

Compassion and suppression in caregivers: twin masks of tragedy and joy of caring

Emanuele Maria Merlo^{1,2}, Sean M. McNabney³, Fabio Frisone^{1,2}, Federica Sicari¹, Mihai Paunica⁴, Catalina Motofei⁴, Salvatore Settineri⁵

¹DEPARTMENT OF COGNITIVE SCIENCES, PSYCHOLOGY, EDUCATIONAL AND CULTURAL STUDIES (COSPECS), UNIVERSITY OF MESSINA, ITALY

²CRISCAT (INTERNATIONAL RESEARCH CENTER FOR THEORETICAL AND APPLIED COGNITIVE SCIENCES) UNIVERSITY OF MESSINA AND UNIVERSITARY CONSORTIUM OF EASTERN MEDITERRANEAN, NOTO (CUMO), ITALY

³VALPARAISO UNIVERSITY, DEPARTMENT OF PSYCHOLOGY, VALPARAISO, IN 46383 USA

⁴ASE BUCHAREST, STATISTICS, ANALYSIS EVALUATION, BUCHAREST, ROMANIA

⁵DEPARTMENT OF BIOMEDICAL AND DENTAL SCIENCES AND MORPHOFUNCTIONAL IMAGING, UNIVERSITY OF MESSINA, ITALY

ABSTRACT



Background: Compassionate caregiving is a critical skill for workers among the helping professions, but the degree of empathy required by caregivers can place high demands on their mental and emotional resources. While many professionals employ successful coping strategies to mitigate these stressors, others experience compassion fatigue or burnout from emotional exhaustion. The objective of this research was to evaluate the relationships between caregivers' demographic/career variables, compassion satisfaction, compassion fatigue, and psychodynamic defense mechanisms such as suppression, repressive function, regression in the service of the Ego, and rationalization. **Methods:** Participants were 250 caregivers with 178 (71,2%) women and 72 men (28,8%) between 18 and 80 years old (Mean age = 41,37; SD = 13,78). Standardized instruments were used to assess compassion in its different meanings (Professional Quality of Life Measure, ProQOL-5) and deployment of defense mechanisms such as suppression (Suppression Mental Questionnaire, SMQ). Correlational analyses were performed. **Results:** Greater compassion satisfaction was positively associated with more years of study and inversely associated with increasing age and working days per week. Burnout was positively correlated with greater age, more working hours per week, and more working days per week. Higher secondary traumatic stress was associated with increasing age, higher working hours, and more working days per week, while it was inversely associated with more years of study. Regarding the psychological defense mechanisms, more years of study was inversely associated with lower deployment of the repressive function, regression in the service of the Ego, and rationalization. Advancing age was negatively correlated with repression and regression in the service of the Ego, while it was positively correlated with rationalization. A higher number of working days per week was associated with greater utilization of all defense mechanisms, and higher working hours per week was correlated with higher SMQ total scores and greater use of the repressive function. Greater deployment of nearly all defense mechanisms was associated with greater secondary traumatic stress, while compassion satisfaction was associated with less utilization of repression, rationalization, and lower total SMQ scores. **Conclusions:** Excessive reliance on psychodynamic defense mechanisms can increase caregivers' risk for burnout or secondary traumatic stress. Compassion satisfaction might serve as one coping strategy to mitigate emotional exhaustion among professionals.

Category: Original Research Paper

Received: November 09, 2019

Accepted: February 27, 2020

Keywords:

Caregivers, Clinical Psychology, Suppression Mental Questionnaire, Secondary Trauma, Compassion Fatigue.

*Corresponding author:

Emanuele Maria Merlo

- Department of Cognitive Sciences, Psychology, Educational and Cultural Studies (COSPECS), University of Messina, Italy
- CRISCAT (International Research Center for Theoretical and Applied Cognitive Sciences) University of Messina and University Consortium of Eastern Mediterranean, Noto (CUMO), Italy
E-mail: emerlo@unime.it

Introduction

Although the role of the caregiver has always been important to society, its impact is more important than ever [1]. The figure of the compassionate caregiver can be considered ambivalent since those who are called to perform this function can experience positive feelings related to job satisfaction (compassion satisfaction) and negative emotions related to fatigue (compassion fatigue)

[2,3]. While compassion satisfaction plays an important role in protecting the caregiver from psychological distress [4], several studies have shown that the caregiver may risk the development of maladaptive behavior [5-7].

