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Personality Traits and Sense of Dignity in End-of-Life Cancer Patients: A Cross-Sectional Study

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Abstract

Context Patients' personality traits can play an important role in the end-of-life care process. **Objectives.** The present study aimed to investigate the relationship between personality traits and dignity in cancer patients nearing death. In addition, the associations between personality traits and physical, psychological symptoms, and coping strategies during the end-of-life stage were explored. **Methods.** The study is cross-sectional. The sample consisted of 210 participants with a Karnofsky Performance Status (KPS) lower than 50 and a life expectancy of a few weeks. For each patient, personal and clinical data were collected and a set of validated rating scales, assessing personality, dignity, physical, psychological symptoms and coping strategies was administered during the first psychological consultation. **Results.** The results highlighted significant associations between personality traits and dignity. In particular, Conscientiousness was negatively correlated with Social Support and Extroversion was negatively associated with Loss of Purpose and Meaning. Neuroticism was related to all the dimensions of dignity and Extroversion was significantly associated with the physical and psychological symptoms. Regarding coping styles, active coping strategies were predictors of Extroversion and Agreeableness. Conversely, anxiety symptoms predicted the Neuroticism trait. **Conclusions.** Personality traits seem to be actively involved into the loss of dignity. These findings highlighted the importance of including personality traits and dignity into the patient's care process. Exploring individual differences and coping mechanisms at the end-of-life could improve palliative care and lead to better patient-tailored psychological interventions.

Running Title: Personality traits and dignity in end-of-life

Introduction

Personality is a complex dynamic construct that refers to the individual differences in their cognitive, emotional and behavioral patterns[1],[2]. It influences the person's ability to build relationships and manage stressors, habits, and choices during everyday experiences[3]. At the same time, personality is greatly affected by all the events that occur throughout the person life[4].

The Big Five Model[5] is one of the psychological theoretical framework which analyzes different personality traits, that are defined as the individual's tendency to think, behave and feel differently from each other. Such Model has been developed from the psycho-lexical traits approach to personality structure and empirical analysis of the distinctive terms people use to describe themselves and others. The macro-categories mostly used breakdown the main personality differences in five broad factors: Extroversion, being outgoing and dominant; Neuroticism, being emotionally unstable; Conscientiousness, being well-organized, prudent, and efficient; Agreeableness, being honest and well-intentioned; and Openness to Experience, being intellectually curious and open-minded. Each trait is disposed on a continuum with the respective opposite characteristics: Introversion, Antagonism, Irresponsibility, Emotional Stability, and Closedness. These domains can be used for the description of both adaptive and abnormal personality traits and include a set of more specific facets that describe a variety of behaviors, thoughts and feelings in order to take into account more accurately individual variability within the five macro-factors. Specifically, each trait can be considered pathological when it is as rigid and pervasive of personality structure as to create severe difficulties in interpersonal functioning[41].

In the last few years, there have been various attempts to explore the relationship between personality traits and health in general.

McCann[3], by using the Big Five Model, found that, the mortality rate due to cancer and heart disease was higher when the residents presented higher scores in neuroticism. Moreover, higher consciousness and lower neuroticism were associated with better health in both a non-clinical sample and in patients with cancer[6]. Different facets of neuroticism (anxiety, depression, vulnerability) were negatively associated with the ability to adjust to daily stressors, well-being, sense of satisfaction and quality of life[7],[8],[3],[6] (QoL). Therefore, on one-hand patients' personality influences health, longevity and mortality. On the other hand, life events, stress, illness and total pain could have a possible impact on changes in personality[9],[10],[11]. Furthermore, the processes related to severe pathologies could

influence personality dimensions[4]. For example, the lack of independence due to chronic disease can lead the individual to consider himself/herself as less capable than in a non-clinical situation[12].

