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The impact of personality and coping on the development of depressive symptoms in adult burns
survivors

Rachel M. Andrews^{1,2}, Allyson L. Browne^{3,4}, Peter D. Drummond², Fiona Wood^{1,5}

¹McComb Research Foundation, Western Australia

²Murdoch University, Western Australia

³Trauma Service, Royal Perth Hospital

⁴School of Medicine & Pharmacology University of Western Australia

⁵Western Australian Burns Service

Author responsible for correspondence:

Name: Rachel Andrews

Address: Level 2, MRF Building

GPO Box X2213

PERTH WA 6847

Email: rachandrews77@hotmail.com

Abstract

This prospective study examined the extent to which the personality traits *neuroticism*, *extraversion* and *agreeableness* and coping styles *approach*, *avoidant* and *ambivalent* contribute to the development of depressive symptoms in adult burn survivors at three months post-injury. Participants were 70 adult burn survivors admitted to Royal Perth Hospital in Western Australia between June 2007 and February 2008. Personality was assessed using the NEO Personality Inventory-Revised (NEO-PI-R), coping was evaluated with the Coping with Burns Questionnaire (CBQ) and depressive symptoms were measured using The Centre for Epidemiologic Studies Depression Scale (CES-D). Twenty one percent of retained participants at three months ($n = 29$) reported clinically significant depressive symptoms. There were no significant relationships between depressive symptoms at three months and demographic or burn injury characteristics. Neuroticism significantly predicted depressive symptoms at three month follow-up and this relationship was significantly mediated by avoidant coping. In addition, extraversion, avoidant coping and approach coping were all significant and independent predictors of depressive symptoms at three months. These findings suggest that burns patients at greatest risk of developing clinically significant depressive symptoms may be identifiable in the acute recovery phase.

Introduction

Survivors of severe burn injuries typically experience impairments to physical health, functioning and appearance [1]. While recent improvements in burn care and service provision have led to increased survival rates, burn survivors can still face an array of rehabilitative challenges including adjustment to disfigurement, reconstructive surgery, ongoing pain, barriers to social functioning, and psychological symptoms such as depression and anxiety [2]. In fact, reported rates of depression within one month of burn injury range between 2.2% [3] and 54% [4].

Many burns patients also go on to experience clinically significant depressive symptoms with post-discharge rates ranging from 13% - 54% [2] and rates at 12 months post-burn varying from 13% to 34% [5]. Yet, not all burns survivors experience persistent depressive symptoms. By identifying factors which influence the development and course of depression, it may be possible to determine which burns patients are at greater risk of developing psychological problems in the early stages of rehabilitation so that psychological treatment models can focus on those with the greatest need [6]. This is especially important in medical hospital settings where mental health resources are often limited.

Factors hypothesised to influence adjustment to trauma may include the characteristics of the traumatic event (intensity of ordeal – duration and proximity of exposure, degree of shock, pain or distress, exposure to atrocities, perceived threat), burn injury characteristics (type, location, severity), premorbid factors (previous traumatic experiences, psychiatric history), and ‘resilience-recovery variables’ (personality, coping styles, social support) [7]. However, factors that increase the risk of psychological maladjustment following burn injury remain unclear. Some authors have suggested that psychological factors such as personality traits and coping styles are

more instrumental than burn characteristics in determining psychological adjustment for burn survivors [6, 8] whereas others have argued that psychological and physical outcomes are the result of the interaction of both physical (burn severity, locus of injury) and psychosocial factors (personality, coping) [9]. In support of the former proposition, recent evidence has suggested that burn factors are not strong predictors of depression following burn injury [10].

The role of personality and coping in adjustment and the development of post-trauma symptoms following burn injury have been investigated. For example, Lawrence & Fauerbach [7] found that neuroticism accounted for most variance in Posttraumatic Stress Disorder (PTSD) in the burns population that they studied and was the only trait to have an independent effect on PTSD. In contrast, the relationship between extraversion, neuroticism, and PTSD symptoms was mediated by other personal characteristics such as coping style and social support. Across studies, burn survivors with high neuroticism and low extraversion [1, 11] and those who use avoidant coping [9,12,13] experience greater difficulty adjusting following their injury, while approach (active) coping strategies (seeking emotional support, problem solving and optimism) have been shown to facilitate psychological adjustment [4,9]. These findings suggest that personality and coping factors play an important role in the development of PTSD and adjustment in burns survivors.

