

Psychological Factors Affecting the Family's Satisfaction of Patients in an Intensive Care Unit: The Dominant Role of Self-Compassion and Resilience

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Abstract

Background: Family members of Intensive Care Unit (ICU) patients are subject to a higher risk of depression, anxiety, and stress-related disorders. This psychological distress inevitably affects their perception of the quality of care that their relative receives. The aim of this study is to enlighten the effect of psychopathology, resilience, and self-compassion on the satisfaction of family members of ICU patients and examine the role of self-compassion and resilience as explaining variables of the psychopathology and satisfaction relation. **Methods:** One hundred and seventy-six family members participated in the study. Each participant completed the Symptom Check List 90 (SCL-90-R), the Family Satisfaction in the Intensive Care Unit (FS-ICU) questionnaire, the Connor-Davidson Mental Endurance Scale (CD-RISC), and the Self-Compassion scale (SCS). Analysis of variance and path analysis was applied in order to test the research hypotheses. **Results:** The patient's age, patient's gender, type of relation, and age of the family member did not have a statistically significant direct or interaction effect on the satisfaction of the family members. The psychopathology had a significant negative correlation with the total satisfaction of the family members. The self-compassion was found to have a significant direct effect on psychopathology and a significant indirect effect on satisfaction via resilience, while both resilience and self-compassion had significant direct or indirect effects on satisfaction. Self-compassion was found to eliminate the mediation role of resilience on psychopathology and the resilience and psychopathology effect on satisfaction. **Conclusions:** Self-compassion emerged as the most important personality characteristic concerning the satisfaction of

family members of ICU patients. Our study indicates that interventions aiming to enhance self-compassion will help patients' relatives cope with the particularly stressful experience of the intensive care unit.

Keywords

ICU, Self-Compassion, Resilience, Psychopathology, Satisfaction

1. Introduction

Admission of a patient to an Intensive Care Unit (ICU) usually signifies that the patient's physical health has suffered particular and possibly irreversible damage. The involvement of the patient's relatives in this stressful procedure and the potential loss of a loved one naturally create psychological disruption, a burden that has significant implications for the family members' mental health [1] [2] [3] [4]. Satisfaction from ICU hospitalization has been adequately studied for patients and various factors have been identified affecting their vulnerability to psychopathology symptoms, such as anxiety, depression, or post-traumatic stress disorder (PTSD), after ICU admission [5]. Analogous studies demonstrate the association between family psychological distress and satisfaction with ICU care [6].

In order to enlighten the relationship between psychopathology and satisfaction, one of the factors proposed in the literature is the concept of mental resilience, usually described as the subject's ability to prosper despite the adversities he faces in life. The importance of resilience as a factor influencing psychopathology has been demonstrated by previous studies that suggested that the effect of stressful events on a subject's psychopathology is strongly dependent on its resilience [7]. In particular, in the context of ICU, resilience has been associated with fewer symptoms of depression, anxiety, and acute stress, as well as larger satisfaction with the services provided for the patients' family members [8]. Nevertheless, the factors that delimit and describe this relationship have not been sufficiently elucidated [9] [10].

More recently, the notion of self-compassion was also discussed as a possible resilience mechanism. Self-compassion is usually defined as the subject's ability to behold a warm-hearted, caring, empathic and non-judgmental orientation towards the self during times of suffering and failure [11] [12]. As a notion, it originates from the Buddhism loving-kindness meditation, aiming to direct people to have compassion toward all living beings, including themselves [13]. All the published studies on self-compassion, use the self-compassion scale (SCS) [12] in order to measure this structure, since it is the only known available measure of self-compassion shown to be a valid and theoretically coherent measure of self-compassion [14]. In particular, self-compassion has been reported to be a potential buffer against psychopathology [15] [16] [17], functioning as a resilience mechanism and adaptive emotion regulation strategy [18]. Further, various

practices have been found to enhance self-compassion in specific target groups such as health-care providers [19] [20] [21], parents of children with chronic conditions [22], or groups of persons suffering from specific diseases [23]. Although some current studies dispute the psychometric validity and theoretical consistency of SCS [24] [25], its reported effectiveness provides sufficient motivation for its further study.

