

# Burden and professional quality of life of caregivers: The clinical role of suppression and resilience

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## Abstract

*Background: the caregiver's role is fundamental in the context of healthcare and the well-being of caregivers is often undermined by traumatic experiences and suffering. The aim of this study was to evaluate the relationship among the caregiver's resilience, burden, suppressive mechanisms and professional quality of life. Goals and methods: Participants were 665 caregivers, 458 women and 207 men aged between 18 and 81 years old. In order to highlight the above-mentioned relationship, caregivers were asked to complete a Suppression Mental Questionnaire (SMQ), a Resilience Scale for Adults (RSA) self-report, a Caregiver Burden Inventory (CBI) and a Professional Quality of Life Measure (ProQOL-5). A correlation and linear regression*

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*analysis was thus performed on the results obtained. Results: The Suppression Mental factors were positively correlated with both Resilience and Burden, with the exception of Regression in the Service of the Ego. Resilience was also positively correlated with Secondary Traumatic Stress and Burnout but negatively correlated with Compassion Satisfaction. Both significant correlations and linear regressions emerged in terms of the relationship between caregiver's variables and total scores. Conclusions: Burnout and Secondary Traumatic Stress can affect the caregiver's well-being, so that resilience and suppressive mechanisms are fundamental. These components should be considered with a particular reference to the current health emergency.*

**Keywords:** Burden; Caregivers; Clinical psychology; Compassion Satisfaction; Fatigue; Resilience; Quality of Life.

## 1. Introduction

Caregivers offer assistance and support to patients with different medical conditions and their psychophysical well-being is often undermined by prolonged conditions of stress, which can even affect their quality of life (Collins & Swartz, 2011).

Although assisting another person could represent the occasion to reach different benefits, including self-realization as well as the satisfaction of alleviating the suffering of others, the possibility to develop burdens is high to the point of compromising the quality of the care provided (Meier, Back, & Morrison, 2001; Shanafelt, Bradley, Wipf, & Back, 2002; Aldrich, 2011).

Previously published research indicated that the continuous exposure to experiences of suffering disease and death, may lead to the onset of trauma and burnout syndromes in caregivers (McCloskey & Taggart, 2010; Hamilton, Tran, & Jamieson, 2016; Catalano, Sardella, Bellone, Lasco, Martino, & Morabito, 2019; Rosa, Tomai, Lauriola, & Martino, 2019; Settineri, Frisone, Alibrandi, & Merlo, 2019; Merlo, McNabney, Frisone, Sicari, Paunica, Motofei *et al.*, 2020; Merlo, Stoian, Motofei, & Settineri, 2020), understood as a physical, emotional and mental process characterized by an exhaustion evolving over time in response to excessive workloads and to high performance requirements (Figley, 1995; Platania, Di Nuovo, Caruso, Digrandi, & Caponnetto, 2020). It can be defined as a condition in which the perception of personal needs exceeds the perception of resources (Flarity, Gentry, & Mesnikoff, 2013) and whose key dimensions foresee emotional exhaustion, depersonalization and a deep sense of ineffectiveness (Maslach, Schaufeli, & Leiter, 2001). These symptoms can manifest themselves through dissociative phenomena, which involve exclusion and dissatisfaction in terms of personal and social aspects (Benau, 2020).

Another factor involved is Secondary Traumatic Stress (STS), which concerns, instead, a condition of maladjustment deriving from the contact with other people's suffering, sorrow and traumatic experiences and that culminates in a decrease of compassionate feelings. Unlike burnout, this condition emerges suddenly and sharply, accompanied by confusion and a sense of helplessness (Figley, 2002; Neumann, Edelhäuser, Tauschel, Fischer, Wirtz, Woopen *et al.*, 2011; Sinclair, Raffin-Bouchal, Venturato, Mijovic-Kondejewski, & Smith-MacDonald, 2017). In both conditions, it is clear that the level of "burden" sustained by the caregiver is quite high (Hoenig & Hamilton, 1966; Lim, Cheah, Ali, Han, Anthony, Chan *et al.*, 2014; Velutti, Pavesi, Poggio, Caretoni, Sietta, Arcanà *et al.*, 2017;

Widowati, Devi, & Nihayati, 2018) in terms of temporal, evolutionary, physical, social and emotional impact (Kosberg, Cairl, & Keller, 1990), as is supported by several studies (Collins & Long, 2003; Sabin-Farrell & Turpin, 2003; Elwood, Mott, Lohr, & Galovski, 2011; Beaumont, Durkin, Martin, & Carson, 2016; Duarte & Pinto-Gouveia, 2017; Win, Chong, Ali, Chan, & Lim, 2017).