The construct used to measure the psychological/emotional burden that arises from caregiving, compassion fatigue, incorporates two subcategories of compassion-related problems – burnout and secondary trauma [8, 9]. Regarding burnout, the

phenomena are mainly related to anger, frustration, and exhaustion. Secondary trauma, in contrast, refers to the potential danger assumed by indirect exposure to a traumatic event.

In terms of “cost of caring”, nowadays there is controversy regarding the role of compassion as the determinant for the caregiver's fatigue [10]. That is, conceptualizing compassion as a finite resource that is gradually exhausted by the rigors of the caregiving profession may not accurately or fully reflect caregivers' experiences on the job. For example, the research literature suggests that, rather than the use of empathy at the workplace, factors such as inadequate positive feedback, lack of resources, and the response to personal distress may be associated with an elevated risk of developing compassion fatigue [11].

Compared to burnout alone, the risks associated with compassion fatigue can have long-term repercussions [12]. If compassion fatigue can be contextualized as the sum of both burnout and secondary trauma, then it is necessary to clarify the latter aspect since its repercussions may extend beyond the caregiving environment, adversely affecting the caregiver even after leaving the profession or completing a particularly difficult case. The caregiver who is indirectly exposed to a traumatic event of patients or clients may show perceptual and representative contents [13] of a traumatic nature which are difficult to manage and ultimately interfere with the quality of life [14].

In our experience, and consistent with the current literature, the role of clinical psychology in medical contexts [15,16] can highlight several phenomena referred both to patients [17-19] and clinicians [20-24].

The disturbing psychic contents can invalidate the adaptation of the caregiver to the point of fixing suppression as a dominant defense mechanism. It is known that patterns of defense mechanisms may become dominant in relation to chronic and general medical conditions [25-28].

We have previously defined suppression as the only defense mechanism whose objective consists of suppressing consciously unpleasant emotional contents [29-32]. Concerning this, it has been noted that the three dimensions of suppression that emerged as statistically significant are: repressive function, regression in the service of the Ego, and rationalization. The implementation of suppressive mechanisms, when utilized excessively, risks compromising the health of the caregiver and, consequently, the actual possibilities of treatment that the latter can provide to others [33, 34].

A previous study [35] has shown that the caregiver's risk of reaching the threshold of psychopathology exists despite the sublimation attempts made.

Considering these findings, it appears that suppression-related defense mechanisms, while they have clinical

utility in the short-term, may have deleterious effects over a long period if caregivers consistently fail to address their own emotional or psychological work-related burdens. Thus, caregivers who more frequently examine and acknowledge negative emotions and other stressors associated with their careers may be better able to care for the patients/clients whom they serve and experience greater job satisfaction (i.e., compassion satisfaction).

This study aimed at highlighting further data useful for the caregiver's health.

In this work we assumed that: (1) the personal characteristics of the caregiver have an influence on how they benefit from the work activities as well for the possibility of experiencing dissatisfaction and psychopathology; (2) there are relationships between the personal variables of the caregiver and suppressive tendencies; (3) there are relationships between suppressive tendencies of caregivers and compassion (satisfaction, burnout and fatigue).

Materials and Methods

Procedure and participants

The sample consisted of 250 subjects, 178 women (71,2%) and 72 men (28,8%). The age of participants ranged from 18 to 80 years old (Mean age = 41,37; SD = 13,78). Participants were selected on the basis of their work activities. Respondents completed paper-and-pencil questionnaires comprising the demographic variables and empirically derived instruments, and each participant was informed about the anonymous nature of the methods of data processing.

Statistical analysis

Numerical data were expressed as mean and standard deviation and the categorical variables as number and percentage. Spearman correlations were computed among the demographic variables and empirically validated inventories to determine potential associations between these factors. Statistical analyses were performed using SPSS 26 for Windows package. A p-value smaller than 0.050 was considered to be statistically significant.