In the last decade, given the lack of studies analyzing in depth the association between dying patients' personality dimensions and their way to deal with symptoms and distress at the end-of-life, the need of identifying the relationship between personality traits and dignity perception at the end-of-life has emerged[7]. Dignity is perceived as one of the most important dimensions of a human being and is the result of the interaction between three different internal representations: the Self, the others' perception about the Self and the perception of one's Self with others in a social context[13],[14],[15],[16]. The importance of preserving patients' dignity at the end-of-life has become an essential purpose in palliative care[17],[14]. Guo and Jacelon[18] demonstrated that patients' sense of dignity is preserved when physical distress is low, treatments are non-invasive, independence, autonomy, and privacy are ensured, relationships are meaningful and care is dignified. These aspects are essential for a successful palliative care practice, because psychological variables, individual needs, and habits represent core aspects of the dignity-conserving perspectives and practices. Indeed, it was found that terminal cancer patients felt they were treated without value, respect and dignity by health professionals, when their personality was disregarded[19]. As evidenced by Chochinov[7], Neuroticism makes patients more vulnerable to life stressors and this has repercussions on the way they face end-of-life. Chochinov investigated the relationship between Neuroticism, coping strategies and dignity, in a sample of 409 terminally-ill cancer patients, but he did not explore the associations between all the personality traits and dignity.

The evaluation of cancer patients' personality should represent a focus towards end-of-life. Understanding individual differences during the illness can improve our knowledge about the patients' psychological condition and lead to a more personalized care approach. This could help clinicians identify the most vulnerable individuals, who struggle to adapt to the cancer terminal phase.

In order to understand personality aspects as risk factors for cancer incidence or as adaptive consequence to cancer, several studies analyzed the role of personality in cancer patients[20],[21],[22] . Although the results did not support the hypothesis that personality influenced risk factors for cancer, they did not exclude the possibility that personality traits and psychosocial variables could be associated to cancer patients' experienced.

However, to the best of our knowledge, no studies considered the possible interactions between different personality traits, i.e. Extroversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience, and patients' sense of dignity at the end-of-life.

Therefore, the present study first aim is to investigate the relationship between these personality dimensions and the sense of dignity in a cohort of end-of-life cancer patients with a life expectancy of a few weeks. Furthermore, the study assesses the relationship between personality traits and physical, anxious and depressive symptomatology, and coping strategies, in patients nearing death.

Methods

Study design and participants

The sample was recruited from January 2018 to March 2019, at "Città della Salute e della Scienza" Hospital and at the "Vittorio Valletta" Hospice, in Turin. Inclusion criteria were: being at least 18 years old; having a diagnosis of cancer; being able to give informed consent; meeting the criteria to access Palliative Care (National Law on Palliative Care and Pain Treatment, No. 38/2010). The latter are the following: the presence of an advanced disease in its terminal phase, for which there are no possible or appropriate curative treatments and with an unfavorable/poor prognosis; an estimated life expectancy of less than four months; a Karnofsky Performance Status[23] (KPS) of 50 or lower. Exclusion criteria were: having a diagnosis for any severe psychiatric disorder; showing cognitive impairment that would have prevented providing informed consent or completing the protocol. During the first consultation, the psychologist administered various rating scales to patients and evaluated their diagnosis and prognosis awareness. .

All the patients provided informed consent and the study was approved by "Comitato Etico Interaziendale A.O.U. San Giovanni Battista di Torino A.O. C.T.O./Maria Adelaide di Torino" protocol number 0073054.

Measures

The Italian validated versions of the following instruments were used in the present research.

The Big Five Inventory[24] (BFI), based on the Five Factors Theory[25], examines individual personality traits (Extroversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience) at a given point in time. The BFI consists of 44 items on a 5-point Likert Scale, ranging from one (Strongly disagree) to five (Strongly agree).

The Patient Dignity Inventory (PDI)[16] is a 25-item scale, based on the Chochinov's Dignity Model and it measures various sources of distress related to patients' dignity[26]. The items are on a 5-point Likert scale (from 1, not a problem, to 5, an overwhelming problem). The Italian version, validated for end-of-life patients, consists of five subscales: *Psychological Distress, Social Support, Physical Symptoms and Dependency, Existential Distress, Loss of Purpose and Meaning*.