Despite the obvious risk, research has demonstrated that many caregivers do not develop high levels of psychopathological issues when motivated by a sense of satisfaction, allowing them to engage in meaningful interactions (Ray, Wong, White, & Heaslip, 2013; Parker Oliver, Patil, Benson, Gage, Washington, Kruse *et al.*, 2017). This construct, called Compassion Satisfaction (CS), mitigates the impact of STS and of the burnout syndrome (Haley, LaMonde, Han, Burton, & Schonwetter, 2003; Lynch, Shuster, & Lobo, 2018; Allday, Newell, & Sukovskyy, 2020), which together represent opposite but intrinsic possibilities linked to the quality of professional life (Stamm, 2005).

In addition to CS, numerous studies also enhanced the role of resilience as a protective factor; this construct, which is understood as the ability to reach adaptation with reference to changes and to cope with negative events (Jackson, Firtko, & Edenborough, 2007; Bonanno, 2012; Palacio, Krikorian, & Limonero, 2018), would be negatively related to Burnout and positively related to Compassion Satisfaction, suggesting the importance of its role in caregiver's professional and private life (Gito, Ihara, & Ogata, 2013; Burnett & Wahl, 2015; Olson, Kemper, & Mahan, 2015; Rushton, Batcheller, Schroeder, & Donohue, 2015).

In this sense, it is clear that caregivers are particularly vulnerable to psychological suffering: the need to achieve a sort of adaptive process (Cramer, 1998) determines the adoption of defensive mechanisms in order to avoid unacceptable mental states. More specifically, the mechanism of suppression, which allows subjects to consciously suppress unpleasant emotional contents (Settineri, Frisone, Merlo, Geraci, & Martino, 2019), takes a fundamental role in this context. Starting from its main dimensions, it seems that a moderate implementation of these mechanisms favors the above-mentioned adaptation and helps the subject to dominate traumatic or stressful situations. An excessive use of these defenses could, instead, compromise the caregiver's mental and physical well-being and the quality of the care provided (Hyphantis, Tomenson, Bai, Tsianos, Mavreas, & Creed, 2010; Di Giuseppe, Ciacchini, Micheloni, Bertolucci, Marchi, & Conversano, 2018; Saeed, Salehi, Alavi, Ajdarkosh, Kashaninasab, &

Esfahani, 2019), thus again affecting the patient's representation in terms of affective symbolization (Caputo, 2013).

### *1.1. Objective and hypotheses*

The study was aimed at highlighting the relationship among a series of variables associated with the quality of life and well-being of caregivers. In this study we hypothesized that: (1) There were significant correlations between the suppressive tendencies of the caregiver and resilience; (2) There were significant correlations between the suppressive tendencies of the caregiver and the burden associated with the workload; (3) There were significant correlations between resilience and the variables descriptive of the caregivers' professional quality of life; (4) There were significant correlations among the personal characteristics of the caregiver and the overall factors relating to: burden, repressive tendencies, resilience and professional quality of life, and (5) there were causal relationships among the two main predictors, identified as Age and Gender, and factors such as: burden, repressive tendencies, resilience and professional quality of life.

## 2. Methods

### *2.1. Procedure and participants*

The sample consisted of 665 subjects, 458 women (68.9%) and 207 men (31.1%). The age of participants ranged from 18 to 81 years old ( $M_{\text{age}} = 41.74$ ;  $SD = 13.61$ ). The questionnaires were filled out in paper and pencil and each participant was informed about the anonymous nature of the methods of data processing before signing the informed consent.

### *2.2. Statistical analysis*

Numerical data was expressed by mean and standard deviation and the categorical variables as number and percentage. Spearman correlations were computed among the demographic variables and empirically validated through inventories to determine the potential associations between these factors.

Multivariate linear regression was used to assess the dependence of each burden-related outcome (Time Dependence Burden, Developmental Burden,

Physical Burden, Social Burden, Emotional Burden and Total CBI score) on a set of independent predictors (Age and Gender).

