain the trajectory of basic psychological needs in well-being and ill-being SDT rely on concepts like "integration" and "internalization" and certain motivational patterns facilitating or hindering them. Organism's interaction with social context is the major medium through which satisfaction of needs actualizes (Adie, Duda, & Ntoumanis, 2008, p.189). Appraisal and evaluation of sensory inputs from the environment and tendency of the organism to move away from contexts that are not appropriate for need satisfaction and attempts for hitting equilibrium with the environment are the main dynamics involved in the interaction. Internalization is a spontaneous process in which regulations from environment are transformed into internal regulations. The individual "progressively integrate societal values and proscriptions into a coherent sense of self". Termed as an organism process internalization stands in dialectical relationship to psycho-social environment and environment is theorized to influence the degree and quality of internalization (Grolnick et al., 1997; Ryan & Deci, 2000). Right kind of internalization leads to self determined outcomes and well-being (Williams, Grow, Freedman, Ryan, & Deci, 1996).

The proper internalization and ensuing self determined outcomes result in integration and self regulation which is marked by a state which "constitutes a complex response system that enables individuals to examine their environments and their own repertoires of responses for coping with those environments in order to make decisions about how to act, to evaluate the desirability of the outcomes of the action, and to revise their plans whenever necessary" (Whitman, 1990 p. 373). Compulsions in the environment mar the autonomous regulation and result in ill-being (Deci & Ryan, 2000). Thus any imbalance in the organism, from the perspective of SDT, is a state marked by improper integration resulting from poor internalization which in turn is a direct consequence of unmet needs.

### **Emotional Intelligence (EI)**

Just as in the case of psychological need satisfaction, scientists have acknowledged the significance of emotion in survival and adaptation of human species (Ekman & Davidson, 1994; Pinker, 1997). Recently, researches in the field of emotions have got a fillip (Kringelbach, 2004). According to 20<sup>th</sup> century revelations in neuroscience, emotions precede cognitions. In other words our brain's basic design carries all information first into emotional centers of brain and then to rational centers. That is, our feelings set the real back ground of our cognition, memory, creativity, thinking, imagination and perception of surroundings (Abhishek, 2014). Even though the status of psychological needs as antecedents for psychological growth and development is untenable, the possible role of it (psychological need satisfaction) in the

emotional profile of individuals has long been neglected. This ratifies the need for an exploration of emotional intelligence from the stance of psychological need satisfaction.

### History and significance

It was Charles Darwin in 1872 who theorized about the indispensable role of emotional/social intelligence in human survival and adaptation. Thorndike (1920) in his concept of social intelligence gave due attention to the affective aspects of intelligence. Following it, Gardner (1983) in his theory of personal intelligence stated that knowing, managing and regulating one's emotion refers to ability to deal with emotions from within while ...the same in others refers to ability to handle interpersonal relationships. He considered this as an integral part of interpersonal intelligence. Subsequent models emerged with a set of criteria or taxonomy for emotional intelligence.

There are three main theoretical approaches extant in the realm of EI. First model views EI as a mental ability to deal with or process emotional information (Mayer & Salovey, 1993; 1997). Second model conceptualizes EI as an array of socio-emotional traits (Bar-On 1997). Third one pinpoint on a set of emotional competencies as learned capabilities (Goleman, 2005). Various models are complementary rather than contradictory to each other (Ciarrochi, Chan, & Caputi, 2000). Palmer, et al (2007) in their attempt to integrate all theoretical view points and consolidate taxonomies determining EI produced five common facets of EI 1) emotional self-awareness 2) emotional other-awareness 3) emotional reasoning 4) emotional self management 5) emotional other management. Lately, Tatton's (2005) attempt to distinguish "knowledge about emotions" from "ability to apply the knowledge" in life situations gave way to five types of personalities namely 1) Emotionally intelligent 2) Emotionally intuitive 3) Emotionally negligent 4) Emotionally manipulative 5) emotionally un-intelligent.

### Objectives

1. To evolve a conceptual frame work to present a rational model capable of expounding need – emotion connection.
2. To explore nature of association between psychological needs and emotional intelligence in a sample of college going students.

### Hypotheses

1. There will be significant positive association between three basic psychological needs and emotional intelligence.
2. Psychological need satisfaction will exhibit significant predictive power in emotional intelligence.