The Hospital Anxiety and Depression Scale (HADS) is a 14-item self-report scale, which examines depression

and anxious symptoms[27]. The two subscales (Depression and Anxiety) are both composed by seven items on a four-point Likert scale. The HADS has been validated for cancer patients[28],[29]. Scores of eight or more indicate significant clinical symptomatology[30].

The Edmonton Symptom Assessment System[31] (ESAS) measures the intensity of nine symptoms experienced by cancer patients: pain, tiredness, nausea, depression, anxiety, drowsiness, appetite, well-being, and shortness of breath. Moreover, patients can mention other symptoms. The symptoms severity is rated on an 11-point Likert scale, ranging from zero (no symptom) to ten (worst possible symptom).

The Brief Coping Orientation to Problem Experienced (Brief-COPE) is a 28-item self-report measure used to assess 14 different coping strategies[32]: *Active Coping, Planning, Positive Reframing, Acceptance, Humor, Religion, Use of Emotional Support, Use of Instrumental Support, Self-Distraction, Denial, Venting, Substance Use, Behavioral Disengagement* and *Self-Blame*. Each subscale consists of two items on a 4-point Likert scale, ranging from one "I have not been doing this at all" to four "I have been doing this a lot".

Statistical Analysis

After performing the descriptive statistics of the sample, the associations between the variables were explored with Pearson's correlation index and one-way ANOVA with Bonferroni comparisons. Then, standard multiple linear forced entry regression models were executed to identify BFI traits' predictors. Then, after selecting the predictors with the highest β coefficients, standard multiple block-wise regression models were performed to further explore their predictive ability of the dependent variables.

p values less than .05 were considered statistically significant.

The data analysis was conducted using the software SPSS Statistics Version 25.0.0 (IBM Corp. Armonk, New York).

Results

Participants' socio-demographic and clinical characteristics

The sample included 210 end-of-life cancer patients with an average life expectancy of about 27 days, ranging from <24 hours to 120 days.

All the sample's characteristics are in Table 1.

Associations between personality traits and sense of dignity

The PDI subscales that were significantly associated with the BFI traits were the following:

- Conscientiousness: Social Support.

- Extraversion: Loss of Purpose and Meaning.

- Agreeableness: Existential Distress; Loss of Purpose and Meaning; PDI Total Score.

- Neuroticism: Psychological Distress; Social Support; Physical Symptoms and Dependency; Existential Distress; Loss of Purpose and Meaning; PDI Total Score.

See Table 2.

Associations between personality traits, physical and psychological symptoms, and coping strategies at the end-of-life

The ESAS, HADS and Brief-COPE subscales that were significantly associated with the BFI traits were the following:

- Extroversion: Fatigue; Depression; Drowsiness; lack of Well-being; Venting; Instrumental Support; Active Coping; Behavioral Disengagement; Acceptance; Planning; Self-Blame.

- Agreeableness: Anxiety; Instrumental Support; Active Coping; Denial; Religion; Behavioral Disengagement; Emotional Support; Acceptance;

- Conscientiousness: Drowsiness; Depression; Active Coping; Behavioral Disengagement; Substance Abuse; Planning;

- Neuroticism: Fatigue; Nausea; Depression; Anxiety; Drowsiness; lack of Appetite, lack of Well-being; Positive Reframing; Venting; Instrumental Support; Active Coping; Denial; Religion; Behavioral Disengagement; Emotional Support; Acceptance; Planning;

- Openness: Depression; Active Coping; Behavioral Disengagement; Acceptance; Planning.

  See Table 3.

Associations between personality, sociodemographic, and clinical variables

"Agreeableness" (F=21.99; p≤.01) and "Neuroticism" (F=5.74; p ≤.05) BFI subscales were significantly higher in females (Δmean=4.27; Δmean=2.07). "Openness to Experience" BFI subscale was on average higher in patients with a University Degree (mean=38.29; SD=7.95). Married people had higher "Extraversion" (F=2.78; p≤.05) and "Conscientiousness" (F=3.75; p≤.05) BFI subscales scores than singles (Δmean=3.837). The association between religious practice and "Agreeableness" (F=6.18; p≤.01) and "Openness to Experience" (F=4.08; p≤.05) BFI subscales was significant. In particular, "Agreeableness" was higher in subjects who practiced religion (Δmean= 2.9) while "Openness" was lower in the same group (Δmean=2.91).