Statistical analyses were performed using SPSS 26 for Windows package. A *p*-value smaller than .050 was considered to be statistically significant.

### 2.3. Instruments of observation

The participants were asked to provide some personal data, such as gender, age, educational qualification and the amount of time dedicated to the profession, expressed in days, hours and years of work. In addition, they were exposed to the four instruments of observation described, as follows:

- The *Suppression Mental Questionnaire (SMQ)* (Settineri, Merlo, Frisone, Alibrandi, Carrozzino, Diaconu *et al.*, 2019) is a self-report instrument consisting of 18 items based on a 5-point Likert scale. The original validation study included a factor analysis whose results highlighted the presence of three main factors: Repressive function, Regression in the service of the Ego, and Rationalization. The first function concerns the removal of disturbing contents; the second consists of a temporarily regressive activity based on imagery and fantasies, in order to manage conflicts; the third function concerns a logical process of ordering contents and actions. The adequacy of sampling ( $KMO = .648$ ) was demonstrated in a preliminary study (Saeed *et al.*, 2019), suggesting the following alpha coefficients: Repressive function = .742; Regression in the service of the Ego = .804; Rationalization = .698. The items referring to each factor were: Factor 1, items 3, 4, 7, 8, 10, 14, 15, 16, 17, 18; Factor 2, items 5, 6, 9, 11, 12; Factor 3, items 1, 2, 7, 13. A subsequent study (Tauschke, Merskey, & Helmes, 1990) introduced an app-based version of the tool, so that Cronbach's alpha coefficients corresponded to: .74 - .73 for the first factor, .80 - .77 for the second, and .70 - .76 for the third.
- The *Resilience Scale for Adults (RSA)* is a 33-item self-report scale based on a 5-point Likert scale, assessing resilience factors, defined as the ability to deal with traumatic events in a positive way (Hjemdal, Friborg, Martinussen, & Rosenvinge, 2001; Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003; Friborg, Barlaug, Martinussen, Rosenvinge, & Hjemdal, 2005). The Italian adaptation study

(Capanna, Stratta, Hjemdal, Collazzoni, & Rossi, 2015) produced the following results: Perception of Self ( $\alpha = .74$  by Cronbach) referred to self-confidence and ability; Planned future ( $\alpha = .73$ ) was related to the sense of confidence in the opportunity for success; Social competence ( $\alpha = .83$ ) regarded the fact of feeling comfortable in a social context; Structured style ( $\alpha = .80$ ) was relative to the orientation of the objective; Family cohesion ( $\alpha = .80$ ) concerned shared values and mutual appreciation and Social resources ( $\alpha = .80$ ) referred to social support (Friborg *et al.*, 2005; Hjemdal, Friborg, Stiles, Rosenvinge, & Martinussen, 2006). The weights of the items, referring to the six factors described above, provided the following assignment: Factor 1, items 1, 7, 13, 19, 25, 29; Factor 2, items 2, 8, 14, 20; Factor 3, items 3, 9, 15, 21, 26, 30; Factor 4, items 6, 12, 18, 24; Factor 5, items 4, 10, 16, 22, 27, 31; Factor 6, items 5, 11, 17, 23, 28, 32, 33.

- The *Caregiver Burden Inventory (CBI)* (Novak & Guest, 1989; Italian version by Conti, Clari, Garrino, Maitan, Scivoletto, Cavallaro *et al.*, 2019) assesses the caregiver's burden, in reference to five dimensions: Time Dependence Burden associated with the time required for assistance; Developmental Burden concerns the caregiver's feeling of not having the same opportunities as peers; Physical Burden describes the load that pours on the body; Social Burden refers to the perception of a role conflict and Emotional Burden describes the mood resulting from the patient's conduct. The CBI consists of 24 items measured through a 5-point Likert scale. The reliability indicators were as follows: .96 for the total scale, .91 for the time dependence burden, .92 for the developmental burden, .88, .89 and .93 for the physical, social and emotional burden, respectively. In a second study, published by Conti and collaborators (2019), the total score index was .91 and ranged from .76 to .91 for the above-mentioned factors. The items referring to each factor were divided as follows: Factor 1, items 1, 2, 3, 4, 5; Factor 2, items 6, 7, 8, 9, 10; Factor 3, items 11, 12, 13, 14; Factor 4, items 15, 16, 17, 18, 19; Factor 5: 20, 21, 22, 23, 24.
- The *Professional Quality of Life Scale (ProQOL-5)* (Stamm, 2005; Italian adaptation by Palestini, Prati, Pietrantonio, & Cicognani, 2009), is a self-report scale aimed at evaluating the caregiver's well-being and suffering, associated with the nursing experiences. The instrument is composed of three scales: Compassion Satisfaction, Burnout and