Yet, the extent to which personality and coping factors predict depressive symptoms amongst burn survivors remains unclear [14,15]. While neuroticism has also been linked to unpleasant affective states [16] and is considered a vulnerability factor in the development of depression in medical populations [17], the extent to which neuroticism impacts on the development of depressive symptoms in the burns population is uncertain. Similarly, the role of extraversion in the development of depressive symptoms in burns survivors is yet to be

established. Agreeableness has received little attention within the context of adult burn injury [18], although less agreeableness has been associated with increased depressive symptoms in adolescent burn survivors [19]. Finch & Graziano [20] also reported a significant relationship between reduced agreeableness and depression in a community sample, suggesting that agreeableness may impact on depression indirectly whereby those high in agreeableness are more likely to engage in social interaction which facilitates intimacy and are less likely to perceive the behaviour of others as confrontational.

While research has indicated that coping may play an important role in adjustment following burn injury, findings reported in the literature are inconsistent. For example, while avoidant strategies such as distraction, substance use and daydreaming are generally considered maladaptive [14], there is some evidence to suggest that some avoidant strategies may facilitate adjustment immediately following a traumatic experience [7] as a way of protecting the individual from overwhelming emotions [21]. In contrast, a recent study found an association between avoidant coping and higher levels of depression during the acute phase of recovery from burn injury [22].

Coping style has also been identified as a mediator of the relationship between personality and psychological outcomes [7,20]. The process by which coping may mediate the relationship between individual factors (e.g., personality) and depression has been described by Folkman and Lazarus [23]. They proposed that the relationship between coping and emotion during stressful situations is bidirectional whereby the initial appraisal of an event evokes an emotional response. Both the appraisal and the resulting emotion then influence the selection of coping strategies which, in turn, lead to a change in the individual's behaviour or cognition. This new state is then reappraised and a new emotional state is produced. In this sense coping is generated within the

process and therefore plays a mediating role between the event or stressor and the emotional outcome.

The current study aimed to investigate the degree to which neuroticism, extraversion and agreeableness predict the severity of depressive symptoms at three months post burn injury and whether particular coping styles mediate this relationship while controlling for age, gender and burn factors. It was hypothesised that: 1) Higher neuroticism, and lower extraversion and agreeableness traits would be associated with significantly more severe depressive symptoms at three months post-burn injury; 2) Neuroticism would have a direct effect on depressive symptoms at three months and an additional indirect effect mediated by avoidant coping. Extraversion and agreeableness would have an indirect buffering effect against depressive symptoms at three months mediated by approach (active) coping; 3) Burns patients who employ more avoidant coping strategies at one month post-injury would report more severe depressive symptoms at three months follow-up than those using approach coping strategies at one month. Figure 1 demonstrates the proposed predictive model.

Method

Participants

One hundred and sixty one adult burn survivors admitted to the Burns Unit at Royal Perth Hospital (RPH) between June 2007 and February 2008 were approached to participate either during inpatient admission ($n = 105$) or via mail ($n = 56$). Of these, 28 were excluded based on the following criteria: 1) current psychosis or significant psychological distress; 2) substance dependence, but not abuse; 3) cognitive impairment (e.g. traumatic brain injury, dementia); 4) unable to communicate (e.g. intubated) as these individuals were typically too unwell to

complete assessment measures or their condition was likely to invalidate their responses. The 56 patients unable to be assessed by the hospital psychologist were posted an information sheet immediately after their discharge detailing the study and were invited to participate by returning a consent form in a reply-paid envelope. No participants were obtained via this method.

All but seven of the remainder agreed to participate in the study, resulting in a final sample of 70 participants. The mean age of participants at the time of injury was 38 years (S.D. = 15.4, range 17-82 years). The sample was predominantly Caucasian (90%). The percentage total body surface area burnt (TBSA) ranged from 0.5% - 40% with an average of 7% (S. D. = 7.3). Forty-seven percent of participants sustained full thickness burns while 47% received partial burns and 6% sustained superficial burns.

Measures

Demographics and burn characteristics. A semi-structured interview was conducted by a hospital clinical psychologist or the researcher during the acute phase of the participant's recovery to obtain standard demographic information such as age, gender, financial/employment/marital status and details of the patient's burn injury (type, TBSA, location, severity and nature of injury).