Considering the clinical variables, only the awareness was significantly associated with the BFI (F=4.24; p≤.01). In particular, "Openness" trait was higher in patients aware of their clinical conditions than in those who were not (Δmean=7.18).

Personality traits' predictors

The regression models identified the following BFI traits significant predictors:

− Extraversion: Forced entry model: Loss of purpose and Meaning, KPS, Fatigue, Depression, Drowsiness, Appetite, Well-being, Venting, Instrumental Support, Active Coping, Behavioral Disengagement, Acceptance, Planning, and Self-Blame. Block-wise model: Active Coping, Drowsiness, and Venting.

− Agreeableness: Forced entry model: Existential Distress, Loss of purpose and Meaning, KPS, Anxiety, Instrumental Support, Denial, Religion, Behavioral Disengagement, Emotional Support, and Acceptance Brief-COPE subscales. Block-wise model: Instrumental Support, Acceptance, Religion.

− Conscientiousness: Forced entry model: Social Support, Drowsiness, Depression, Active Coping, Behavioral Disengagement, Substance Abuse. Block-wise model: Substance Abuse, Active Coping.

− Neuroticism: Forced entry model: Psychological Distress, Social Support, Loss of Purpose and Meaning, Physical Symptoms and Dependency, Existential Distress, KPS, Nausea, Anxiety, Appetite, Drowsiness, Depression, Well-being, Fatigue, Planning, Venting, Religion, Denial, Active Coping, Emotional Support, Acceptance, Behavioral Disengagement, Instrumental Support. Block-wise model: Anxiety, Appetite.

− Openness to Experience: Forced entry model: Well-being, Depression, Active Coping, Behavioral Disengagement, Acceptance, Planning. Block-wise model: there were not significant results into the description of variance.

See Table 4.

Discussion

The present study aimed to investigate the relationship of personality traits with sense of dignity in a sample of patients with a life expectancy of a few weeks. In addition, their associations with physical and psychological symptoms, and coping strategies were analyzed.

With regard to the first purpose of the research, Conscientiousness was significantly associated with "Social Support" dignity-related-dimension. Conscientiousness, which implies following the social norms regarding impulse control, being oriented towards a goal, being organized, and postponing gratification[33],[34], might be a buffer factor

involved in the therapeutic relationship, because the patients might be more inclined to adhere to the clinical treatments and to achieve therapeutic goals[35]. In addition, patients might feel the professional's psychological support more during the treatments and perceive the therapeutic setting as more suitable for satisfying their needs. Conscientiousness could also have an effect on the affective regulation, consistent with Javaras's study[36] , suggesting that individuals with higher Conscientiousness may be more able to control their negative emotions in stressful situation. So, the emotional inner states modulation might protect them from the distress related to the lack of social support, thus preserving the individual sense of dignity. Instead, lack of Conscientiousness could hinder the Self-regulation process, and may complicate the maintenance of the sense of dignity and the relationship with the healthcare professionals.

Moreover, the findings regarding the relationship between Extroversion, i.e. the tendency towards positive moods, sociability and an active and engaging lifestyle[37], and "Loss of Purpose and Meaning" dignity-related dimension, might suggest that the first safeguards dying patients from perceiving life as without a meaning and a purpose. End-of-life cancer patients having higher levels in Extroversion could be more inclined to share their fears and concerns about mortality with their clinicians. Indeed, patients might develop and give new and complex meanings to their inner suffering through the work with a psychologist, which might help them with the search for a new sense at the end-of-life. As well as Conscientiousness, also lack of Extroversion could be a risk factor towards the suffering related to the sense of dignity, not enabling the patients' reflection on own mental states, search of alternative perspectives on their terminal cancer experience and hindering their distress associated to dignity. Consequently, regarding the psychological interventions, inviting patients with a low level of Extroversion and Conscientiousness to work on their mental states related to their clinical condition could be difficult and could undermine the efficacy of the treatment.