Secondary Traumatic Stress. ProQOL-5 involves 30 items, based on an ordinal 5-point Likert scale. Satisfaction of compassion, reliability of the alpha scale = .88; Burnout, reliability of the alpha scale = .75; Secondary traumatic stress, alpha scale reliability = .81. The weights of the items referred to the three factors provided for the following assignment: Factor 1, items 3, 6, 12, 16, 18, 20, 22, 24, 27, 30; Factor 2, items 1, 4, 8, 10, 15, 17, 19, 21, 26, 29; Factor 3, items 2, 5, 7, 9, 11, 13, 14, 23, 25, 28.

### 3. Results

The caregivers' personal data and characteristics, as well as means and standard deviations of all factors evaluated, are summarized in Table 1.

Table 1 – *Descriptive statistics: characteristics of the sample and factors evaluated*

	<i>M</i>	<i>SD</i>
Age	41.74	13.61
Years of study	13.88	3.45
Working days per week	5.66	1.39
Working hours for week	43.82	30.73
Years of work	8.92	9.1
<i>Caregiver Burden Inventory</i>		
Time Dependence Burden	11.31	5.73
Developmental Burden	7.45	5.99
Physical Burden	7.93	5.62
Social Burden	4.51	4.63
Emotional Burden	2.7	3.74
Caregiver Burden Inventory Total Score	32.07	18.92
<i>Professional Quality of Life Measure</i>		
Compassion Satisfaction	36.68	7.41
Secondary Traumatic Stress	23.39	7.58
Burnout	23.95	6.68
Professional Quality of Life Scale Total Score	84.03	10.79
<i>Suppression Mental Questionnaire</i>		
Repressive Function	23.34	6.88
Regression in the Service of the Ego	13.04	4.35
Rationalization	10.89	3.23
Suppression Mental Questionnaire Total Score	50.1	8.08



*Resilience Scale for Adults*

Perception of Self	14.04	2.36
Planned Future	12.16	2.42
Social Competence	17.46	2.78
Structured Style	11.42	2.08
Family Cohesion	18.35	3.04
Social Resources	19.25	2.94
Resilience Scale for Adult Total Score	96.07	10.16

*3.1. Hypothesis 1*

The first hypothesis focused on the relationship between the caregivers’ suppressive tendencies and their resilience, which was assessed through the Suppression Mental Questionnaire and the Resilience Scale for Adults self-report, respectively (Tab. 2).

Table 2 – *Correlation coefficients between the Suppression Mental Questionnaire (SMQ) and the Resilience Scale for Adults (RSA) self-report*

	Perception of Self	Planned Future	Social Competence	Structured Style	Family Cohesion	Social Resources	Resilience Scale for Adults Total Score
Repressive Function	.154**	.169**	.072	.064	.070	.089*	.157**
Regression in the Service of the Ego	-.184**	-.089*	-.013	-.066	-.035	.019	-.084*
Rationalization	.175**	.097*	-.019	.027	-.021	.013	.054
Suppression Mental Questionnaire Total Score	.039	.067	.040	.034	.032	.091*	.080*

\* $p < .05$  (two-tailed); \*\* $p < .01$  (two-tailed)

The results highlight several significant correlations: the total SMQ score was positively correlated with the overall scores of the Resilience questionnaire and with one of its components (i.e. Social Resources). The

first result suggests that the mechanism of suppression was in line with resilience since both can be considered two conscious cognitive functions. If suppression is considered a high-level defense, it could be inferred that it is associated with a psychological well-being and is supported by resilience. The significant relationship between suppression and the social resources of the caregiver can thus be explained in this sense.

With reference to the dimensions of the Suppression Mental Questionnaire, the Repressive Function was positively correlated with the overall score of the RSA and with some of its components, such as the Perception of Self, Planned Future and Social Resources. The Repressive Function allows the subject to consciously banish disturbing thoughts; this could, therefore, be moderately used as a strategy to deal with stressful situations in a positive way, as was proven by the high overall RSA scores. In this perspective, its use can be closely linked to domains such as self-efficacy, optimistic vision of the future and social support.