Observation instruments

Participants were asked to indicate some personal indices, useful for recording variables such as gender, age, years of study, working days per week, working hours per week, and years of work.

The Suppression Mental Questionnaire (SMQ) [34,35] is a self-report instrument containing 18 items that assess the use of suppression. The 18 items quantify three categories of suppression including: Repressive function, Regression in the service of the Ego, and Rationalization. Factor analysis has provided support for these three constructs, including the repressive tendency to banish disturbing thoughts, regression to images closer to

creativity to adapt to contents difficult to manage, and rationalization to order objects, representations, and possible actions in a logical way. Our preliminary study [34] demonstrated good sampling adequacy (K.M.O.= 0,648) for this inventory and produced the following alpha coefficients: repressive function = 0.742; Regression in the service of the Ego = 0.804; Rationalization = 0.698. The factor analysis also reduced the number of items, structured on the basis of 5-point ordinal Likert scales, from 30 to 18. The weights of the items referred to the three factors provided for the following assignment: 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 research paper [35], introduced an app-based version of the instrument and provided comparisons between paper-and-pencil and app-based administration: the Cronbach's alpha coefficients were 0.74 - 0.73 for the first factor, 0.80 - 0.77 for the second, and 0.70 - 0.76 for the third.

Results

Table 1. Descriptive statistics for the sample

	Mean	Standard deviation
Age	41,37	13,78
Years of study	14,50	3,28
Working days per week	5,58	1,13
Working hours per week	38,92	24,53
Years of work	10,34	10,16
Compassion satisfaction	37,02	7,81
Burnout	24,33	6,96
Secondary traumatic stress	24,13	8,26
Repressive function	28,41	5,87
Regression in the service of the Ego	14,02	2,85
Rationalization	11,03	3,28
Suppression Mental Questionnaire total score	49,50	7,98

The Professional Quality of Life Scale (ProQOL-5). The ProQOL-5 [36] in its Italian adaptation [37] is an instrument aimed at studying the different possibilities due

to the clinical contact and assistance with patients. In particular, based on the above-mentioned construct of compassion, it provides for positive aspects coming from patients care, known as Compassion Satisfaction and two pathological outcomes – Burnout and Secondary Traumatic Stress – which fall under the designation “Compassion Fatigue.” The instrument is based on 30 items, assigned to the three factors and based on a 5-point ordinal Likert scale. The authors provided for reliability indexes as follows: Compassion Satisfaction, alpha scale reliability = 0.88; Burnout, alpha scale reliability = 0.75; Secondary traumatic stress, alpha scale reliability = 0.81.

Table 2. Correlation coefficients among caregivers' personal data and ProQOL-5 scales

	Compassion satisfaction	Burnout	Secondary traumatic stress
Age	-,251**	,265**	,192**
Years of study	,189**	-,092	-,191**
Working days per week	-,373**	,381**	,378**
Working hours per week	-,041	,161*	,153*
Years of work	-,084	,116	,088

Hypothesis 1

The first hypothesis analyzed the relations among personal caregivers' demographic variables – such as age, years of study, working days and hours per week and years of work – with measures of compassion-related outcomes per the ProQOL-5 inventory. Regarding this hypothesis, several significant correlations emerged. Age was significantly and negatively related to compassion satisfaction, suggesting that with advancing age it results more and more difficult to benefit from caring activities, and positively related to the likelihood of experiencing pathological outcomes such as burnout and secondary traumatic stress. The development of burnout, as articulated by [38], requires a long maturation process so that clinicians experience gradual exhaustion through continual exposure to patients.

With regard to education, significant correlations emerged among years of study, compassion satisfaction, and secondary traumatic stress. Specifically, greater compassion satisfaction was associated with more years of education. Secondary traumatic stress, in contrast, was

associated with fewer years of study, suggesting that longer or more intensive training could provide caregivers with a larger repertoire of coping mechanisms for job-related stressors.

Other significant relations emerged among working days per week and all compassion scales. A greater number of working days per week was associated with lower levels of compassion satisfaction, while more working days per

week highlighted higher levels of burnout and secondary traumatic stress. A higher number of working hours per week was similarly associated with greater burnout and secondary traumatic stress, but no significant correlation emerged between working hours and compassion satisfaction. Interestingly, there were no significant associations between years of caring service and any of the ProQOL-5 outcomes.