Data regarding the relationship between Neuroticism and dignity, the results confirmed previous evidences. In particular, as shown by Chochinov[7], Neuroticism trait, i.e. the tendency to be emotionally unstable, tense, depressed, inclined to experience anxious states and unable to remain calm in stressful situations[38], had a significant relationship with different end-of-life sources of dignity's distress, including Psychological Distress and Existential Distress. As a result, Neuroticism could be a relevant risk factor of end-of-life cancer patients' sense of dignity.

With respect to the associations between coping strategies and personality traits, our results supported past researches, suggesting that personality might interact with the subjective experience and coping responses of the patients who are nearing death[7]. In particular, the regression pointed out that Extroversion and Agreeableness personality traits were predicted by problem-focused and emotion-focused coping strategies. Conversely,

Neuroticism, which was seen to be related to maladaptive coping styles, has highlighted the patients' inability to adapt to stressful situations. It is important to remind that these findings support the hypothesis that several protective traits help the patients in coping with stressful situations; while Neuroticism might be a risk factor associated to maladaptive physical and psychological responses in the dying stage[37],[39]. This is also supported by our findings, that emphasized several significant associations between Neuroticism, anxiety, depression and physical symptomology, that could have an effect on the quality of life of cancer patients at the end-of-life.

From a clinical perspective, the current data could have important implications for advance care planning for preserving and improving terminal cancer patients' sense of dignity. In particular, a comprehensive personality's assessment approach, including psychological interviews and testing, could provide valuable information and have an important role in planning effective personalized and brief psychological treatments at the end-of-life and improving their outcomes. In addition, a successful psychological therapy for patients nearing to death should orient the clinical work according to patients' personality dimensions, reducing their impact on patients' quality of life and death. Personality traits could play a role in attributing sense to the end-of-life experience and could influence patients' functioning and adaptation to their life situation. Given the associations between several personality traits and the sense of dignity, the purposes of these treatments should be to support the patients in living the rest of their life with respect, reducing the discomfort associated to the psychological and physical symptoms and allowing them to feel their own worth. In this perspective, Big Five personality traits could also affect Self-regulation processes. This could assume a key role in the psychotherapeutic interventions, whose objective is to favor patient's modulation of emotional inner states and to support his healthy behaviors. Thus, a personality assessment could likely be useful for the entire multidisciplinary team at end-of-life contexts in order to develop informed, integrated and adequate care plans. With regard to the present study, its strength was to have explored the relationship between the terminal cancer patients' different personality traits and their sense of dignity, in proximity to death. Nevertheless, there are two main limits in this study. First, although the BFI is useful to evaluate hospitalized cancer patients' personality traits, it does not allow to deepen the several facets connected to different personality traits. So, it provides results, which are exclusively related to the Big Five Factors. Therefore, it would be useful to have an additional tool, in order to further investigate patients' personality. Secondly, another limit was the experimental design. The study was cross-sectional and it measured variables in a single time. Because of this, the procedure does not allow assessing the possible changes in the relationship between patients' personality traits and sense of dignity during the different stages of the oncological

disease and in particular, when the patients are approaching death. Future studies could expand the results by doing a longitudinal assessment of personality and dignity, but the difficulties encountered in recruiting the patients and posed by their death will always be a challenge for end-of-life research. Furthermore, exploring the relationship between personality traits' facets and the sense of dignity experienced at the end-of-life, and associating this information to the therapeutic treatments is an important challenge for future research. Finally, it could be useful take culture or values in the relationship between personality traits and sense of dignity into consideration, a significant issue in end of life care and that could allow the generalizability of the results.

Conclusions

The current study suggested that Conscientiousness, Extroversion and Agreeableness have an active role in patient's perception of own dignity and ability to adapt to the end stage of cancer. Instead, Neuroticism can be defined as a risk factor in dying patients.

Personality and dignity should represent a crucial therapeutic focus in the end-of-life cancer patients' care. Paying attention to them could help the health care providers in being mindful of the psychophysical pain in the terminal cancer stage and in favoring patients' adaptation to the terminal illness[40].

