

## Affective Profiling to Determine Propensity for Empowerment or Disempowerment: Protective Attributes or Afflictive Proclivities in Depressive States and Well-Being

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### Editorial

A plethora of studies focusing on affective personality attributes, positive affect (PA) and negative affect (NA), have measured ubiquitously self-reports of the Positive Affect and Negative Affect Schedule (PANAS), forming the basis of prevailing notions regarding health and well-being over different ethnical populations, gender and clinical and healthy volunteer populations [1-27]. Invariably, these studies have measured participants' self-reported feelings of enthusiasm, activity, feelings of duty, control, strong, proud (i.e., PA) linking them to well-being, proneness to frequent exercise and agentic, cooperative, and spiritual behaviors (e.g., self-acceptance, goal-orientations, empathy, helpfulness, seeking support in faith, meaningfulness). In contrast, feelings such as anger, guilt, shame contempt, and distress (i.e., NA) are associated with anxiety, depressiveness, ill-being, rumination, inaction (e.g., low exercise frequency and passive leisure activities such as watching TV) and health problems [28-32]. These studies show that PA and NA ought to be viewed as separate entities [33], despite the temptation to view them as opposite poles on a continuum.

On the basis of the above and other studies [34-36], the notion of the "affective profiles" was coined by proposing four possible combinations using individuals' experiences of high/low positive/negative affect: (1) high positive affect and low negative affect (i.e., the "self-fulfilling" profile), (2) low positive affect and low negative affect (i.e., the "low affective" profile), (3) high positive affect and high negative affect (i.e., the "high affective" profile), and (4) low positive affect and high negative affect (i.e., the "self-destructive" profile). See Figure 1 for a study [37,38] showing the distribution of profiles across 2,225 US-residents. This model of the affective system is of special importance because of discerned inconsistencies in cases wherein individuals express similar levels of affectivity in one dimension (e.g. low-low) yet express different levels in the other dimension (e.g., low-high) [38]. For example, as in the case where those expressing a "low affective" profile (i.e. low PA, Low NA) report greater life satisfaction in relation to the "self-destructive" profile (low PA, high NA), implying that the greater the extent of life satisfaction, the greater the reduction in NA expression when PA expression is low. Notwithstanding the robust aspects of these profiles, these self-reported evaluations of NA appear to vacillate according to the variations of testing condition: [39] found that the more individuals made self-evaluations of NA, the less pronounced (sometimes nonexistent) were the associations between everyday experiences of NA and a range of indicators for poorer psychosocial functioning (emotional health problems, social integration, etc.) and physical health (number health complaints, hand grip strength, momentary physical well-being, etc.). In essence, affective profiling can be used to determine peoples' propensity for empowerment or disempowerment, subject, at least partially, to the "whims-of-fate".

Personal empowerment is cocooned in the notion of a person-

environment composition wherein 'person' brings a genetic predisposition and 'environment' implies those social, psychological and physical forces impinging post conception and through fetal, infancy, childhood and adolescence phases in an epigenetic orchestration of development. It is defined as the current habitus of multidimensional processes of reciprocally-determining interactions associated with the attainment of an individual's self-awareness, control and disposition of his/her life and well-being [40,41]. Disempowerment on the other hand, involves ill-being expressed as multidimensional processes of reciprocally-determining interactions associated with distress in an adverse epigenetic spiral of fear, unfulfillment, defeat, disappointment, dissatisfaction, frustration, disillusionment, setbacks, sadness, regret and adversity. Well-being, whether subjective or psychological, are often seen as notions of individuals' sense of life satisfaction in relation to an ideal situation in combination with their personal experiences of PA and NA, but also as her/his ability to create positive relations with others, self-acceptance, sense of control of one's environment, self-determination, purpose in life and personal growth [42]. Certainly, well-being involves a state of contentment in happiness, but also in health and prosperity [43-47]. Seeing well-being in this way, leads to the importance of ternary structures, such as, body (a): vitality and versatility, embodying physical fitness, energy, positive emotions, plasticity, resilience, etc; mind:(b) life satisfaction, self-determination, positive thinking etc, and soul (c): spiritual aptitude involving self-transcendence values and virtues such as hope, patience, trust, justice, moderation, honor, courage, wisdom, patience, love and faith [48,49].

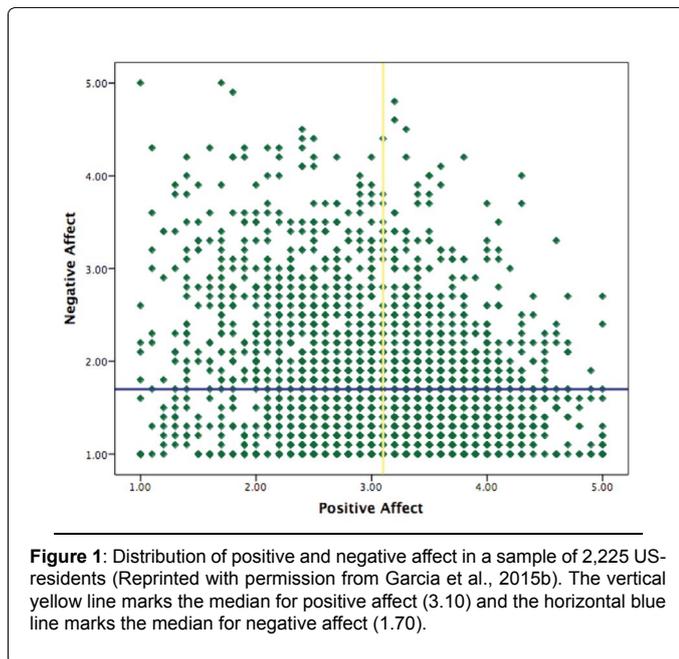
The disempowering influence of NA and its associations with clinical depression and anxiety have been established [50,51]. In a study of male war veterans, telomere length, which is linked to health and longevity [52] correlated positively with PA but negatively with early trauma and global psychopathological severity [53]. Nevertheless, the developmental trajectory of PA and NA is not always straightforward: thus, in a sub-longitudinal study of adolescents' development of social and executive functioning [54], it was observed that behavioral