Table 3. Correlation coefficients among caregivers' personal information and SMQ scales

	Repressive function	Regression in the service of the Ego	Rationalization	Suppression Mental Questionnaire Total Score
Age	-,084	-,005	,244**	-,036
Years of study	-,215**	-,059	-,145*	-,121
Working days per week	,133*	,130*	,378**	,115
Working hours per week	,150*	,093	,111	,136*
Years	-,117	,004	,120	-,061

Hypothesis 2

Regarding the second hypothesis, analysis focused on relationships between the personal characteristics of caregivers and Suppression Mental Questionnaire (SMQ) outcomes. In detail, the SMQ variables included the three suppression-related defense mechanisms and the total suppression score. Regarding the repressive function, there was an inverse correlation between years of study and repression, suggesting less reliance upon repression in caregivers with more intensive training. As the number of working days per week and the amount of working hours per week increased, however, there was a higher deployment of the repressive function. Taken together, these data illustrate the close link between the need to dedicate time to work and the loss in terms of free time. In our research, caregivers expressed this fact in order to state their necessity to utilize coping strategies to manage their sacrifice.

The second domain was that between regression in the service of the Ego and caregivers' demographic/career variables. Regression in service of the Ego was positively

correlated with more working days per week, underling the appeal to fantasy related to the caregiver's commitment. For the final domain, rationalization, three significant associations were apparent concerning caregivers' characteristics.

Both increasing age and a higher number of working days per week were associated with greater deployment of rationalization. In the first case, increasing age correlated with higher levels of rationalization. The second positive relation suggested the need to rationalize contents and representations due to a high number of working days per week. Finally, more years of training was inversely associated with deployment of rationalization, suggesting that caregivers who receive more formal training might rely on other coping strategies to mitigate job-related stressors.

Regarding overall suppression, a higher SMQ total score was positively associated with a greater number of working hours per week, demonstrating the need to mentally disengage from emotionally exhausting, caring activities within the day.

Table 4. Correlation coefficients among SMQ and ProQOL-5 Scales

	Repressive function	Regression in the Service of the Ego	Rationalization	Suppression Mental Questionnaire total score
Compassion Satisfaction	-,200**	,192**	-,412**	-,148*
Burnout	,186**	,119	,679**	,124
Secondary traumatic stress	,212**	,651**	,816**	,083

Hypothesis 3

The third hypothesis examined the relations among compassion and suppression variables of the caregivers involved in our research. Importantly, compassion satisfaction was significantly correlated with all SMQ outcomes. Higher compassion satisfaction was positively associated with regression in the service of the Ego. It is possible to assume that fantasy had an adaptive role corresponding to a higher possibility to benefit from work activities. The three negative relations were those among compassion satisfaction and repressive function, rationalization, suppression total score. We know from clinical experience where the concept of suppression emerged, that it is the only conscious defense mechanism. Suppression emerges as a protective mechanism when one is confronted by maladaptive situations, emotions, images, and representations. In our case, these defense mechanisms often indicate underlying dissatisfaction, so the emergence of negative correlations with compassion satisfaction can be considered in line with the adaptive significance of satisfaction.

The second domain examined the relationships between burnout and the suppression variables. Two positive and significant correlations were showed in the analysis, as both repressive function and rationalization moved in the same direction as burnout. Managing emotions, representations and in general contents related to clinical contact with patients through these two defense figures, appeared as the precondition on which the maturation of exhaustion was based.

In the third domain, secondary traumatic stress was positively correlated with all suppression subcategories, although there was no association between secondary traumatic stress and overall SMQ scores. Taken together, these data suggest that greater reliance upon suppression-related defense mechanisms can place caregivers at higher risk of experiencing compassion fatigue as burnout or secondary traumatic stress.