The aim of the present study is to elucidate the relation between psychopathology, resilience, self-compassion, and satisfaction, aiming, in particular, to demonstrate the impact of self-compassion on the ability to address the ICU experience in patient attendants. Self-compassion is considered to be a resilience factor, a perspective that is highly adopted in the literature [26] [27] [28] [29], while, as commonly reported, both self-compassion and resilience are assumed to affect psychopathology [7] [30] [31] and satisfaction [8]. Under this perspective, an appropriate casual path model is formulated with which the mediation effect of resilience on self-compassion and psychopathology relationship, and the psychopathology mediation effect on the resilience and satisfaction relationship are additionally quantified.

2. Method

2.1. Participants and Study Design

This study was conducted in the period from September 2017 to December 2020, in the intensive care unit of the University Hospital of Ioannina, located in western Greece. This unit cares for both medical and surgical critically ill patients that originate from northwestern Greece and the Ionian Islands. In the 25 years, it has been operational, approximately 450 - 500 patients are admitted annually. It is a closed-type unit and has 14 beds. The protocol of the unit for informing those concerned includes a morning briefing with relatives by the Professor/Director of the clinic and an afternoon briefing by the doctor on call. The relatives' visiting time is allowed every afternoon for half an hour. However, the relatives stay in the waiting room of the unit day and night, something that is a cultural tradition in almost all of Greece. Family members were defined as all relatives and friends who stayed in the waiting room of the unit during the hospitalization, and were adults (over 18 years), with sufficient knowledge of the Greek language so as to understand the psychometric tools being used in the study. All interviews with family members took place during the first week after admission to the intensive care unit. Individuals who agreed to participate in the study were informed about the purpose of it and were assured of the confidentiality and anonymity of the process. Each person created a secret, private code and participated in the survey using that code instead of his/her name). Moreover, the entire process was carried out by one researcher, so that the likelihood of information leakage was decreased and the framework of trust between researchers and individuals who took part in the survey was ensured. To those who participated in the study, an envelope was given containing a questionnaire and they

were asked to return it the next day, during the afternoon briefing. The researchers were at their disposal to answer any questions.

All participants' relatives completed a questionnaire of socioeconomic characteristics (age, gender, date of birth, region, educational qualification, employment, marital status, relationship to the patient, **Table 1**). Each participant completed the Symptom Check List 90 (SCL-90-R), the Family Satisfaction in the Intensive Care Unit (FS-ICU) questionnaire, the Connor-Davidson Mental Endurance Scale (CD-RISC) and the Self-Compassion scale (SCS).

The Symptom Check List 90 (SCL-90-R) [32] is a widely used screening tool for assessing mental well-being. It contains 90 items with a 5-point scale (0 = not at all, 4 = extremely) and assesses symptomatology in 9 areas (Somatization—SM, Obsessive-Compulsive—OC, Interpersonal Sensitivity—IS, Depression—DR, Anxiety—AN, Aggression—AG, Phobia—PH, Paranoid Ideation—PI, Psychoticism—PS). The average score of all 90 items yields the global severity index (GSI), which represents the overall level of distress and is suggested to be the best single indicator of the current level of the disorder [32]. Higher scores on the scales of the SCL-90-R indicate higher distress, however it should be noted that individual scales cannot be interpreted in diagnostic categories. The Greek version of the SCL—90 R questionnaire has been translated and validated into Greek [33]. The Family Satisfaction in the Intensive Care Unit (FS-ICU) Questionnaire is used to assess the opinion of patients' families about the care provided in the Intensive Care Unit. It consists of 24 questions and is completed by the relatives themselves. It has been validated in the Greek language [34] and has been found to have satisfactory reliability and validity of structure. The Connor-Davidson Mental Endurance Scale (CD-RISC) was developed by Kathryn M.

Table 1. Psycho-demographic and patient health indicators.

