

Coping, Personality Traits and Social Support in Severe Burn Survivors

Priscilla M. P. Frota, Daniela S. Zanini Pontifical Catholic University of Goiás, Goiánia, Brazil Email: dazanini@yahoo.com, pmpfrota@hotmail.com

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Objective: The present study aimed at investigating the correlations among coping, personality traits, and social support for burn survivors. **Method:** Participants were 48 patients from a reference burn hospital who attended group meetings at a non-governmental organization associated to that institution that offers support to burn survivors. Data were collected from February to May, 2010. The participants answered a socio-demographic questionnaire and three instruments: Coping Strategy Indicator (CSI), Personality Markers, and Social Support Questionnaire (MOS Scale). **Results:** The data obtained showed a significant correlation among the personality traits neuroticism and socialization and social support, as well as between socialization and coping; however, differently than expected, no significant correlation was established between social support and coping. **Conclusion:** Personality traits are related to the perception of support from others; however the perception of support does not influence the way burn survivors cope with their problems. These data were discussed in order to broaden the knowledge and stimulate new studies on the area, so that, based on this information, more efficient treatment plans and interventions can be designed to fulfill both the physical and emotional needs of these survivors with more competency and perceptiveness.

Keywords: Coping; Personality Traits; Social Support

Introduction

Get burned, apart from being a sudden and traumatic event for those who suffer it and for those surrounding them (Patterson et al., 1993), also involves a long treatment process. The impact caused by it is not only restricted to physical sequelae but also affects the survivor's emotional life, and might lead to pre-existent psychopathologies or to those resulting from the burn (Fauerbach et al., 1997).

Patterson et al. (1993) indicate that people with premorbid psychopathological disorders, such as depression, personality disorders, alcohol and drug abuse, are more likely to have burn injuries. They also have a tendency to have longer and more difficult recovery suggesting that there is a correlation between personality and burns accidents. The authors also identify a considerable number of survivors with emotional instability previous to the burn experience and highlight that the medical model usually developed in the researches has proved insufficient to evaluate the psychological impact that afflicts burn survivors.

Regarding physical sequelae, Fauerbach et al. (2002) indicate that the radical changes in the survivors' physical appearance reflect strongly on the integration of cognitions and behaviors. All this brings losses to the cognitive and social abilities needed to adapt to the new condition. Even considering the physical and emotional impact of the burn, discrepancies among sur-

vivors have been observed regarding their abilities to adapt to the new condition. Fauerbach et al., All these circumstances increase the need for this type of patient to be cared for by an inter-disciplinary team, which not always happens (Gilboa, 2001).

As the burn event has a strong and traumatic impact on one's life, it can be considered as a stressful event (or a stressor) and the way the individual will cope with it will depend on his coping abilities and resources (Lazarus & Folkman, 1984). According to Folkman and Lazarus (1980), coping involves the individual perception of the stressful event and the cognitive and behaveioral strategies chosen by him to manage it. So when the effectiveness of the strategies is evaluated, it is necessary to consider the specificity of person environment relationship, such as nature, coping resource and result (Victorson, Farmer, Burnett, Ouellette, & Barocas, 2005).

One particular situation considered stressful can originate several possibilities of coping, which led Moos (1993) to establish a categorization based on focus and method. Therefore concerning the first aspect, the coping strategies can be described as approach coping (or problem focused coping), when it describes efforts to solve the problem directly, or avoidance coping (or emotional focused coping), when it is described as efforts to solve the emotion caused by the stressful event. The second aspect can be cognitive or behavioral, i.e., it can use several cognitive efforts (e.g. cognitive re-evaluation) or behavioral efforts (e.g. problem solving).