Regarding the Regression in the Service of the Ego, in this case negative correlations emerged with the total RSA score, the Perception of Self and Planned Future. This could suggest that resilient, self-effective and future-oriented individuals rely on more functional strategies to face reality, which do not require appeal to imagination.

Finally, with reference to Rationalization, positive correlations emerged with the Perception of Self and Planned Future. This would suggest that caregivers with higher levels of self-confidence and of planned future could benefit from the rationalization of contents and representations, managing the stress deriving from the burden of nursing through this mechanism.

### *3.2. Hypothesis 2*

The second hypothesis (Tab. 3) regarded the relationship between the scores of the Suppression Mental Questionnaire (SMQ) and the factors of the Caregiver Burden Inventory (CBI). More in detail, the SMQ total score was positively correlated to all the variables with the only exception of the Time Dependence Burden.

As regards these results, it can be assumed that the subjects used the suppression mechanism as a way to deal with stressful situations and manage emotions more in general. This modality could be implemented especially by caregivers who perceive few social opportunities, by experiencing a physical fatigue and a high social burden, which may be

related to conflicts of role and of time-sharing between work and family activity.

Table 3 – *Correlation coefficients between the Suppression Mental Questionnaire (SMQ) and the Caregiver Burden Inventory (CBI)*

	Time Dependence Burden	Development al Burden	Physical Burden	Social Burden	Emotional Burden	Caregiver Burden Inventory Total Score
Repressive Function	.077*	.280**	.254**	.244**	.229**	.276**
Regression in the Service of the Ego	.029	-.036	-.020	-.069	-.043	-.017
Rationalization	.098*	.179**	.171**	.137**	.087*	.185**
Suppression Mental Questionnaire Total Score	.065	.188**	.166**	.133**	.100**	.091*

\* $p < .05$  (two-tailed); \*\* $p < .01$  (two-tailed)

The correlation with the total CBI score also suggested the need for the subjects with high levels of burden to escape from grueling nursing activities.

With reference to the other dimensions, a positive correlation emerged between the Repressive Function and all the domains of the CBI. This data suggests that caregivers, oppressed by the nursing activities, face these stressful situations through repressive mechanisms.

Rationalization was also positively correlated to all the dimensions of the CBI, suggesting the need for subjects with a high burden to manage suffering through logical constructs.

No significant results emerged with reference to the Regression in the Service of the Ego.

### 3.3. Hypothesis 3

The third hypothesis (Tab. 4) concerned the relationship between the Professional Quality of Life Measure (ProQOL-5) and the Resilience Scale for Adults (RSA). The score related to the Compassion Satisfaction was negatively correlated with the overall RSA scores and with the components Planned Future, Social Competence and Social Resources. The results could suggest that subjects with higher levels of Compassion Satisfaction developed resilience, gratified by their work activities: a capacity that implies "self-repair" deriving from the perceived workload. This result could also explain the negative relationships with the domains related to future planning, skills and social resources.

Table 4 – *Correlation coefficients between the Professional Quality of Life Measure (ProQol-5) and the Resilience Scale for Adults (RSA)*

	Perception of Self	Planned Future	Social Competence	Structured Style	Family Cohesion	Social Resources	Resilience Scale for Adults Total Score
Compassion Satisfaction	-.071	-.203**	-.093*	.009	-.028	-.131**	-.145**
Secondary Traumatic Stress	.021	.257**	.069	-.026	.048	.112**	.143**
Burnout	.052	.293**	.084*	.002	.066	.114**	.154**
Professional Quality of Life Scale Total Score	.003	.230**	.025	-.017	.075	.068	.104**

\* $p < .05$  (two-tailed); \*\* $p < .01$  (two-tailed).

As for the second domain (i.e. Secondary Traumatic Stress), it emerged that this variable was positively correlated with the total RSA scores and with the factors related to Planned Future and Social Resources, suggesting both an increase in resilience in the most traumatized caregivers and an inversion of compassionate feelings towards them. In fact, we consider STS

as deriving from a sense of exhaustion that culminates in a decrease of compassionate feelings.

With reference to the Burnout domain, positive correlations emerged with the total RSA scores, with Planned Future, Social Competence and Social Resources, suggesting that individuals with high psychophysical exhaustion could develop greater resilience in the above-mentioned domains.