	Mean (SD)
Age	46.6 (11.6)
	N (%)
Gender	
Women	105 (59.7%)
Men	71 (40.3%)
Lives with the patient	
Yes	75 (42.6%)
No	101 (57.4%)
Type of relation: Child	88 (50.0%)
Patients Age	63.7 (17.3)
Patient Gender	
Women	56 (31.8%)
Men	120 (68.2%)

Connor and Jonathan R.T. Davidson as a mean of assessing mental resilience. The CD-RISC is based on Connor and Davidson's functional definition of resilience, which is man's ability to prosper despite the adversities he faces in life. Since its development in 2003, the CD-RISC has been tested in different environments with a variety of populations and has been modified in different versions. In the present study the original version of the 25 questions was used which has been translated and checked for validity and reliability in Greek [35]. The Self-Compassion Scale (SCS) [12] is a questionnaire specifically developed as a method by which individual differences in self-compassion can be assessed. The self-report 26-item SCS explicitly represents the thoughts, emotions, and behaviors associated with the three components of self-compassion and includes six components as well as an overall compassion score. It has been validated in the Greek language [36] and has been found to have satisfactory reliability and validity of structure.

2.2. Statistical Analysis

Analysis of variance was used to test the effect of the sociodemographic variables on satisfaction and the self-compassion, resilience, and psychopathology scales. The Pearson's correlation coefficient was computed in order to quantify the linear effect between each pair of psychological and satisfaction scales. Then, path analysis was applied to test the hypothesis that self-compassion (SCS) and resilience (CDR) explain the psychopathology (GSI) and satisfaction (STF) relation. Psychopathology, resilience, and self-compassion were regressed on total satisfaction while resilience was positioned as a mediator variable in the relation between self-compassion and psychopathology. The mediation effects were tested according to the steps suggested by Baron and Kenny [37]. Maximum likelihood estimation method was used to compute the path model coefficients. The data were analyzed using SPSS statistical package (version 21) and R statistical language [38] equipped with Lavaanpackage [39].

3. Results

In the current study, we studied 176 family members (71 men and 105 women, mean age 46.6 ± 11.6 years) of critically ill patients. These patients were admitted to the intensive care department with various medical and surgical conditions (176 patients, 120 men and 56 women, mean age 63.7 ± 17.3 years). One family member was interviewed for each of the 176 patients, 75 (42.6%) lived with the patient and 88 (50.0%) were grown children of the patients.

The four psychometric scales showed very good internal consistency with Cronbach's alpha value ranged from 0.822 to 0.967 (Table 2). The resilience score of the patient's family members was analogous to the reported score of the Greek validation of the scale on a sample of 244 healthy participants (70.7 vs 70.2, $p_{\text{diff}=0} = 0.378$) [35]. On the other hand, self-compassion score was significantly higher than that reported in [36] on a sample of 1364 Greeks not being in a stressful situation (3.27 vs 2.97, $p_{\text{diff}=0} < 0.001$), while the ICU satisfaction score

Table 2. Descriptive statistics and correlation among the psychometric scales.

	N	Cronbach's α	M (SD)	Pearson's Correlation coefficient		
				SCS	CDR	GSI
SCS	26	0.822	3.27 (0.50)			
CDR	25	0.918	70.7 (14.1)	0.439**		
GSI	90	0.967	0.72 (0.48)	-0.555**	-0.308**	
STF	24	0.869	76.5 (15.5)	0.177*	0.225**	-0.194**

*Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed). SCS: Self-Compassion Scale; CDR: Resilience; GSI: Global Severity Index, STF: Satisfaction.

was lower than a previous application in Greek hospital (76.5 vs 80.7, $p_{diff=0} = 0.005$) [40].

General symptom index was negatively correlated with total satisfaction ($r(176) = -0.194$, $p < 0.01$), self-compassion ($r(176) = -0.555$, $p < 0.01$) and resilience ($r(176) = -0.308$, $p < 0.01$), while the latter two had a significant positive linear correlation ($r(176) = 0.439$, $p < 0.01$) confirming previous reports [41].

Patient's age (PAGE), patient's gender (PGND), type of relation (CHL) and age of the family member (AGE) did not have a statistically significant direct or interaction effect on the satisfaction and the three psychometric scales. In particular, patient's age and gender, type of relation and age of the family member emerge to be factors with minor explaining ability (Table 3).

In contrast, gender of the respondent (GND) and living with the patient (STP) were found to significantly affect psychopathology and/or resilience. Specifically, women were found to have significantly larger psychopathology symptom index than men (0.81 ± 0.52 vs 0.60 ± 0.40 , $F(1, 166) = 10.826$, $p = 0.001$), while respondents living with the patient (STP) were found to have a significantly larger score in psychopathology symptom index (0.87 ± 0.50 vs 0.61 ± 0.44 , $F(1, 166) = 10.247$, $p = 0.002$), and lower resilience score (68.0 ± 14.9 vs 72.8 ± 13.2 , $F(1, 166) = 5.042$, $p = 0.026$).