Depression. The Centre for Epidemiologic Studies Depression Scale (CES-D) [24]. was used to assess the patient's level of depressive symptoms at three month post injury. The CES-D is a 20-item self-report instrument which consists of four factors: Dysphoria, Positive Affect, Somatic and Interpersonal. Respondents are required to rate the frequency of depressive symptoms experienced over the past week on a 4-point Likert scale. Scores range from 0 to 60 with higher scores indicating greater presence of depressive symptomatology. The standard cut off point for the distressed range is ≥ 16 [25,26]. For the purpose of this study scores above this

cut off were considered 'clinically significant' [27]. The CES-D has been used widely in both clinical and nonclinical populations [26]. It has demonstrated sound psychometric properties with internal consistency reliability ranging from .85 to .92 across a number of demographic subgroups [28] and good convergent and discriminative validity [29].

Personality. Personality traits Neuroticism, Extraversion & Agreeableness were measured using the Neuroticism Extraversion Openness Personality Inventory-Revised (NEO-PI-R) [30]. This self-report inventory systematically measures the five domains of personality proposed in the five-factor model: Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C), and is based on decades of factor analytic research with both non-clinical and clinical populations. The NEO-PI-R scales have demonstrated reliability and validity in both clinical and nonclinical populations [30]. Internal consistency coefficients for the self-report version range from .76 -.93 for domain scales Neuroticism, Extraversion and Agreeableness [30].

Coping. The Coping with Burns Questionnaire (CBQ) is 33-item self-report questionnaire which requires respondents to rate how much they have used particular strategies to cope with burn and trauma related problems. The items are categorised into six subscales: emotional support, optimism/problem solving, avoidance, revaluation/adjustment, self-control, and instrumental action. Sound psychometric properties have been reported for the original CBQ subscales including internal consistency of .56 to .83 [31].

Procedure

Assessments were conducted across three phases; acute, one month and three month follow-up. Informed written consent was obtained prior to baseline assessment

Acute Phase. Participants were approached within one month of their admission to the RPH

Burns Unit by a hospital clinical psychologist as part of routine clinical care either on the burns ward, at the RPH burns outpatient clinic or via mail. At this point, patients who met the inclusion criteria were informed of the current study, provided a written information sheet and invited to participate by the first author or the hospital clinical psychologist.

Demographic and burn injury (TBSA, type, location and severity of injury) information was collected from hospital medical records and bedside clinical interview as part of routine clinical assessment.

One Month. Assessment at one month included completion of two standardised self-report questionnaires measuring personality traits (NEO-PI-R) and coping style (CBQ). They were administered at one month post injury because they were considered to be too long and unwieldy to administer during the early stages of recovery when patients were likely to be too unwell to engage in the assessment process. Furthermore, the CBQ was designed to be implemented post discharge [21]. All participants had been discharged at this phase of assessment; thus, questionnaires were either distributed via mail or at the outpatient clinic. Follow-up telephone calls were made approximately two weeks after questionnaire distribution to encourage participation and to answer any concerns or queries.

Three month follow-up. As part of routine clinical care all patients were scheduled to visit the RPH outpatient clinic at three months post-injury to be reviewed by the multi-disciplinary team, including a psychological review. During this review the hospital psychologist conducted a semi-structured clinical interview and administered a battery of self-report questionnaires measuring psychological health and functioning, including depressive symptoms (CES-D).

The study was approved by the Royal Perth Hospital and Murdoch University Ethics Committees, Western Australia.

Data Analysis

One-way ANOVA's with planned comparisons and Chi-square tests were performed to compare those who remained in the study to those who dropped out with respect to demographic and burn injury characteristics. A series of bivariate correlations were performed to examine the relationship between covariates (demographic and burn characteristics) and psychological variables (personality and coping styles), and depressive symptoms. Regression analyses were performed to examine the predictors of depressive symptoms. All analyses were performed using SPSS 15.0 statistical package.

Results

Of the 70 patients who entered the study, 29 (41%) were retained at the three month assessment phase. The demographic and injury characteristics of the retained participants compared with that of participants who dropped out at one and three months post-injury are presented in Table 1. Ethnicity and type and nature of injury variables were excluded from further analyses due to a) the predominant ethnic homogeneity of the sample and b) the insufficient number of cases in categories within these injury characteristic variables to perform analyses.