Regarding the recovery of severe burn survivors, the extension of the burn is often not the most important predictor of his re-adaptation, but his personality. Thus, when it comes to dealing with the stress caused by the burn injury using coping abilities (Gilboa, Bisk, Montag, & Tsur, 1999), it can be observed that the cognitive evaluation and the emotional response to the trauma apparently derive from one's personality. Smith, Smith, Rainey and DelGiorno (2006) postulated that personality and coping prior to the burn should guide the treatment planning. Grant and Langan-Fox (2007) suggest that the presence of a high level of neuroticism predisposes individuals to create stressful situations, and establishes a correlation between this trait in life in general and specifically at work.

Andrews, Browne, Drummond and Wood (2010) argued that the healthcare team assisting severe burn survivors can have more productive interventions from the understanding of the impact of patients' personality on their dysfunctional reactions and behaviors. They can acquire tools to assist patients in facing difficulties, with emotional support and functional coping strategies. Apart from the great influence of personality, also the role of social networks and the social support are important for coping with burn.

Receiving social support as well as being part of a social network can bring benefits to health, both by buffering the stressful event and by reinforcing feelings of self-esteem. Both conditions are associated with the reduction of negative effects from exposition to physical or emotional trauma (Lawrence & Fauerbach, 2003), with the increase of quality of life of both, patients and caregivers (Yu, Hu, Efird, McCoy, 2013), and with coping with difficulties of acute burn injuries (Farrell, Bennett, & Gamelli, 2010).

However, the support does not depend only on the provider, but also on the receiver, who needs to be capable of eliciting the response from the environment or of perceiving it. So, once more, the importance of taking into consideration personality traits and its relation to personality is reinforced (Gilboa et al., 1999). In fact, Onyishi and Okongwu (2013) demonstrate that life satisfaction can be predicted by personality and social support even in adverse environment or work such as with Nigerian prisons officers.

The social context, in conformity with Moos (2003), has paradoxically a curing and a destructive potential and, in this sense, social support has the role of protecting and preventing dysfunctional reactions in crisis situations.

Moos (2002, 2003) hypothesized that, the environment and the quality of the relationships established in it influence the individual's commitment to this environment. His findings indicate that the moderate emphasis on establishing relationships in this net strengthens and benefits the person, while exaggeration can bring serious problems, so as to cause a dependence on it. The author continued to state that the individual does not need, necessarily to seek support in family and friends to obtain these benefits, but only the knowledge that he can count on them can suffice.

Badger and Royse (2010) evaluated the perceived social support from other burn survivors of 30 burn survivors in their psychosocial rehabilitation. The authors stressed the positive effect on health of the perception of belonging and been affiliate to a group in which people had a common experience. This effect is not only situational but can have effects throughout life. That's what Meyer et al. (2004) postulate. For them a routine follow-up throughout life is important, especially for the female

population. That is because women tend to face more difficultties connected to physical appearance, leading them to react to the burn sequelae with anger and attempts of isolation. The purpose of the follow-up evaluations would be to measure, in the long term, the level of adaptation to the new reality and to identify possible problems that need intervention and so the group experience could help.

Farrel, Bennet and Gamelli (2010) researched the correlation between burn survivors' discharge disposition and social support, and verified that the social support plays a decisive role when determining discharge disposition. The authors demonstrated that those individuals who did not have adequate social support, were usually transferred from a hospital to another inpatient setting, thus extending the length of their hospitalizetion and, consequently, postponing their return home to face their daily lives. In fact, Russel et al. (2008) conducted a paper with the purpose of identifying the level of agreement between the statements regarding personal problems given by burn survivors and by an informant with whom they have a close personal relationship. In their results, they detected that the perception of problems stated by the informants was much higher than the ones stated by the survivors themselves. They concluded that this suggests that survivors used an adaptive coping mechanism in order to avoid an anticipated rejection in their interpersonal relationships.

Taking into account that cultural factors play an important role and that they, possibly, exert influence in the way the aspects studied are manifested. This paper aimed at researching how personality, coping and social support appear and interact specifically in a sample of severe burn survivors in the Brazilian population. The results can help to develop appropriate interventions to the Brazilian sociocultural context and contribute to a better reinsertion of these survivors.