The aforementioned findings enlighten the mental state of the family member of the ICU patient. In particular, it is suggested that a path analysis model aiming to test the ability of self-compassion (SCS) and resilience (CDR) to explain psychopathology effect on satisfaction should also control for gender of the family member (GND) and living with the patient (STP) effects.

Following the preliminary analysis, the path model presented in Figure 1 was formulated and subsequently tested. The validity of the suggested mediations was assessed according to the Baron and Kenny (1986) approach. Using Pearson correlation coefficients, psychopathology, resilience and self-compassion were confirmed to be significantly associated with overall satisfaction, validating their role in the path model as independent variables or mediators. Further, they were significantly associated with each other, highlighting as legitimate the mediator role of resilience between self-compassion and satisfaction, as well as the mediator

Table 3. Univariate analysis results for satisfaction and psychometric scales.

Factor	df ⁽¹⁾	SCS		CD-RISC		GSI		STF	
		F	p	F	p	F	p	F	p
Corrected Model	9	0.731	0.680	0.883	0.542	3.547	0.000	0.937	0.495
Intercept	1	248.964	0.000	174.315	0.000	37.449	0.000	145.956	0.000
Patient demographics									
Patientgender (PGND)	1	0.249	0.618	0.009	0.925	0.225	0.636	0.839	0.361
Patient age (PAGE)	1	0.028	0.868	0.030	0.863	0.762	0.384	2.983	0.086
Family member demographics									
Gender (GND)	1	0.459	0.499	0.006	0.939	10.826	0.001	0.000	0.988
Age (AGE)	1	0.104	0.747	0.625	0.430	2.408	0.123	3.370	0.068
Stay with patient (STP)	1	2.106	0.149	5.042	0.026	10.247	0.002	0.012	0.913
Child of patient (CHL)	1	0.002	0.967	1.413	0.236	0.144	0.705	0.792	0.375
Interaction effects									
GND * PGND	1	0.244	0.622	0.089	0.766	3.641	0.058	0.158	0.691
GND * STP	1	1.084	0.299	0.020	0.886	0.589	0.444	0.245	0.621
GND * CHL	1	0.360	0.549	0.470	0.494	0.031	0.861	1.396	0.239
		R ² = 0.038 (R ² _{adj} = -0.014)		R ² = 0.046 (R ² _{adj} = -0.006)		R ² = 0.161 (R ² _{adj} = 0.116)		R ² = 0.048 (R ² _{adj} = -0.003)	

(1) Error: 166, Total: 176, Corrected Total: 175. SCS: Self-Compassion Scale; CD-RISC: Connor-Davidson Mental Endurance Scale; GSI: Global Severity Index, STF: Satisfaction, GND: Gender.