### Method

#### Participants

To explore the nature of influence of basic psychological need satisfaction on emotional intelligence 174 college going students were selected from various government-recognized educational institutions of Thrissur district of Kerala state. After cleansing the data for outliers, the sample comprised of 170 students of which 80 were females and the rest---90 --were males. The mean age of participants was 19.63 (SD=2.180).

#### Instruments

1. The Assessing Emotions Scale: The scale prepared by Schuttle et al (1998) is a self reporting inventory consisting 33 items. The scale, in the Likert format has five response options ranging from strongly agree to strongly disagree. The subscales constituting the Emotional intelligence are respectively perception of emotions, managing own emotions, managing others' emotions and utilizing emotions. Internal consistency of the scale measured by Chornbach's alpha is 0.90. Test-retest reliability estimated within a span of two weeks is 0.78. Scale claims adequate convergent validity.

2. Basic Psychological Need Satisfaction Scale: This scale by Deci and Ryan (2000) consisted 21 items framed in Likert format intended to measure three basic psychological needs namely autonomy, competence and relatedness. Response format of this scale has seven options. At one end it is "very true" at the other end it is "not at all true" and in the middle it is "somewhat true". Intervening numbers indicated the felt intensity of the situation described in each item and respondent rated themselves with respect to the given statement. Its internal consistency ranged from .84 to .90 for autonomy, .61 to .81 for competence and .61 to .90 for relatedness. Excellent external validity is provided on various studies (eg. Johnston & Finney, 2010)

## Results and discussion

To verify the the hypothesis the mean and standard deviations of the variables of the study were calculated and presented in table 1.

Table 1

*Descriptive Statistics of the variables under study*

Basic Psychological Needs	Mean	SD	Components of EI	Mean	SD
Autonomy	33.49	6.05	Perception of emotion	37.56	5.05
Competence	29.23	5.31	Managing Own Emotion	35.43	4.29
Relatedness	46.52	7.09	Managing Others' emotions	32.25	3.75
			Utilizing emotions	24.65	2.96
			Total EI	129.90	11.50

To know how the variables under study are related the Pearson correlation coefficient among the variables of Emotional Intelligence and Basic psychological need satisfaction were calculated and presented in table 2.

Table 2

*Correlation among the variables under study*

Variables	Perception of Emotion	Managing Own Emotion	Managing Others' Emotions	Utilization of Emotions	Total EI
Autonomy	.339**	.297**	.263**	.200**	.397**
Competence	.290**	.396**	.306**	.293**	.450**
Relatedness	.173*	.173*	.476**	.029	.303**

(\*p<.05. \*\*p<.01)

From table 2, it can be seen that the Pearson correlation coefficient among the variables of Emotional Intelligence and Basic psychological need satisfaction were ranged from 0.173 to 0.476.

According to SDT in the absence of need satisfaction especially autonomy, controlled emotional regulation marked by suppression and denial of emotions, in the long run, will lead to psychopathology and illness (Ryan, Deci & Vansteenkiste, 2015). Emotional regulation is integral in autonomous self regulation resulting from need satisfaction. Autonomous self-regulation leading to well-being is marked by a state in which individual have access to his own feelings without being controlled by external or internal agencies. Autonomy, the most important of three needs bared significant positive association with integration and synchrony of emotions, cognition and behavior in a study by (Koestner, Bernieri, & Zuckerman, 1992).

Significant association of relatedness with the components of EI can be juxtaposed with the declaration of Goleman (1995) that "the art of relationship in large part is a skill in

managing emotions in others. All interpersonal, intra personal components of emotional intelligence (e.g. Bar-On, 2006) will be thriving on the satisfaction of this basic psychological need called relatedness. We must notice that relatedness bared higher magnitude in its positive association with managing other's emotion ( $r=.476$ ,  $p<.01$ ) and one's own emotions ( $r=.173$ ,  $p<.05$ ) while its relation with utilization of emotions were not at all significant. Given the fact that the process of satisfying three needs ---autonomy, competence and relatedness--- is not mutually exclusive but interdependent, one must conclude from the above observation that satisfaction of need for relatedness can be a resource in the management of emotions.