Method

Participants

Participants were 48 burn survivors from a Brazilian reference burn hospital, being 33 females and 15 males, aged between 12 to 73 years (M = 29.13, SD = 14.16) and 42.2% with incomplete primary school.

Measure

In order to accomplish this study the following instruments

- 1) A sociodemographic questionnaire with information regarding age, gender and level of schooling.
- 2) The Coping Strategy Indicator (CSI) developed by Amirkhan (1990), is a self-report scale, in which, initially, the participants are instructed to select a stressing event in their lives and describe it briefly. Later, the participants read a list of 33 specific coping behaviors and were asked to indicate the extension with which these were used by them to deal with the event described (never, sometimes or always). By means of simple addition of the questions, the three scales of coping are grouped: problem-solving (e.g., thought about what needed to be done to solve the problem); search for social support (talk to a friend); and avoidance (doing something in order to avoid facing the problem). The alpha values obtained in the present study for this scale were: $\alpha = 0.63$, $\alpha = 0.79$ and $\alpha = 0.70$ for problem-solving, social support and avoidance, respectively.

- 3) An inventory named Marcadores de Personalidade (Personality Markers), developed by Hutz et al. (1998), was used. This instrument is composed by 96 adjectives and individuals should recognize the degree of intensity in which a given adjective (such as "hard-working", "pessimistic", "honest", "responsible", "kind", among others) described their personality, marking their agreement in a scale of 7 points. These adjectives can be grouped in five scales in the means of the Big Five. The alphas for the scale in this study were: 0.83, 0.85, 0.60, 0.62 and 0.80 for socialization, extroversion, consciousness, neuroticism and openness, respectively.
- 4) To evaluate the perception of social support, the Social Support Questionnaire (MOS Scale), originally developed for the Medical Outcomes Study (MOS) (Sherbourne & Stewart, 1991), and adapted to Portuguese by Griep, Chor, Faerstein and Lopes (2003), was used. The questionnaire is composed of 19 questions, which must be answered according to the Likert scale ranging from 1 (never) to 5 (always). These questions, such as "If you need so, how often do you count on someone...to help you if you are bedridden?" are grouped into four subscales in the Brazilian version, according to factorial analysis: a) material support: b) affective support: c) emotional/informational support: d) positive social interaction support. The alpha coefficients of these subscales range from 0.95 to 0.76. The alpha values of these four subscales obtained in this study were: 0.88, 0.87, 0.90 and 0.83 for material support, affective support, emotional/informational support and positive social interaction support, respectively.

Procedure

After evaluation and approval of the project of this research by the Ethics Committee, which regulates the application of the Resolution CSN Nr 196 of the National Health Council, referring to research with human beings (Brazil, 1996), contact was made with the management of a reference burn hospital from the Center-West Region, requesting authorization to execute this study. Once the authorization was obtained, the burn survivors were contacted, and after signing the Free and Clarified Consent Term, the data collection started. The anonymity and the possibility of consent withdrawal at any moment of the process were ensured to all participants. The interviews were performed on the same days and time of the group meetings that the participants attend, starting straight after the end of the meetings. The application took place in groups of six survivors in a ventilated and well-lit room, lasting from 30 to 50 minutes.

Results

Aiming at evaluating the existence of significant differences in the average scores of the personality markers, social support and coping strategies according to gender, an average comparison study was performed using *t Student* test (**Table 1**). The results indicate no differences between gender and the personality markers social support or coping strategies.

To evaluate the correlation among personality markers, social support and coping strategies, a Pearson bivariate correlation (**Table 2**) was used. The data reveal that the higher the score in socialization, the higher the account of total social support (r = 0.37, p = 0.03) and the lower the use of avoidance coping (r = -0.41, p = 0.02). Apart from that, the higher the score in neuroticism, the lower the account of total social support was (r = -0.45, p = 0.01).