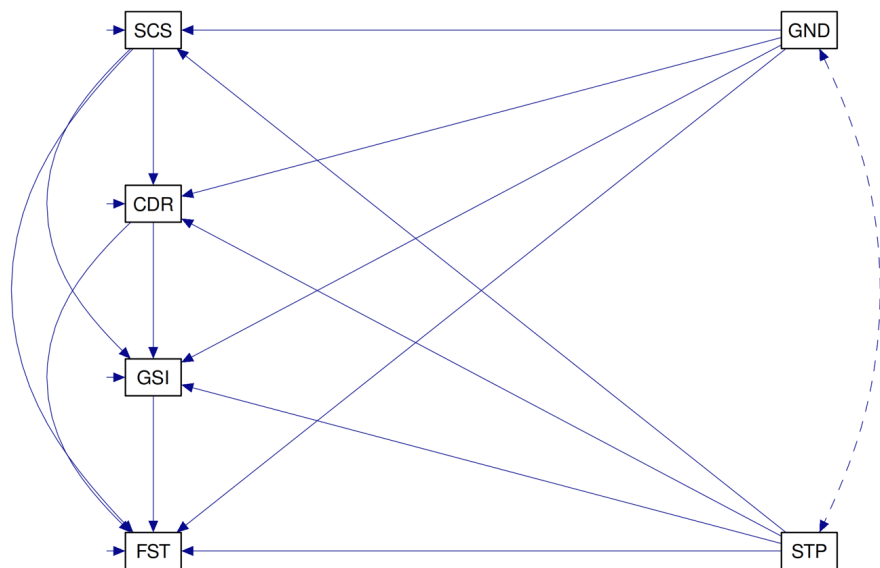


Figure 1. Proposed Path model investigating the relations between intensive care unit satisfaction and the psychometric scales (SCS ~ GND + STP, CDR ~ GND + STP + SCS, GSI ~ GND + STP + SCS + CDR, FST ~ GND + STP + GSI + CDR + SCS). SCS: Self-Compassion Scale; CDR: Resilience; GSI: Global Severity Index, STF: Satisfaction, GND: Gender; STP: Lives with the Patient.

role of psychopathology between self-compassion, resilience and satisfaction (Table 2).

The model was fitted using the maximum likelihood estimator and it converged after 88 iterations. The 2.6% of the self-compassion, 20.5% of the resilience, 37.6% of general symptom index and 8.7% of the total satisfaction variation was explained. The regression coefficients along with the indirect effects are presented in Table 4.

3.1. Effects of Demographic Variables on the Psychometric Scales and Satisfaction

The preliminary analysis of variance demonstrated a significant gender effect on psychopathology as well as a significantly larger psychological burden on those

Table 4. Path model's parameters.

		b	SE	z-value	p	95% C.I.		Std.all ^(*)	R ²
						Lower	Upper		
SCS									0.026
GND		0.060	0.075	0.797	0.426	-0.088	0.208	0.059	
STP		-0.147	0.075	-1.969	0.049	-0.293	-0.001	-0.147	
CDR									0.205
GND		-1.043	1.939	-0.538	0.591	-4.844	2.759	-0.036	
STP		-3.032	1.942	-1.561	0.118	-6.837	0.774	-0.106	
SCS		12.104	1.938	6.245	0.000	8.305	15.903	0.425	
GSI									0.376
GND		-0.174	0.059	-2.973	0.003	-0.289	-0.059	-0.178	
STP		0.167	0.059	2.838	0.005	0.052	0.283	0.172	
SCS	direct	-0.474	0.065	-7.336	0.000	-0.601	-0.348	-0.489	
	ind. CDR	-0.027	0.028	-0.953	0.341	-0.081	0.028	-0.027	
CDR		-0.002	0.002	-0.964	0.335	-0.007	0.002	-0.064	
STF									0.087
GND		-0.679	2.330	-0.291	0.771	-5.246	3.889	-0.022	
STP		4.333	2.342	1.850	0.064	-0.258	8.923	0.139	
GSI		-5.233	2.925	-1.789	0.074	-10.966	0.501	-0.163	
CDR	direct	0.203	0.089	2.295	0.022	0.030	0.377	0.186	
	ind. GSI	0.011	0.014	0.849	0.396	-0.015	0.038	0.011	
direct		0.847	2.868	0.295	0.768	-4.773	6.468	0.027	
SCS	ind. CDR	2.459	1.142	2.154	0.031	0.221	4.697	0.079	
	ind. GSI	2.482	1.428	1.738	0.082	-0.317	5.282	0.080	

(*) Completely standardized solution. SCS: Self-Compassion Scale; CDR: Resilience; GSI: Global Severity Index, STF: Satisfaction, GND: Gender; STP: Lives with the Patient.

that are accommodated with the patient. Both findings were verified by the path model ($b_{\text{GND}} \rightarrow \text{GSI} = -0.178, p = 0.003$, $b_{\text{STP}} \rightarrow \text{GSI} = 0.172, p = 0.005$), suggesting that the unfavorable psychopathology position of women and those living with the patient are not altered under the hypothesized mediator role of resilience between self-compassion and psychopathology.

In contrast, the analysis of variance finding that the family members that are accommodated with the patient have lower resilience than the other respondents, was not verified ($p_{\text{STP}} \rightarrow \text{CDR} = 0.118$). Instead, an analogous significant effect was demonstrated on the self-compassion score ($b_{\text{STP}} \rightarrow \text{SCS} = -0.147, p = 0.049$), suggesting that, under the path model cause and effect relation between self-compassion and resilience, the observed effect of being accommodated with the patient on resilience is fully explained by the corresponding effect on self-compassion.