When researches claim that ambivalent social environment, interactions with caregivers especially maltreatment and conditional parental regard have disruptive consequences on emotional intelligence (Smith & Walden, 1999) one must conclude that it is the basic psychological need satisfaction especially relatedness and autonomy which is at stake in these social contexts and find its way to flawed emotional regulatory capacities in individuals thriving in those environments. Because there is ample proof for the potential of these harmful social contexts in thwarting basic psychological need satisfaction (Jeny & Varghese, 2015; Vansteenkiste, 2005; Maccoby & Martin, 1983; Sadeghi, et al, 2013; Srite, 2000; Thatcher et al, 2003). All these revelations lend support to the words by Richard Davidson, the director of laboratory for affective neuroscience at University of Wisconsin that "You can't separate cause of an emotion from the world of relationships---our social interactions are what drive our emotions" as cited in Goleman (2007).

Ability to perceive, manage (one's own and others) and utilize emotions is nothing but a reflection of coherent sense of self and ability to act from it. But ability to act with coherence and equanimity is verily a consequence of psychological need satisfaction (Di Domenico, et al, 2013). Similarly, psychological need satisfaction has shown to elevate activity in medial pre-frontal cortex suggesting facilitation of access and utilization of self knowledge (Di Domenico, et al, 2013). At the same time, ability for managing one's own emotion is a byproduct of self Knowledge. As need satisfaction enhances self-knowledge and self awareness (e.g. Di Domenico et al, 2013) the ability to manage one's emotions is a direct consequence of it. See the significant positive association of managing one's own and other's emotions with the psychological need satisfaction (Table 3 & 4) in the present study. Moreover, fostering of self care resources (eg. Emotional reliance, managing one's emotions etc) always followed basic need satisfaction (Timmerman & Acton, 2001, p.693).

Table 3

*Regression Summary*

Dependent Variable	R-Square	Adjusted R-square	F (3,165)
Emotional Intelligence	.241	.227	17.419

Predictors: Autonomy, Competence, Relatedness

Table 4

*Coefficients*

Basic Needs	Beta	t-value	Sig.	Tolerance	VIF
Autonomy	.176	2.058	.041	.630	1.589
Competence	.184	3.626	.000	.643	1.554
Relatedness	.123	1.417	.158	.790	1.267

Finally regression model envisaged 22.7% variation in the emotional intelligence of the sample that can be attributed to the satisfaction of needs ( $R^2=.227$ ,  $F_{(3,165)}=17.419$ ,  $p<.00$ ). Which means the predictive power of psychological need satisfaction in the emotional intelligence is



significant. The beta loadings for three basic psychological needs namely autonomy ( $\beta=.176$ ,  $p<.05$ ) and competence ( $\beta=0.184$ ,  $p<.01$ ) were significant but that of relatedness ( $\beta=.123$ ,  $p<.156$ ) was not significant.

### Homeostasis paradigm to explain need – emotion relation

A host of authors affirms that central to the definition of well-being is the capacity to regulate and integrate emotional experience (La Guardia & Ryff, 2003; Ryan & Deci, 2001as cited in Joanne et al., (2013)). Emotional well-being can never be separated from the basic concept of well-being. Claude Bernard (as cited in Goldstein, 2006) in his lecture said that “The constancy of the internal environment is the condition for free and independent life.... All the vital mechanisms however varied they might be always have one purpose, that of maintaining the integrity of the conditions of life within the internal environment”. This prompted us to think of introducing the concept of homeostasis in “need satisfaction – emotional intelligence” trajectory. Literature in SDT has enough supportive evidence to the claim that proper internalization and integration and ensuing self-regulatory skills (which are contingent upon optimal satisfaction of basic psychological needs) facilitate emotional well-being. Facilitation of emotional regulatory skills and emotional well-being is imbedded in overall psychological well-being ensuing from basic psychological need satisfaction. But the missing link is how integration and self regulation resulting from need satisfaction become instrumental in emotional competence and adaptive emotional regulation skills.

In the case of biological drives like hunger, thirst etc, homeostasis is reinstated during the sequence of events beginning from the arousal of drives to felt imbalance and final satiation. We hope that a psychological counter part of this kind of interpretation will be possible with the help of the concept of “Subjective Well-being Homeostasis” (SWH) introduced by Cummins (2010). Cummins recognizes a ‘set point range’ within which an individual’s Subjective Well-being (SW) remains positive, and stable. Biological as well as psychological mechanisms of the individual work together to defend this set point range. Dönmez et al (2016) in their study titled ‘affect development as a need to preserve homeostasis’ gives a meaningful account of need-emotion connection. Environmental challenges leading to corresponding changes in autonomic nervous system can destabilize homeostasis. The very destabilized homeostasis causes the arousal of drives. Drives trigger the neural basis of the “*basic emotional systems*”. These basic emotions evolve into affect and seek for suitable objects to invest emotional energy.