A comprehensive personality's assessment could provide valuable information and facilitate in planning effective personalized treatments[37].

Declaration of conflicting interests

All the authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Table 1

Sociodemographic characteristics of the sample (*N*=210)

Characteristics	n^a (%)	Mean	SD
Age		67.83	11.61
Site			
Hospice	63 (30)		
Hospital	147 (70)		
Sex			
Male	117 (55.7)		
Female	93 (44.3)		
Marital status			
Married	129 (61.4)		
Single	26 (12.4)		
Divorced	24 (11.4)		
Widow(er)	31 (14.8)		
Education			
Primary school	39 (18.6)		
Middle school	83 (39.5)		
High school	67 (31.9)		
Graduate	21 (10)		
Profession			
Unemployed	14 (6.7)		
Employed	42 (20)		
Self-Employed	20 (9.5)		
Retired	128 (61)		
Religion			
Catholic	175 (83.3)		
Orthodox	3 (1.4)		
Atheist	27 (12.9)		
Evangelist	1 (0.5)		
Religious practice			
Prayer	87 (41.4)		
Not Prayer	96 (45.7)		
Cancer site			
Respiratory	51 (24.3)		
Gastrointestinal	34 (16.2)		
Genitourinary	29 (13.8)		
Hepatic-Pancreatic	28 (13.3)		
Breast	23 (10.9)		
Other cancers	44 (21)		
Cancer stage			
Local	27 (12.9)		
Loco-regional	43 (20.5)		
Metastatic	136 (64.8)		
Awareness			
No Diagnosis, no prognosis	31 (14.8)		
Diagnosis	40 (19)		
Diagnosis, prognosis overestimation	61 (29)		
Prognosis, no diagnosis	5 (2.4)		
Total	73 (34.8)		
KPS		39.95	8.88

$^a n$ absolute frequencies, *SD* standard deviation

Table 2

Correlations between BFI personality traits and PDI subscales

		BFI				
		Extroversion	Agreeableness	Conscientiousness	Neuroticism	Openness
PDI	Psychological Distress	-.050	-.132	-.017	**.327**[b]	.067
	Social Support	-.130	-.086	**-.218**[b]	**.188**[b]	-.102
	Physical Symptoms and	-.107	.023	.088	**.219**[b]	-.092
	Existential Distress	-.072	**-.164**[c]	-.027	**.270**[b]	-.056
	Loss of Purpose and Meaning	**-.186**[b]	**-.137**[c]	-.019	**.178**[b]	.027
	PDI Total Score	-.083	**-.137**[c]	-.006	**.305**[b]	-.024

[b]$p \leq .01$; [c]$p \leq .05$

Significant correlations are highlighted in bold.