Group Comparisons

One way ANOVA's with planned comparisons were performed to compare age and TBSA across groups. There were no significant differences between those who remained in the study at three months and those who dropped out of the study at either one or three months with respect to age or TBSA, $F(2,67) = 1.51$, $F(2,52) = .56$, $p > .05$ respectively. Chi-square tests were conducted to compare severity and location of burn, gender, and marital status across groups.

There were no significant differences in these variables between those who remained in the study at three months and those who dropped out of the study $\chi^2(2, n = 70) = 6.26, p > .05$, $\chi^2(2, n = 70) = 2.93, p > .05$, $\chi^2(2, n = 70) = .36, p > .05$, $\chi^2(2, n = 70) = 1.08, p > .05$ respectively.

Descriptive Statistics

Descriptive statistics for psychological variables of participants in the final sample are summarised in Table 3. Twenty-one percent of individuals reported clinically significant depressive symptoms at three months follow-up (i.e., a score of 16 or more on the CES-D) [25,26]. Emotional support seeking and optimism/problem solving (both examples of approach coping) were the most commonly employed subscale coping strategies at one month post-injury while avoidance (avoidant coping) and instrumental action (approach coping) were the least employed of the coping subscales (see Table 2).

Bivariate Correlations

No significant relationships were observed between depressive symptoms and demographic or burn characteristics; thus, these variables were not included in further analyses.

As shown in Table 3, high neuroticism and low extraversion were associated with more severe depressive symptoms and with avoidant coping. In addition, avoidant coping was associated with more severe depressive symptoms whereas seeking emotional support was related to less severe depressive symptoms.

Predicting Depressive Symptoms

A series of standard and sequential linear multiple regressions were conducted to examine the extent to which neuroticism, extraversion and agreeableness predicted depression and whether a particular coping style mediated these relationships. Due to the small sample size and thus limited power, only the coping subscales shown to be significantly associated with either the

relevant personality trait or depressive symptoms were included in regression analyses.

Furthermore, in line with Baron and Kenny's [32] criteria for mediation analysis, the mediating effect of coping was examined only if the following conditions were met: there was a significant relationship between 1) the predictor and the outcome; 2) the mediator and the outcome; 3) the predictor and the mediator. Finally, after controlling for the effects of the mediator on outcome, the relationship between the predictor and outcome should be significantly reduced.

Neuroticism predicted depressive symptoms when entered alone, accounting for 14% of the variance, $F(1,27) = 4.35, p < .05$. Avoidant coping also predicted depressive symptoms, accounting for 15% of the variance, $F(1, 26) = 4.64, p < .05$. Neuroticism was associated with avoidant coping, accounting for 34% of the variance, $F(1,36) = 18.33, p < .001$. Finally, after controlling for the effects of avoidant coping on depressive symptoms, the relationship between neuroticism and depressive symptoms was no longer significant, $F(1, 25) = 2.92, p > .05$, indicating that this relationship is mediated by avoidant coping. The Sobel test [33] was performed to determine whether the indirect effect of neuroticism on depressive symptoms through avoidant coping was significant. Results indicated that avoidant coping ($z = 1.99, p < .05$) is indeed a significant mediator of the relationship between neuroticism and depressive symptoms in this study.

These results do not support the hypothesis that neuroticism would be associated directly with depressive symptoms. However, the hypothesis that the relationship between neuroticism and depressive symptoms is mediated by avoidant coping was supported.

Extraversion predicted depressive symptoms when entered alone, accounting for 25% of the variance in depressive symptoms, $F(1,27) = 8.85, p < .01$. Approach coping also predicted depressive symptoms, accounting for 23% of the variance, $F(1, 26) = 7.74, p = .01$. However,

Baron and Kenny's criteria for mediation analysis were not met sufficiently as approach coping was not significantly associated with extraversion. Therefore, the hypothesis that extraversion would have an indirect effect on depressive symptoms mediated by approach coping was not supported. Rather, it would appear that extraversion and approach coping act independently to produce effects on depressive symptoms.