Table 1. Average, standard-deviation, t value and significance level (p) in the average comparison study for the variables personality marker, total social support in the MOS scale and approach and avoidance coping strategies, according to gender.

Variable Socialization Extroversion Accomplishment Neuroticism	Gender		T	p					
Variable	Male M (DP)	Female M (DP)							
Personality marker									
Socialization	90.09 (11.45)	93.93 (13.01)	0.92	0.37					
Extroversion	41.08 (13.59)	45.72 (13.62)	0.99	0.33					
Accomplishment	81.17 (6.69)	78.04 (8.97)	-1.16	0.25					
Neuroticism	38.67 (6.43)	38.03 (10.25)	-0.24	0.81					
Openness	52.45 (16.18)	55.00 (12.93)	0.44	0.65					
Total social support									
MOS Scale	73.50 (18.94)	82.90 (11.07)	1.61	0.13					
Neuroticism 38.67 (6.43) 38.03 (10.25) -0.24 0.81 Openness 52.45 (16.18) 55.00 (12.93) 0.44 0.65 Total social support MOS Scale 73.50 (18.94) 82.90 (11.07) 1.61 0.13 Coping strategy									
Problem-solving	26.27 (3.20)	27.30 (3.22)	0.91	0.37					
Search for social support	26.15 (3.36)	25.90 (4.84)	-0.20	0.84					
Avoidance	22.45 (5.48)	22.55 (3.53)	0.05	0.95					

Table 2. Pearson correlation among personality markers, social support and coping strategies.

	Social	Coping strategy			
Variable	support	Problem- solving	Search for social support	Avoidance	
Socialization	0.37*	0.21	0.16	-0.41*	
Extroversion	0.23	0.32	0.19	-0.15	
Consciousness	-0.23	0.33	-0.11	-0.13	
Neuroticism	-0.45**	-0.24	0.15	0.25	
Openness	0.16	0.19	0.10	-0.01	
Total social support	-	0.23	0.23	-0.15	

*Significant correlation at 0.05% (two-tailed test). **Significant correlation at 0.01% (two-tailed test).

Discussion

The present study aimed at investigating the correlations among coping, personality traits, and social support for burn survivors. The results diverge from those obtained in the studies of Kazak, Reber and Snitzer (1998), Glynn, Christenlfeld and Gerin (1999) and Zanini, Verolla-Moura and Queiroz (2009), which indicated that social support is perceived in different ways by different groups of people, for instance between men and women or between married and single people. It is thought that this divergence occurred for two distinct reasons: the fact that the sample studied may not have been large enough for the differences to appear in relation to gender; or, as suggested by studies such as by Patterson et al. (1993), the variable that would most exert influence in the definition of the burn survivor's profile would not be gender, but personality characteristics, which could be expressed by means of traits, perceptions and behavioral manifestations.

However, despite the fact that in this specific sample gender

did not have a recognized significance in the results found, this is not always a neutral variable regarding burns. For that reason, it is important to accentuate that some studies with qualitative methodology, such as by Meyer et al. (2004), demonstrated that the impact of the burn differs significantly between men and women, for example, evidencing that women tend to present a higher difficulty to deal with changes in physical appearance as a result of a burn event, which eventually makes them present more externalizing behavior problems than the male population.

Also, the results show that the socialization trait correlated with a higher perception of social support and also with a smalller use of coping strategies of avoidance, establishing, therefore, a significant correlation among the personality trait, the occurrence of social support and the choice of coping strategies. There was also an inverse correlation between the neuroticism trait and social support. The results are in accordance with those from several studies that also found that the personality is an important factor of influence on the selection and use of approach coping strategies (Endler & Parker, 1990; Kaiseler, Polman & Nicholls, 2012). Similar findings were stated by Gilboa et al. (1999), who postulated that the cognitive evaluation and the response to the trauma are influenced by personality. It also exerts substantial impact on coping and the subsequent posttrauma adjustment of the individual. In other words, the findings of this study indicate that, despite the Brazilian cultural particularities, there is a similarity of results between this specific sample of the Brazilian population and those found in the foreign literature.