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inhibition, rule detection, strategy generation and planning executive functions and emotion recognition with dynamic stimuli evolved over testing times (separated by 12-16 month intervals). Self-reported empathy and emotion recognition functions using visual static and auditory stimuli were stable by the age of 17 years whereas concept formation declined between time points. Nevertheless, although PA was increased and NA was reduced from 17 to 19 years of age these effects did not reach significance [55] have shown that adaptive coping behavior was correlated positively with PA and social support whereas maladaptive coping behavior was correlated positively with NA, and inversely related to PA and social support, implying that interventions that harness positive resources, such as social support and positive mood, should facilitate adaptive coping. Physical exercise, a strong agent of empowerment associated with individuals whose affect profiles are invariably positive, and generates a wide variety of physical and psychological health benefits [56,57]; both compliance and propensity for exercise are predicted by PA.

The pain-depression link implies shared neurobiology, precipitating environmental factors and cognitive influences that may be exemplified through recourse to aspects of ill-being present ubiquitously in fibromyalgia [58]. The notion of “Affect Balance” which estimates the relative levels of NA and PA has been introduced to capture emotional functioning levels more effectively than than NA or PA alone [59,60], showed that depressive patients (low PA, high NA comparable to “Self-destructives”) and reactive patients (high PA, high NA comparable to “High affectives”) affect balance styles were predominant in fibromyalgia patients and related to poor functioning and psychiatric comorbidity [59]. In contrast, a “Healthy affect balance” style (high PA, low NA comparable to “Self-fulfilling”) was associated with superior physical and psychological symptom profiles in fibromyalgia patients [60]. From a sample of 858 fibromyalgic patients who responded to several questionnaires [61] argued that (i) PA and NA would be associated with fibromyalgia symptom burden; (ii) resilience would be associated with PA and NA; (iii) resilience would be associated with fibromyalgia symptom burden; and (iv) the connection between resilience and fibromyalgia symptom burden would be mediated by both PA and NA. Using mediation modelling, they showed that resilience exerted

a direct effect upon fibromyalgia symptom burden (iii), and that there were indirect effects of resilience upon fibromyalgia symptom burden through PA and NA (i, ii and iv), thereby concluding that efforts to improve affect through resiliency training offered a avenue for alleviation of the fibromyalgia symptom burden. If one assumes the the fibromyalgic condition presents a position of disempowerment, the evidence here implies that increments of the PA profiles or “Healthy affect balance”, i.e. developing a “Self-fulfilling” profile, render patients more resilient and therewith more empowered (Archer & Garcia, submitted).

Beyond the intrinsic value of experiencing ‘more happiness’, PA confers upon individuals’ welfare a marked degree of health and well-being [62-66] and is linked to healthy lifestyles [67,68]. Several physiological domains, including the neuroendocrine, autonomic and neuroimmune systems, as well as survival, are activated by PA and associated attributes [69-75]. PA and its biological correlates appears to exert a distinctive influence upon psychobiological processes that are independent of NA. Applying fibrinogen and C reactive protein as indexes of systemic inflammation, have found an inverse relationship between PA and fibrinogen, as well as an inverse association between PA and C reactive protein. It has been observed that in chronic obstructive pulmonary disease that both self-management capability and quality-of-life were mediated through the empowering effects of PA. In young adults presenting chronic pain PA was associated with efficacy of ‘work-goal’ schedules and ‘work-goal’ striving. Certainly, in the context of health and well-being, the appreciation of PA may not be overestimated since patients expressing high levels of PA reported fewer symptoms linked with NA, such as anxiety and despondency, and they preserved their habitual relationships and social roles to a greater extent [76]. The authors imply that PA offers a basic disposition that to bolster cancer patients’ efforts to adapt suitably to severe illness, through compliance with the prescribed medical treatment and by applying cognitive strategies that enable them to cope with the concurrent and prospective challenges of illness. In a study performed upon Chinese nurses, involving the relationships between perceived structural empowerment (i.e. structures within the organization rather than an individual’s attributes), psychological empowerment, burnout and “intent-to-stay” [77] showed that structural empowerment and psychological empowerment induced marked positive effects on “intent-to-stay” and negative effects on burnout which induced negative effects on “intent-to-stay” thereby illustrating the protective effects of conditions facilitating empowerment and the afflictive proclivity of disempowerment.

Taken together, there is a profusion of evidence from health and well-being reviews, psychobiological research, occupational and behavioral medicine clinical studies supporting the contention that PA might stand for empowerment, while NA stands for disempowerment. Most importantly, from a person-centered framework these two affectivity dimensions within the individual can be seen as interwoven components with whole-system properties [78]. The outlook of the individual as a whole-system unit is then best studied by analyzing patterns of information [79]. Although at a theoretical level there is a myriad of probable patterns of combinations of peoples’ levels of positive and negative affect, if viewed at a global level, there should be a small number of more frequently observed patterns or “common affective types” [80-82], who explain nonlinear dynamics in complex adaptive systems).

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