Agreeableness was not a significant predictor of depressive symptoms when entered alone, $F(1,27) = .93, p > .05$. Thus, the hypothesis that agreeableness would impact on depressive symptoms indirectly via the mediating effect of approach coping was not supported. Table 4 summarises the regressions conducted with personality and coping as predictors of depressive symptoms.

Discussion

The central aim of this study was to investigate the degree to which the personality traits neuroticism, extraversion and agreeableness predicted the severity of depressive symptoms at three months post burn injury and whether particular coping styles mediate this relationship while controlling for age, gender and burn injury characteristics.

A number of important findings emerged from the present study. First, approximately one in five (21%) retained participants reported clinically significant depressive symptoms at three months post-injury. Second, there were no significant relationships between depressive symptoms at three months and demographic or burn characteristics. Third, while neuroticism significantly predicted more severe depressive symptoms at three month follow-up, this relationship was mediated by avoidant coping. Fourth, extraversion and a measure of active coping (emotional support seeking) were significant and independent predictors of less severe

depressive symptoms at follow-up. Finally, agreeableness and other forms of coping were not significantly related to depressive symptoms.

The rate of clinically significant depressive symptoms in the current study was consistent with reported rates for clinically significant post-discharge depressive symptoms (13-54%) in other burns populations [2].

Nevertheless, when compared with rates obtained using the same self-report measure and classification criteria for depression, the rate of clinically significant depressive symptoms found in this study was similar to that found in a normal population (19%) [24] but less than previously found in outpatient hospital populations (32.8%) [27]. This seems counterintuitive given the traumatic nature of burn injury. However, the lower rate found in the current study may be due to the nature of the drop out group. In particular, some participants who were followed-up by telephone reported that they did not complete questionnaires as they found doing so too distressing.

Psychological variables appeared to be more powerful predictors of depressive symptoms at three months post-injury than physical factors. Relationships between depressive symptoms and TBSA, location and severity of burn, age, and gender were not significant. This finding is consistent with earlier arguments that personality traits and coping styles may be more instrumental than physical factors in determining psychological maladjustment following burn injury [6,8] and is in accordance with previous findings that burn factors are not significantly related to depression [34,35,36]. On the other hand, the impact of potentially important variables (e.g., the location of the burn injury) on depressive symptoms could not be assessed because of sample size limitations.

Of the psychological variables assessed, neuroticism and avoidant coping were positively

related to depressive symptoms while there was a significant inverse relationship between depressive symptoms and extraversion and active coping. These results support the hypotheses that those patients higher in neuroticism and lower in extraversion would demonstrate significantly more severe depressive symptoms, and that burns patients who employ more avoidant coping strategies at one month would exhibit more severe depressive symptoms at three months post-injury than those using more approach coping strategies. Similar patterns have been reported in the burns literature. For example, Lawrence and Fauerbach [7] found that those higher in neuroticism and who engaged in avoidant coping at one month post discharge exhibited greater PTSD symptoms, while Willebrand et al. [21] reported that patients who used avoidant strategies were at greater risk of developing psychological symptoms.

Neuroticism may contribute to the development of depressive symptoms by influencing the intensity and duration of the patient's distress during recovery [37]. Burns survivors higher in neuroticism may also experience more depressive symptoms as a result of greater difficulty coping with stress [30] and a tendency to withdraw socially, thus minimising support seeking and opportunities for positive experiences. Although avoidant coping may be useful in dealing with uncontrollable or overwhelming symptoms during the acute phase of recovery from burn injury [21], the present results suggest that using avoidant coping beyond the period of hospitalisation may be maladaptive. One explanation is that prolonged avoidance may lead to distress when difficulties persist and problems are not addressed.

Neuroticism significantly predicted depressive symptoms at three months; however, avoidant coping appeared to mediate this relationship. This finding indicates that individuals high in neuroticism appear to engage in avoidant coping which, in turn, results in more severe depressive symptoms. It also supports the proposition that avoidant coping may be more closely

related to neuroticism than other forms of coping [14]. Consistent patterns have been reported in relation to predictors of PTSD following burn injury [7]. Together these results suggest that avoidant coping plays a significant role in the relationship between neuroticism and maladaptive adjustment following burn-injury. It could be that individuals high in neuroticism, who are by nature more susceptible to psychological distress [30], adopt avoidant coping strategies such as denial and/or substance use to avoid negative emotional states which, paradoxically, perpetuates distress.