Discussions

The results of the study support the idea that the high-stress demands of the caregiving profession, particularly the high number of working hours and working days per week, place caregivers at risk of developing adverse psychological outcomes. We observed that older caregivers are more likely to experience compassion fatigue, which suggests that as age progresses, this profession may have contributed to the onset of negative emotions and feelings such as anger and frustration, in addition to accumulated physical exertion high enough to generate exhaustion [39]. These data further suggest that older caregivers have been exposed to more traumatic events for a longer duration than their younger

counterparts, and thus they exhibit more maladaptive psychic representations.

Compassion satisfaction characterizes caregivers with more years of study, but caregivers with more years of study are also more likely to develop secondary trauma. This intertwining is noteworthy because it can indicate heterogeneous factors. For example, the pleasure of helping others through the implementation of skills acquired during one's training plays an important role, because the ability to contribute to the work context or even to the greater good of society through one's work helps to increase self-esteem and receive personal satisfaction [40-42]. However, an excessive involvement in professional dynamics could lead the caregiver to neglect mental and emotional exhaustion from excess effort, and defense mechanisms such as repression and rationalization could similarly favor such neglect.

Other findings highlight that the increase in working hours and days corresponds to lower levels of compassion satisfaction, and a greater number of working days leads to higher levels of burnout and secondary trauma, suggesting that those who have less free time are more likely to experience compassion fatigue [43,44].

Results also showed lower repression function in subjects with a higher level of formative years. This finding may indicate that caregivers with more years of preparation have acquired greater awareness of their feelings and confidence in their skills, and this may contribute to the lower use of repressive function compared to caregivers with fewer years of training. Another relevant finding is the link between regression in the service of the Ego and the weekly working days. These findings suggest that caregivers who work the most hours/days are also the ones who most need to resort to strategies that encourage creativity [45, 46].

We also found that the increase of years and a higher number of working days per week corresponds to higher levels of rationalization. This correlation suggests that as we age and work many days a week it may become increasingly difficult to take care of others, and sometimes the support provided by logical and rational explanations could suppress negative emotions or attitudes that emerge during professional activity. With reference to the number of hours of daily work, the results indicated a greater predisposition to suppression, suggesting that the caregivers most involved in day-to-day assistance activities tend to rely upon suppression to manage the psychological burden or responsibility of professional caregiving. In addition, caregiver experiences of compassion satisfaction is positively correlated with regression in the service of the Ego, suggesting that in the helping professions, it may be useful to incorporate creative strategies that often take over when resorting to this defense mechanism [47-49].

Overall, our study provides evidence regarding the adverse psychological outcomes that can occur in conjunction with excessive use of suppression-related defense mechanisms. Greater deployment of both repression and rationalization were associated with higher risk of burnout, and all three suppression-related subcategories were associated with a higher risk of secondary traumatic stress. Not surprisingly, these psychodynamic defense mechanisms tend to be carried out during particularly stressful situations, such as emotionally demanding, compassionate caregiving. While they may be advantageous for the caregiver in the short-term, chronic use of suppression-related defense mechanisms – particularly when the underlying painful emotions or stress remain unaddressed – may increase caregivers' risk of developing compassion fatigue and associated psychopathology [50, 51].

Conclusions

Our results suggest that defense mechanisms can interfere on the health of the caregiver both from a quantitative and qualitative point of view. With respect to the quantitative analysis, it has been noted that certain defense mechanisms, if used in a balanced way with others, can contribute to the adaptation of the caregiver; but it has also been observed that a repeated and excessive use of mechanisms such as suppression or rationalization may increase a caregiver's risk of developing compassion fatigue. Being the defense mechanisms functions of the Ego, it should be noted that the excessive use of a mechanism also interferes qualitatively on the health of the caregiver since, being in the condition of developing compassion fatigue and therefore psychopathology, the caregiver could show a stiffening capable of compromising his quality of life.

Current research has not yet determined the duration for which suppression-related mechanisms can prevent unpleasant emotions from resurfacing to conscious thought; moreover, it is unclear whether these emotions will reemerge with equivalent – or perhaps even greater – intensity, and so healthcare providers should strive to take caution when relying upon these defense mechanisms to mitigate job-related stressors.