Finally, with reference to the last domain, the overall ProQol-5 score was positively correlated with the overall RSA score and with the Planned Future component. In line with previous data, these results suggest that subjects exposed to Burnout or Secondary Traumatic Stress can develop resilience and set new adaptive perspectives.

### 3.4 Hypothesis 4

In the fourth hypothesis, the personal characteristics of the caregiver were related to the total scores of all the scales administered (Tab. 5).

Table 5 – *Correlation coefficients between the caregivers' personal data and the CBI, SMQ, RSA and ProQol-5 scales*

	CBI Total Score	SMQ Total Score	RSA Total Score	ProQol-5 Total Score
Age	.254**	.019	-.013	.123**
Years of study	-.189**	-.113**	-.009	-.033
Working days for week	.292**	.112**	.084*	.160**
Working hours for week	.188**	.121**	.059	.113**
Years of work	.189**	.005	-.053	.123**

\* $p < .05$  (two-tailed); \*\* $p < .01$  (two-tailed)

Age was positively correlated with the CBI and with the ProQol-5, suggesting that, with an increase in age of the caregivers, the burden related to treatment is perceived more severely and caregivers are more subject to weakness and stress. The years of work factor was negatively correlated with the CBI and the SMQ, suggesting that more intensive training could represent the acquisition of functional coping strategies, which do not require the use of suppression.

The weekly working days were positively correlated with the all four total scores (CBI, SMQ, RSA, ProQol-5). A higher number of working days could be associated with the perception of a healthcare burden, exposing the subject to a greater risk of STS or burnout. At the same time, the greater experience of caregivers could correlate with the development of functional strategies to manage stress, including suppression and resilience.

The working hours per week were positively correlated with the CBI, SMQ and ProQol-5. Again, it appeared that the hours dedicated to work could have an effect on the professional health of the caregiver, exposing him/her to burnout or STS. Suppression could represent a mechanism useful to dominate suffering and exhaustion.

Finally, the years of work were positively correlated with the CBI and ProQol-5 scores, also suggesting in this case that the time spent working over the years could be associated with a higher burden perceived and to the risk of STS or burnout.

### *3.5 Hypothesis 5*

The fifth hypothesis concerned the relationship between the independent variables of age and gender and the factors referring both to the overall test scores and to the individual domains (Tab. 6).

With reference to the overall scores, the results show that age was positively correlated with both burden and professional quality of life, suggesting that older caregivers could be more affected by burden with negative effects on their mental and physical well-being. Gender, on the other hand, was significantly associated with both the suppressive tendencies of the caregiver and with resilience: this result suggests that being a female could affect the use of the two mentioned strategies, useful to deal with highly stressful situations.

Regarding the relationship between age and the individual CBI domains, positive relationships emerged with the: Time-Dependence Burden, Developmental Burden and Physical Burden. This suggests that the burden assessed could be affected by the advancement of age, with particular reference to the perception of: time restrictions, lack of social opportunities and sensations of chronic fatigue. As for gender, a significant impact emerged on the Social Burden dimension, suggesting that being a male could determine the perception of a role conflict with the professional activity.

Table 6 – Results of the linear regression analysis

	Age		Gender	
	B (95% C.I.)	<i>p</i>	B (95% C.I.)	<i>p</i>
CBI Total Score	.365 (.262; .467)	.000	-1.340 (-4.347; 1.668)	.382
ProQol-5 Total Score	.119 (.059; .179)	.000	1.337 (-.418; 3.092)	.135
SMQ Total Score	.009 (-.037; .054)	.711	1.318 (-.011; 2.646)	.050
RSA Total Score	.001 (-.055; .058)	.966	2.446 (.782; 4.111)	.004
Time Dependence Burden	.131 (.101; .162)	.000	.091 (-.806; .988)	.842
Developmental Burden	.107 (.075; .140)	.000	-.470 (-1.428; .487)	.335
Physical Burden	.117 (.087; .148)	.000	.136 (-.752; 1.024)	.763
Social Burden	.024 (-.001; .050)	.064	-.759 (-1.519; .001)	.050
Emotional Burden	.006 (-.015; .027)	.590	-.519 (-1.134; .096)	.098
Compassion Satisfaction	-.090 (-.131; -.049)	.000	.424 (-.780; 1.628)	.489
Secondary Traumatic Stress	.113 (.072; .155)	.000	1.427 (.209; 2.644)	.022
Burnout	.096 (.059; .132)	.000	-.517 (-1.598; .564)	.348
Repressive Function	-.043(-.081; -.005)	.028	1.614 (.491; 2.738)	.005
Regression in the Service of the Ego	.061 (.037; .084)	.000	-.810 (-1.512; -.108)	.024
Rationalization	-.014(-.032; .004)	.120	.854 (.327; 1.381)	.002
Perception of Self	-.018(-.031; -.005)	.006	.571 (.186; .956)	.004
Planned Future	.023 (.009; .036)	.001	.443 (.049; .837)	.027
Social Competence	.011 (-.004; .027)	.149	.350 (-.107; .807)	.133
Structured Style	-.010 (-.022; .002)	.960	-.031 (-.374; .311)	.857
Family Cohesion	-.015 (-.032; .002)	.085	.989 (.494; 1.484)	.000
Social Resources	.010 (-.006; .027)	.219	.182 (-.303; .666)	.462