Extraversion and emotional support seeking each independently buffered against depressive symptoms. This finding is contrary to the hypothesis that extraversion would protect against depressive symptoms only through indirect effects mediated by approach coping. Perhaps extraversion facilitates healthy adaptation following burn injury through mechanisms other than approach coping. Highly extraverted individuals are more likely to have a positive outlook, are less likely to experience anxiety, sadness and guilt, and are less susceptible to stress [30].

While the present findings suggest that extraversion acts independently of coping to influence adjustment following burn injury, Lawrence and Fauerbach [7] found that extraversion influenced psychological outcomes (PTSD symptoms) indirectly via approach coping. It could be that the gregarious and assertive nature of extraverted individuals is more protective in terms of depressive symptoms than PTSD as these characteristics may counteract low mood via emotional support engagement which has been found to buffer the effects of depression in other medical populations [38].

The finding that burns survivors' use of emotional support seeking strategies was not related to extraversion may reflect the constraints of the burns environment rather than the lack of relationship between extraversion and approach coping. For example, extraverted individuals

who usually engage in approach coping strategies such as actively restructuring their environment to reduce distress or increasing social interaction and physical activity to improve mood may experience difficulty doing so during recovery due to the physical impairments caused by their burn injury. Furthermore, in line with previous findings relating to adjustment following burn injury [9,21], emotional support seeking was related to fewer depressive symptoms in this study. These results indicate that adopting an approach coping style beyond the acute phase of recovery may be protective against the development of depressive symptoms. If burn survivors are using more approach strategies at post-discharge they may perceive their symptoms as being manageable.

A key strength of this study was the prospective design and consideration of physical factors such as demographic and burn characteristics. However, the small sample size may limit the generalisability of the present findings. Difficulties obtaining a large random sample of burns survivors have been widely reported [34]. Patients were often too unwell to be approached during hospitalisation or were hospitalised for only very short periods. While these patients were mailed consent forms, none responded, perhaps due to the chaotic or transient lifestyle of some patients [34] or possibly because of inaccurate hospital records. Finally, over 50% of participants dropped out of the study before completing the follow-up assessment despite the researcher attending outpatient clinics and following-up participants via telephone calls.

While there were no significant differences between the retained participants and those who dropped out of the study in terms of demographic and injury characteristics, there may have been clinically significant differences in the psychological variables assessed in this study. For example, individuals higher in neuroticism and/or with greater depressive symptoms may not have completed questionnaires to avoid experiencing negative affect or exacerbation of their

symptoms. Finally, additional sources of stress following burn injury, such as relationship difficulties [39] and issues associated with returning to work [33], were not examined in this study and may have contributed to depressive symptoms. Whether such factors contributed to depressive symptoms remains uncertain.

Depression is one of the most common psychological difficulties arising from burn injury [33] and was found to be predicted by neuroticism and avoidant coping in the current study. In contrast, extraversion and approach coping appeared to protect against depression. The present findings may help to determine which burns patients are at greatest risk of developing clinically significant depressive symptoms during the acute phase of recovery and inform the development of tailored psychological interventions.

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Figures and Tables

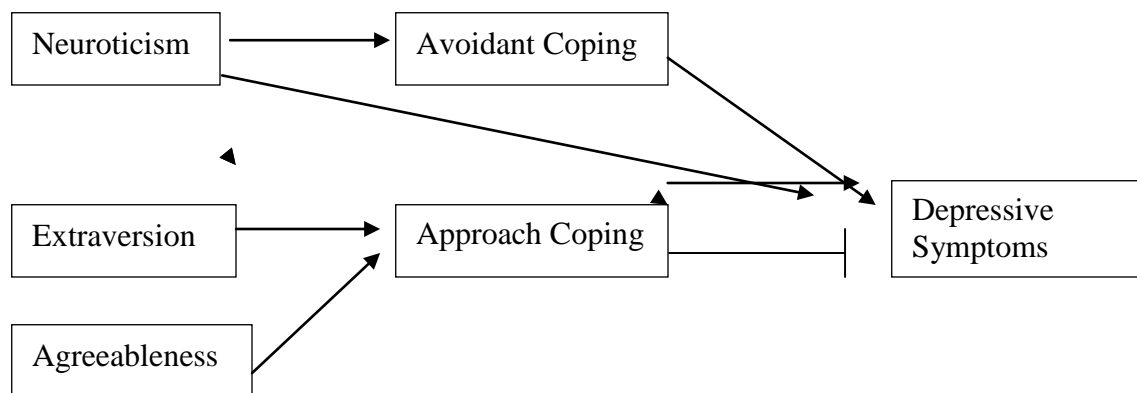


Figure 1. Proposed predictive model of the relationship between personality, coping and depressive symptoms. Arrows indicate facilitatory effects whereas the bar represents an inhibitory effect.