Finally, it should be noted that suppression often refers to the inhibition that occurs as a result of the conflict between opposing instincts and desires. This conflict can give rise to conversion mechanisms that are observed through somatic and psychic symptoms. For example, conversion occurs through an excess or a lack of emotions [13], but it can also happen that an excessive attempt to suppress one's desires interferes with the learning process [44], or that the excessive attempt to suppress one's impulse according to the desire of the other contributes to generating a complex of psychic images [45-47, 51].

The results from this study not only indicate that the kinds of coping strategies employed by caregiving professionals have the potential to influence their psychological well-being, but also suggest that future research can help to contextualize the coping strategies that are most advantageous for caregivers, whether over the long-term or in the most high-demand work environments.

Conflict of interest disclosure

There are no known conflicts of interest in the publication of this article. The manuscript was read and approved by all authors.

Compliance with ethical standards

Any aspect of the work covered in this manuscript has been conducted with the ethical approval of all relevant bodies and that such approvals are acknowledged within the manuscript.

References

1. Collins LG, Swartz K. Caregiver care. *American family physician* 2011;83(11):1309-1317.
2. Hundall Stamm B. Professional Quality of Life Measure: Compassion, Satisfaction, and Fatigue Version 5 (ProQOL), 2009. [https://rems.ed.gov/docs/PROQOL_Compassion_Ver5\[1\].pdf](https://rems.ed.gov/docs/PROQOL_Compassion_Ver5[1].pdf)
3. Lynch SH, Shuster G, Lobo ML. The family caregiver experience—examining the positive and negative aspects of compassion satisfaction and compassion fatigue as caregiving outcomes. *Aging & mental health* 2018;22(11):1424-1431.
4. Allday RA, Newell JM, Sukovskyy Y. Burnout, compassion fatigue and professional resilience in caregivers of children with disabilities in Ukraine. *European Journal of Social Work* 2020;23(1):4-17.
5. Amankwaa B. Informal caregiver stress. *ABNF Journal* 2017;28(4):92-95.
6. Castellanos EH, Dietrich MS, Bond SM, et al. Impact of patient symptoms and caregiving tasks on psychological distress in caregivers for head and neck cancer (HNC). *Psychooncology*. 2019; 28(3): 511–517. doi:10.1002/pon.4968
7. Velutti L, Pavesi C, Poggio C, Caretoni B, Saetta A, Arcanà C, ... & Rimassa, L. Caregiver stress: Clinical evaluation and intervention strategies for caregiver burden prevention. *Journal of Clinical Oncology*. 2017;35:31_suppl, 22-22.
8. Wood R, Taylor-Stokes G, Smith F, Chirita OC, Chaib Torralba C. The humanistic burden of advanced non-small cell lung cancer: What are the key drivers of caregiver burden?. *Journal of*