Emotions and homeostasis work hand in hand. On investigating the functioning of homeostasis one can see that organism passes through instinctual *emotional* affective and cognitive processes in its attempt to restore balance. Emotion is an organismic response to an environmental event which mobilizes multiple subsystems such as autonomic, cognitive and behavioral (Frijda, 1988; Levenson, 1998; Thayere & Lane, 2000 as cited in Dönmez et al (2016)). Significant positive and negative life events can lead to increase or decrease in SW. Accordingly SWH can be pushed to the upper or lower thresholds of set point range. Using internal and external resources homeostatic system combats the strength of challenge. Adaptation results in returning of SWH to set point range (Cummins, 2010). Need deficit mimics as a challenge in itself. The dominating emotions associated with the challenging agent work together in the process leading to homeostasis defeat.

So, it will not be out of context if one tries to interpret the perturbation resulting from inadequate satisfaction of basic psychological needs as disturbance in well-being homeostasis. Moreover, while looking through the theory of subjective well-being homeostasis one must consider psychological need satisfaction as a resource in well-being and in emotional regulation thereof. Finally the possible affinity between SWH and emotions has been authenticated by the declaration that SW is strongly dominated by affect. The goal of homeostasis is to defend the affective score of SWH- which is called HPMood which is person’s inherited tendency to

experience felt positivity (Cummins, 2013). But inherited tendency is not a fixed state as per the revelation that SWB is highly sensitive to resources rather than to inherited tendency when the mechanism of homeostasis is derailed (Cummins, et al. 2014).

### **Psychological need satisfaction as a resource in maintaining 'set point range' in SWH**

According to Cummins, resources are cognitive buffers or positive cognitive biases (Cummins & Nistico, 2002) or psychological mechanisms which help in cognitive restructuring of reality so as to protect one's positive view of the self and world in order to reduce the impact of negative challenges. Accompanying regulatory and restorative processes will be influenced by this (Cummins, 2010). According to Cummin, SWH will return to its pre-event level only if adequate resources are accessible. (Cummins, 2010). Greater use of resources creates greater resilience of the homeostatic system (Cummins & Wooden & Stokes, 2013).

Psychological need satisfaction as an antecedent act as a powerful resource in determining the intensity and nature of the emotions associated with the challenges. When psychological needs are met repeatedly, resources are built to assist in dealing with life stressors (Timmerman & Acton, 2001, p.693). Unmet needs over a long period of time leads to resource deficit and decreased ability to handle stressful life situations. Of the internal resources Cummin (2010) upheld self-esteem, optimism and perceived control in facilitating homeostatic balance. Studies in SDT show that self-esteem is very much associated with basic needs especially competence (e.g. Mabekoje & Okubanjo, 2009) and perceived control is seriously influenced by need satisfaction particularly autonomy and relatedness (e.g. Grolnick, Deci, & Ryan, 1997) Thus the revelation that resources instrumental in well-being homeostasis are very much correlated to basic psychological need satisfaction means need satisfaction itself is a resource in maintaining homeostatic balance.

"Emotion binds together virtually every type of information the brain can encode. Their relentless trajectory towards homeostatic balance, designed to optimize human life, is achieved when the organism feels "right" in relation to its environment" (Aline, n.d, p.20).

### **Conclusion**

Effect of psychological need satisfaction on emotional intelligence is something that must be viewed within SDT's frame work. According to SDT, it is the perturbation in the organismic processes like internalization, integration which is at stake when basic psychological needs are not satisfied. Unmet needs will affect individual's self-regulatory capacities and emotional regulation abilities adversely. But juxtaposing the well established "need satisfaction—well being" connection with that of Subjective well-being homeostasis by Cummins (2010) helped to evolve a psychological counterpart of traditional need-homeostasis paradigm within which biological needs were explained. This will fuel the future researches in the realm of EI and help to refine methods adopted for the enhancement of EI as it pushes the boundaries within which EI has been viewed so far. An organismic approach, in which interaction with the environment is paramount, is important in all initiatives made for the optimal emotional development of individuals. Given the rising importance of emotional intelligence in myriad facets of human functioning like educational achievement, occupational success, interpersonal relationships, stress resilience, psychotherapeutic success etc, approaching emotional intelligence from the perspective of psychological need satisfaction is crucial. Because SDT too has affirmed the inexorable role of basic psychological need satisfaction in the above mentioned areas of human functioning.



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