\**p* < .05

With reference to the relationship between age and the individual ProQol-5 domains, a positive relationship emerged with the domains of Burnout and Secondary Traumatic Stress and a negative relationship with the Compassion Satisfaction domain, suggesting that advancing age favors the appearance of Secondary Traumatic Stress and of the burnout syndrome while younger people feel more satisfied and gratified by the healthcare profession. In terms of secondary trauma, a significant relationship also emerged with the female gender, suggesting the possibility that women are more affected by the contact with the patient's suffering.

Regarding the relationship between age and the SMQ domains, a positive correlation was found with Regression in the Service of the Ego while a negative relationship emerged with the Repressive Function. The results suggest that younger subjects use the second mechanism to remove

distressing thoughts, while older subjects prefer the first mechanism, regressing to fantasy and imagination. As for gender, it also seems that women use the Repressive and Rationalization Function, in contrast to men who use the Regression in the Service of the Ego.

Finally, the regressions regarding age and the individual RSA domains were also significant: more specifically, positive associations emerged with the Planned Future variable while negative associations were found with the Perception of Self domain. This suggests that younger people are more self-efficient while caregivers tend to focus more on their future as they age. The female gender was positively associated with Perception of Self, Planned Future and Family Cohesion, suggesting the tendency to perceive oneself better, to set new goals and to count on the presence of shared values.

#### 4. Discussion

The results of this study focus on the analysis of the strategies adopted by caregivers to support the cost of healthcare and the factors that can affect their well-being (Pinquart & Sörensen, 2007; Wong, Lam, Chan, & Chan, 2012; Wood, Taylor-Stokes, Smith, Chirita, & Chaib Torralba, 2018; Price, Surr, Gough, & Ashley, 2020).

With regard to the aforementioned strategies, it emerged that resilient and socially supported subjects use suppressive mechanisms and, in particular, the Repressive Function to cope with the cost associated to nursing activities. We must consider, in fact, that resilient caregivers are able to cope with stressful and traumatic events also through the use of these defensive mechanisms, which support them in managing environmental and internal requests. As an evidence of their adaptive meaning, it emerged that even subjects with high social support tend to use these strategies suggesting their effectiveness in managing the care burden, as reported by the studies of Metzger (2014). Furthermore, the investment in the interpersonal domain could also respond to a repair strategy that allows the subject to rebuild a relationship between him/herself and the outside world (Caputo, 2019).

We also found that caregivers with a positive perception of themselves and their future use the Repressive Function and Rationalization more, at the expense of Regression in the Service of the Ego. In fact, individuals normally respond to unpleasant thoughts and emotions by trying to control or modify them (Horowitz, 1993): our results confirm that the functional and integrated use of the first two mechanisms allows caregivers to manage distressing thoughts or emotions through the use of logic, without the need



to take refuge in fantasy (Di Giuseppe, Ciacchini, Piarulli, Nepa, & Conversano, 2019; Di Giuseppe, Di Silvestre, Lo Sterzo, Hitchcott, Gemignani, & Conversano, 2019).