- Clinical Oncology* 2018; 36(7): 149-149. doi: 10.1200/JCO.2018.36.7_suppl.149
9. Stamm BH. (2010). The Concise ProQOL Manual, 2nd Ed. Pocatello, ID: ProQOL.org. <https://proqol.org/uploads/ProQOLManual.pdf>
 10. Sinclair S, Raffin-Bouchal S, Venturato L, Mijovic-Kondejewski J, Smith-MacDonald L. Compassion fatigue: A meta-narrative review of the healthcare literature. *International journal of nursing studies* 2017;69:9-24.
 11. Coetzee SK, Laschinger HK. Toward a comprehensive, theoretical model of compassion fatigue: An integrative literature review. *Nursing & health sciences* 2018;20(1):4-15.
 12. Mattioli D, Walters L, Cannon EJ. Focusing on the caregiver: Compassion fatigue awareness and understanding. *Medsurg nursing*. 2018;27(5):323-329.
 13. Jaspers K. (1964). *Psicopatologia generale*, trad. it. Priori R., Roma, Il pensiero scientifico, 482.
 14. Adelman RD, Tmanova LL, Delgado D, Dion S, Lachs MS. Caregiver burden: a clinical review. *Jama*. 2014;311(10):1052-60.
 15. Carli R, Paniccia RM, Policelli S, Caputo A. Clinical psychology in hospital setting. Healthcare and culture: subjectivity in medical contexts. 2017;145-171.
 16. Settineri S, Merlo EM. MJCP and Clinical Psychology, *Mediterranean Journal of Clinical Psychology* 2019; 7(3). doi: 10.6092/2282-1619/2019.7.2346
 17. Marchini F, Caputo A, Napoli A, Balonan JT, Martino G, Nannini V, Langher V. Chronic illness as loss of good self: underlying mechanisms affecting diabetes adaptation. *Mediterranean Journal of Clinical Psychology* 2018; 6(3). doi: 10.6092/2282-1619/2018.6.1981
 18. Martino G, Catalano A, Bellone F, Langher V, Lasco C, Penna A. et al. Quality of life in postmenopausal women: which role for vitamin D?. *Mediterranean Journal of Clinical Psychology* 2018; 6(2). doi: 10.6092/2282-1619/2018.6.1875
 19. Martino G, Catalano A, Bellone F, Russo GT, Vicario CM, Lasco A, Quattropani MC and Morabito N (2019) As Time Goes by: Anxiety Negatively Affects the Perceived Quality of Life in Patients With Type 2 Diabetes of Long Duration. *Front. Psychol.* 10:1779. doi: 10.3389/fpsyg.2019.01779.
 20. Caputo A. Health demand in primary care context: What do people think about physicians? *Psychology, health & medicine* 2013;18(2):145-154.
 21. Caputo A. Psychodynamic insights from narratives of people with amyotrophic lateral sclerosis: A qualitative phenomenological study. *Mediterranean Journal of Clinical Psychology* 2019;7(2). doi: 10.6092/2282-1619/2019.7.2009
 22. Caputo A. The experience of therapeutic community: Emotional and motivational dynamics of people with drug addiction following rehabilitation. *International Journal of Mental Health and Addiction* 2019;17(1):151-165.
 23. Paniccia RM, Giovagnoli F, Caputo A. In-home elder care. The case of Italy: The badante. *Rivista di Psicologia Clinica* 2015;(2):60-83.
 24. Conversano C. Psychological common factors in chronic diseases. *Frontiers in Psychology* 2019;10: 2727.
 25. Georgescu SR, Tampa M, Paunica S, Balalau C, Constantin V, Paunica G, Motofei I. Distribution of post-finasteride syndrome in men with androgenic alopecia; ESDR-Congress 2015, *Journal of Investigative Dermatology* (abstract) 135: S40, 2015
 26. Di Giuseppe M, Ciacchini R, Piarulli A, Nepa G, Conversano C. Mindfulness dispositions and defense style as positive responses to psychological distress in oncology professionals. *European Journal of Oncology Nursing* 2019;40:104-110.
 27. Martino G, Langher V, Cazzato V, Vicario CM. Psychological factors as determinants of medical conditions. *Frontiers in psychology* 2019;10:2502.
 28. Merlo EM. Opinion Article: The role of psychological features in chronic diseases, advancements and perspectives. *Mediterranean Journal of Clinical Psychology* 2019; 7(3). doi: 10.6092/2282-1619/2019.7.2341
 29. Settineri S, Frisone F, Merlo EM, Geraci D, Martino G. Compliance, adherence, concordance, empowerment, and self-management: five words to manifest a relational maladjustment in diabetes. *Journal of multidisciplinary healthcare* 2019;12:299.
 30. Motofei IG, Rowland DL, Baconi DL, et al. Androgenetic alopecia; drug safety and therapeutic strategies. *Expert Opin Drug Saf.* 2018;17(4):407-412. doi:10.1080/14740338.2018.1430765
 31. Cramer P. Defense mechanisms in psychology today: Further processes for adaptation. *American Psychologist* 2000;55(6):637.
 32. Di Giuseppe M, Ciacchini R, Micheloni T, Bertolucci I, Marchi L, Conversano C. Defense mechanisms in cancer patients: A systematic review. *Journal of psychosomatic research* 2018; 115:76-86.
 33. Hyphantis TN, Tomenson B, Bai M, Tsianos E, Mavreas V, Creed F. Psychological distress, somatization, and defense mechanisms associated