Table 3

Correlations between BFI dimensions and the other rating scales subscales

	BFI				
	Extroversion	Agreeableness	Conscientiousness	Neuroticism	Openness
Pain (ESAS)	-.002	.058	.023	.067	.008
Fatigue (ESAS)	**-.246**[b]	.071	.035	**.286**[b]	-.027
Nausea (ESAS)	-.120	.034	-.026	**.242**[b]	-.023
Depression (ESAS)	**-.261**[b]	-.054	-.131	**.467**[b]	-.084
Anxiety (ESAS)	-.005	-.054	.061	**.503**[b]	-.012
Drowsiness (ESAS)	**-.337**[b]	-.039	**-.167**[c]	**.294**[b]	-.120
Appetite (ESAS)	**-.147**[c]	-.024	-.096	**.367**[b]	-.024
Well-Being (ESAS)	**-.296**[b]	.067	-.090	**.391**[b]	**-.167**[c]
Shortness Of Breath (ESAS)	-.058	.033	.005	.103	-.084
Other Symptoms (ESAS)	-.004	-.010	.037	.044	-.041
Anxiety (HADS)	-.055	**-.137**[c]	-.028	**.436**[b]	-.033
Depression (HADS)	**-.376**[b]	-.131	**-.140**[c]	**.403**[b]	**-.212**[b]
Positive Reframing (Brief-COPE)	.099	.024	-.078	**-.178**[b]	.076
Self-Distraction (Brief-COPE)	.107	-.062	.000	-.069	.090
Venting (Brief-COPE)	**.238**[b]	-.004	.006	**.285**[b]	.082
Instrumental Support (Brief-COPE)	**.185**[b]	**.321**[b]	.070	**.137**[c]	.036
Active Coping (Brief-COPE)	**.399**[b]	**.137**[c]	**.293**[b]	**-.303**[b]	**.258**[b]
Denial (Brief-COPE)	-.041	**-.156**[c]	-.134	**.198**[b]	-.047
Religion (Brief-COPE)	-.027	**.254**[b]	.001	**.180**[b]	-.104
Humor (Brief-COPE)	.024	.063	-.100	-.096	.065
Behavioral Disengagement (Brief-COPE)	**-.322**[b]	**-.143**[c]	**-.237**[b]	**.243**[b]	**-.204**[b]
Emotional Support (Brief-COPE)	.130	**.273**[b]	.013	**.218**[b]	.043
Substance Abuse (Brief-COPE)	-.110	-.133	**-.292**[b]	.128	-.025
Acceptance (Brief-COPE)	**.145**[c]	**.253**[b]	.041	**-.272**[b]	**.158**[c]
Planning (Brief-COPE)	**.343**[b]	.115	**.189**[b]	**-.291**[b]	**.276**[b]
Self-Blame (Brief-COPE)	**-.180**[b]	.014	-.076	.087	.002

[b]$p \leq .01$; [c]$p \leq .05$

Significant correlations are highlighted in bold.

Table 4

BFI subscales significant predictors

	B	SE B	β
Extroversion (BFI)			
Step 1			
Constant	16.822	1.792	
Active Coping (Brief-COPE)	1.785	.285	**.399[c]**
Step 2			
Constant	19.457	1.796	
Active Coping (Brief-COPE)	1.611	.274	**.360[c]**
Drowsiness (ESAS)	-.672	.142	**-.289[c]**
Step 3			
Constant	12.368	2.313	
Active Coping (Brief-COPE)	1.727	.263	**.386[c]**
Drowsiness (ESAS)	-.647	.136	**-.278[c]**
Venting (Brief-COPE)	1.130	.247	**.266[c]**
Agreeableness (BFI)			
Step 1			
Constant	31.156	2.874	
Instrumental Support (Brief-COPE)	1.457	.312	.304
KPS	-.130	.051	**-.167[c]**
Constant	25.309	3.074	
Instrumental Support (Brief-COPE)	1.070	.312	**.223[c]**
KPS	-.139	.049	**-.180[c]**
Religion (Brief-COPE)	.579	.207	**.179[c]**
Acceptance (Brief-COPE)	1.018	.300	**.215[c]**
Conscientiousness (BFI)			
Step 1			
Constant	40.151	.943	
Substance Abuse (Brief-COPE)	-1.714	.389	**-.292[c]**
Step 2			
Constant	33.568	1.822	
Substance Abuse (Brief-COPE)	-1.563	.376	**-.267[c]**
Active Coping (Brief-COPE)	1.020	.245	**.267[c]**
Neuroticism (BFI)			
Step 1			
Constant	19.100	.823	
Anxiety (ESAS)	1.249	.149	**.503[c]**
Step 2			
Constant	18.056	.797	
Anxiety (ESAS)	1.149	.141	**.463[c]**
Appetite (ESAS)	.685	.127	**.305[c]**

Standard multiple linear block-wise regression

Extroversion: R^2=.057 for Step 1, ΔR^2=.178 for Step 2, ΔR^2=.076 fort Step 3 (p≤.001). *n*=210

Agreeableness: R^2=.131 for Step 1, ΔR^2=.076 for Step 2 (p≤.05). *n*=210

Conscientiousness: R^2=.086 for Step 1, ΔR^2=.085 for Step 2 (p<.001). *n*=210

Neuroticism: R^2=.253 for Step 1, ΔR^2=.092 for Step 2 (p<.001). *n*=210

B unstandardized regression coefficients, SE B standard error B, and β standardized regression coefficients

[c]*p*≤.05