However, our studies also highlighted a use of suppressive mechanisms, in particular of the Repressive Function and Rationalization in subjects exposed to high levels of burden. More in detail, it seems that caregivers with poor social opportunities, who feel a sense of physical and emotional wear and tear and who perceive a conflict between the working and social or family spheres, try to manage the high burden through the aforementioned strategies. It is not surprising that these defense mechanisms are implemented in particularly stressful situations even if their chronic use can increase the risk of psychopathologies since, in the long term, the lack of expression of emotions and the lack of understanding of the distress can interfere with adaptation (Deburge, 2001; Caputo, 2013; Carrozzino, Costabile, Patierno, Settineri, & Fulcheri, 2019; Merlo, 2019a; Settineri, Frisone, & Merlo, 2019; Manfredi, 2020).

Interesting results emerged with reference to resilience and its relationship with some dimensions of the professional quality of life. In particular, it appears that Compassion Satisfaction is negatively correlated with resilience. We must consider that resilience is a dynamic process (Luthar, Cicchetti, & Becker, 2000), used to cope with adverse conditions or to "repair" following an injury suffered, while CS regards feelings of pleasure and gratification in relation to one's work (Ray *et al.*, 2013). This could suggest that people with CS are already satisfied by their profession and don't show a capacity that develops in adverse or stressful conditions. This could also justify the negative relationship between CS and factors regarding future planning, skills and social resources.

These results are also consistent in light of the positive correlations between some domains of resilience and the conditions of burnout and Secondary Traumatic Stress, a relationship that has been confirmed by several studies (David, 2012; Burnett & Wahl, 2015; Kutlukturkan, Sozeri, Uysal, & Bay, 2016). In fact, caregivers with high levels of mental and physical exhaustion or trauma may have developed resilience to manage suffering.

With reference to the personal characteristics of the caregiver, our results suggest that older subjects are more exposed to burnout or STS, consistent with the research conducted by Craig & Sprang (2010). This data highlights the possibility that the burden of nursing will become increasingly

exhausting over time, in contrast to younger subjects who instead are gratified by their work, feeling satisfied and effective.

In fact, age seems to have a significant impact on the cost of care perceived by the caregiver, who feels ever-increasing time restrictions, the lack of social opportunities and a chronic feeling of tiredness (Bharti & Bhatnagar, 2017). Even the increase in working shifts, expressed in terms of hours, days and years, are perceived in an increasingly burdensome way and faced with suppressive mechanisms. In this sense, older caregivers mostly adopt Regression in the Service of the Ego to get away from a traumatic context while younger caregivers use the Repressive Function to banish distressing thoughts (Settineri, Frisone, Alibrandi, Pino, Lupo, & Merlo, 2018).

Our analysis also showed that intensive professional training could instead be a protective factor for the caregiver, who seems to be less exposed to burden and less inclined to use suppressive mechanisms.

With reference to gender, it seems that female caregivers use more suppressive mechanisms, such as Rationalization and Repressive Function, in contrast to male caregivers who take refuge in imagination to face the stress deriving, in particular, from the perception of a high conflict between their professional and family/social role.

In women there are also higher levels of resilience, probably also due to a greater exposure to Secondary Traumatic Stress, in line with research by Cieslak and co-workers (2014). In fact, female caregivers in close contact with suffering tend to develop resources that allow them to face adverse situations; females also seem to be supported by some protective factors, such as a better self-perception, an orientation towards the future and the existence of supportive family values.

## 5. Conclusions

Overall, our study highlights the numerous factors that can affect the caregiver's well-being and the strategies adopted to face and deal with traumatic conditions. In particular, the protective role of resilience was highlighted, which can help the subject to manage the burden deriving from the healthcare of patients. Even a moderate use of psychodynamic defense mechanisms can temporarily help the subject to cope with stressful situations but their prolonged use can lead to maladjustment, burnout and Secondary Traumatic Stress, which occur mainly in older caregivers and with the increase in work shifts.

These constructs, which are especially important in the context of the current health emergency (Di Giuseppe, Miniati, Miccoli, Ciacchini, Orrù, Sterzo *et al.*, 2020), highlight the risks to which operators are even more exposed, considering the high probability of incurring in chronic diseases with serious consequences also on their nursing ability (Conversano, 2019; Martino, Langher, Cazzato, & Vicario, 2019). The caregiver can be considered the “backbone” of the healthcare system and, as such, it is necessary to provide integrated preventive or clinical interventions, which offer a deep elaboration of the inner world (Merlo, 2019b) and help him/her to manage suffering efficiently and effectively.

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