- with quality of life in inflammatory bowel disease patients. *Digestive diseases and sciences* 2010;55(3):724-732.
34. Saeed F, Salehi M, Alavi K, Ajdarkosh H, Kashaninasab F, Esfahani FN. Defense Mechanisms in Patients with Irritable Bowel Syndrome and Their Relationship with Symptom Severity and Quality of Life. *Middle East journal of digestive diseases* 2019;11(3):158.
 35. Tauschke E, Merskey H, Helmes E. Psychological defence mechanisms in patients with pain. *Pain* 1990;40(2):161-170.
 36. Settineri S, Merlo EM, Dritto IP, Midili M, Bruno A, Mento C. Suppression mental questionnaire: a preliminary study. *Mediterranean Journal of Clinical Psychology* 2016; 4(2). doi: 10.6092/2282-1619/2016.4.1282
 37. Settineri S, Frisone F, Alibrandi A, Merlo EM. Vulnerability and physical well-being of caregivers: what relationship?. *Journal of Mind and Medical Sciences* 2019; 6(1): 95-102. doi: 10.22543/7674.61.P95102
 38. Stamm BH. Professional quality of life: Compassion satisfaction and fatigue version 5 (ProQOL). 2011-03-20]..
 39. Palestini L, Prati G, Pietrantonio L, Cicognani E. La qualità della vita professionale nel lavoro di soccorso: Un contributo alla validazione italiana della Professional Quality of Life Scale (ProQOL). *Psicoterapia Cognitiva e Comportamentale* 2009; 15(2):205-227.
 40. Maslach C. The cost of caring. New Jersey. 1982. Practice Hall Inc.
 41. McCullagh E, Brigstocke G, Donaldson N, Kalra L. Determinants of caregiving burden and quality of life in caregivers of stroke patients. *Stroke* 1982;36(10): 2181-2186.
 42. Pierce JL, Gardner DG. Self-esteem within the work and organizational context: A review of the organization-based self-esteem literature. *Journal of management* 2004;30(5):591-622.
 43. Maditinos DI, Papadopoulos D, Prats L. The free time allocation and its relationship with the perceived quality of life (QoL) and satisfaction with life (SwL). *Procedia Economics and Finance* 2014;9: 519-532.
 44. Motofei IG, Rowland DL, Baconi DL, Georgescu SR, Paunica S, Constantin VD, Balalau D, Paunica I, Balalau C, Baston C, Sinescu I. Therapeutic considerations related to finasteride administration in male androgenic alopecia and benign prostatic hyperplasia. *Farmacia*. 2017; 65(5): 660-666
 45. Bharti J, Bhatnagar P. Personality and creativity as predictors of psychological well-being in caregivers of person with chronic mental illness. *Indian Journal of Positive Psychology* 2017;8(2):148-153.
 46. Murrant GM, Rykov M, Amonite D, Loynd M. Creativity and self-care for caregivers. *Journal of Palliative Care* 2000;16(2):44-49.
 47. Settineri S, Frisone F, Alibrandi A, Pino G, Lupo N, J, Merlo EM. Psychological Types and Learning Styles. *Mediterranean Journal of Clinical Psychology* 2018; 6(3). doi: 10.6092/2282-1619/2018.6.2005
 48. Frisone F. Mask as an epiphenomenon of the complex in psychotherapy. *Mediterranean Journal of Clinical Psychology* 2019; 7(1). doi: 10.6092/2282-1619/2019.7.2235
 49. Merlo EM. Adolescent phobia as a “mask object”. *Mediterranean Journal of Clinical Psychology* 2019; 7(1). doi: 10.6092/2282-1619/2019.7.2241
 50. Settineri S, Merlo EM, Frisone F, Alibrandi A, Carrozzino D, Diaconu CC, Pappalardo SM. Suppression Mental Questionnaire App: a mobile web service-based application for automated real-time evaluation of adolescent and adult suppression. *Mediterranean Journal of Clinical Psychology* 2019; 7(1). doi: 10.6092/2282-1619/2019.7.2056
 51. Settineri S, Frisone F, Merlo EM. The Mask object in psychotherapy: Presentation and Representation. *Mediterranean Journal of Clinical Psychology* 2019; 7(1). doi: 10.6092/2282-1619/2019.7.2232