Regarding the correlation between personality traits and social support, one can hypothesize that the occurrence of social support would not depend solely on its emitter, as the receiver would also have the power to elicit the response from the environment and mobilize internal resources, which would, once again, connect this capacity to personality traits (Gilboa et al., 1999). Moreover, Cramer, Henderson and Scott (1997) evidenced that the existing difference between the social support perceived and the social support received is due to the fact that the first is recognized by the receiver as available in his environment in case it is needed, while the second is the one that effectively occurs in a concrete situation. Therefore, once more, the perception of support is influenced by the personality of whom it is received by, as, countless times, even being available, the support is not perceived as such by the potential receiver, due to his personality characteristics.

On the other hand, it is important to emphasize that signifycant correlations between social support and coping were not found in this study, what contradicts most of the literature here referenced, especially regarding that social support is a coping resource. Considering the specificities of the sample, this finding strengthens the hypothesis that cultural differences exert a considerable influence on coping strategies, as well as in the perception of social support. It also can be hypothesized that this occurrence could be explained by the fact that, even benefitting from the social support, the impact of the burn and its consequences in the survivors' lives are so devastating that they would not manage to perceive the support as something that would make it easier to cope with the situation, i.e., as a coping resource, due to the magnitude of the trauma experienced. However, it is important to emphasize that previous studies in Brazil, developed with university students not afflicted by burn injury did not detect a significant correlation between social support and coping either (Queiroz, 2009) what can indicate

some cultural variance on the relation between social support and coping. To clarify this hypothesis future studies are needed.

Conclusion

There has been a significant increase in the number of burn survivors with the intense progress of medicine in the last 30 years. Faced with this new reality the treatment, which previously was restricted to saving the patient's life, and which was not always successful, had its spectrum widened to new object-tives, needs and interests. The professionals dedicated to this type of care started to deal with new issues, which, if on one hand are not considered urgent in relation to survival, on the other hand are essential when considering the course of the treatment and the quality of life of these patients.

The aims of this paper result precisely from this new look upon burn survivors following the evolution of treatments and the optimization of the results obtained, and which are, therefore, deeply connected to the culture and the context they are inserted. In that sense, researches such as this one have an important role, as the sooner the burn survivors' particularities are detected and diagnosed, the higher the chances of the interventions to be appropriate and successful. Despite all the progresses obtained in the area, it must be highlighted that there is a gap when treating the emotional aspects of the severe burn survivors. It is appropriate to remember that burn survivors experience a long recovery process and that hospital discharge is just the beginning of a new stage, among the many that will come.

This paper had the purpose to contribute towards filling this gap, viewing these patients in a perspective that goes beyond a strictly medical point, aiming at comprising also the important psychological aspects of burn survivors. The results of this research confirmed the correlation among personality, social support and coping. Showing that for Brazilian severe burn survivors having high scores of socialization is positively related with perceiving more social support and negatively related to avoidance coping. On the other hand, having high scores on neuroticism is negatively associated with social support.

However, in this study, as in Richter, Lauritz, Preez, Cassimjee and Ghazinour (2013), only some personality traits are related with coping strategies demonstrating that although personality influences some coping strategies there still some amount of variability that cannot be explained by personality traits and so they must be understood in the light of the environment and stressful event influence.

The fact that the sample is small may have interfered in the analysis and in the data generalization, as it consists of participants from a specific NGO in one city, which may not faithfully depict the diversity of the Brazilian reality in relation to burn survivors. It is important to note, however, that some of the group members came from other cities and even from other states for the monthly meetings. Therefore, it cannot be stated that the participants of this sample were restricted exclusively to the population of the county where the NGO is located. Nevertheless, future studies with a longitudinal nature and with larger samples can verify the reliability of the results currently obtained

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