Table 1.

Summary of participant demographic and injury characteristics across retained and drop out groups

Demographic Characteristics	^a Retained at 3 months	^b Drop out at 1 month	^c Drop out at 3 months
Gender (% male)	66	69	75
Age (years)*	41.8 (18.7)	34.8 (12.7)	37.8 (11.4)
Ethnicity (%)			
Caucasian	97	86	83
Other	3	14	17
%TBSA*	8.0 (7.1)	6.0 (7.8)	8.4 (6.3)
Location of Burn Injury			
Multisite	45	25	42
Single-site	55	76	58
Knee Below	17	21	0
Buttocks/pelvis	3	0	8
Leg(s)	17	25	0
Abdomen/chest	3	4	0
Elbow below	7	11	42
Arm(s)	3	7	0
Ankle/foot	3	7	0
Face/neck/scalp	0	0	8
Severity of Burn (%)			
Superficial	7	3	8
Partial	62	41	25
Full thickness	31	55	67

Note. **M (SD)*. Percentages do not add up 100 due to rounding. ^a*n* = 24-29. ^b*n* = 25-29. ^c*n* = 6-12.

Table 2.

Mean total scores (standard deviations) for psychological variables for participants retained at three months

Measure	Mean (SD)
^a NEO-PI_R	
Neuroticism	86.6 (27.3)
Extraversion	103.2 (22.3)
Agreeableness	121.8 (17.8)
^b CBQ Subscales	
Emotional Support Seeking	2.4 (0.6)
Optimism/Problem Solving	2.6 (0.6)
Avoidance	1.6 (0.6)
Revaluation	2.1 (0.5)
Self-Control	2.0 (0.7)
Instrumental Action	1.6 (0.4)
^c CES-D	
Total Depressive Symptoms Severity	8.9 (9.1)

Note. n = 28 - 29.

Table 3.

Intercorrelations between psychological variables

Psychological Characteristics	1	2	3	4	5	6	7	8	9	10
NEO-PI_R										
1. Neuroticism										
2. Extraversion	-.64**									
3. Agreeableness	-.31	.19								
CBQ Subscales										
4. Emotional Support Seeking	.03	.23	.31							
5. Optimism/Problem Solving	-.14	.16	-.02	.32						
6. Avoidance	.71**	-.63**	-.24	-.08	-.17					
7. Reevaluation	-.14	-.01	.59**	.30	.41*	-.03				
8. Self-Control	.24	-.27	-.34	-.03	.31	.45*	.16			
9. Instrumental Action	-.13	.23	.61**	.32	.39*	.02	.66**	.29		
CES-D										
10. Total Depressive Symptoms	.37*	-.50**	-.18	-.48**	-.15	.39*	-.15	.11	-.20	

Note. $n = 24-29$. * $p < .05$. ** $p < .01$.

Table 4.

Summary of standard and sequential regressions with personality and coping as predictors of depressive symptoms

Predictor Variables	<i>B</i>	<i>SE B</i>	β	<i>t</i>	R^2	ΔR^2	ΔF
Standard							
Neuroticism	.13	.06	.37	2.09	.14	.14	4.35*
Extraversion	-.20	.07	.50	-2.98	.25	.25	8.85**
Agreeableness	-.09	.10	.18	-.96	.03	.03	.93
Avoidant Coping	6.07	2.82	.39	2.15	.15	.15	4.64*
Approach Coping	-7.99	2.87	.48	-2.78	.23	.23	7.74**
Sequential							
1. Avoidant Coping	6.07	2.82	.39	2.15	.15	.15	4.64*
2. Avoidant Coping and Neuroticism	2.97	4.01	.19	.74			
	.10	.09	.28	1.08	.19	.04	1.18

Note. * $p < .05$, ** $p \leq .01$.