3.2. Resilience as a Mediator between Self-Compassion and Psychopathology

Preliminary analysis showed a significant negative correlation between resilience and self-compassion with psychopathology ($r_{\text{GSI, CDR}} = -0.308, p < 0.01$, $r_{\text{GSI, SCS}} = -0.555, p < 0.01$), suggesting a significant negative effect of both on psychopathology as well as a significant effect of self-compassion on resilience ($r_{\text{SCS, CDR}} = 0.439, p < 0.01$).

In the context of the path model, the explanatory role of self-compassion on both general symptom index ($b_{\text{SCS}} \rightarrow \text{GSI} = -0.489, p < 0.001$) and resilience ($b_{\text{SCS}} \rightarrow \text{CDR} = 0.425, p < 0.001$) was confirmed. However, resilience's direct effect on the general symptom index was not longer statistically significant ($p_{\text{CDR}} \rightarrow \text{GSI} = 0.335$), as well as no statistically significant indirect effect of self-compassion on psychopathology through resilience was found ($p_{\text{SCS}} \rightarrow \text{CDR} \rightarrow \text{GSI} = 0.341$). In conclusion,, it could be implied that self-compassion fully eliminates the resilience effect on psychopathology.

3.3. Psychopathology as a Mediator in Self-Compassion and Resilience Relationship with Satisfaction

Preliminary analysis showed that psychopathology had a significant negative correlation with the total satisfaction ($r_{\text{GSI, FST}} = -0.194, p < 0.01$), a finding suggesting a significant psychopathology effect on satisfaction. Similar significant effects were suggested by the Pearson coefficients between self-compassion ($r_{\text{SCS, FST}} = 0.177, p < 0.01$) and resilience ($r_{\text{CDR, FST}} = 0.225, p < 0.01$) with satisfaction.

In the context of the path model, the suggested direct effect of psychopathology on satisfaction was not detected ($p_{\text{GSI}} \rightarrow \text{FST} = 0.074$). On the other hand, self-compassion was found to have a significant direct effect on psychopathology ($b_{\text{SCS}} \rightarrow \text{GSI} = -0.489, p < 0.001$) and a significant indirect effect on satisfaction via resilience ($b_{\text{SCS}} \rightarrow \text{CDR} \rightarrow \text{STF} = 0.079, p = 0.031$), while both resilience and self-compassion had significant direct or indirect effects on satisfaction ($b_{\text{CDR}} \rightarrow$

STF = 0.186, $p = 0.022$, $bSCS \rightarrow CDR \rightarrow STF = 0.079$, $p = 0.031$). These findings demonstrate that self-compassion and resilience can fully explain the psychopathology effect on satisfaction, implying in particular that, in the context of the tested model, the observed differences on satisfaction due to psychopathology should be attributed to self-compassion and resilience.

4. Discussion

Relatives of ICU patients will inevitably experience or be exposed to suffering. Self-compassion represents a personal resource and supports self-care, ensuring that needs are not neglected particularly during times of suffering. This study aimed to contribute to the understanding of the nature of the relationships among self-compassion, resilience, psychopathology, and satisfaction for family members of ICU patients. Previous research indicated that resilience is an important factor that positively influences psychopathology and satisfaction [8]. This finding was also confirmed in our study since self-compassion and resilience were demonstrated to be related to enhanced resilience of the family members, milder psychopathology, and higher satisfaction with the treatment of their relative and their overall experience in the ICU environment.

Further, in the context of the relation between self-compassion and resilience, a new perspective is provided. A remarkable finding of this study is that the effect of resilience on psychopathology is fully explained by self-compassion, while self-compassion is additionally shown to have the ability to essentially eliminate the effect of both resilience and psychopathology on the satisfaction of the ICU experience for a patient's family members. Self-compassion thus emerges as the key personality trait through which family members perceive the stressful experience of the ICU environment. In particular, a more balanced or mindful view of the family members' condition is expected to make them feel less isolated, also improving their ability to cope with the emerging psychological disturbance.

Since both self-compassion and resilience have been proven to be modifiable, this finding suggests that an effective strategy for alleviating the psychological pain of relatives and increasing their satisfaction from the ICU experience would be to provide them with the means to strengthen these personality characteristics.

In the literature, various interventions to enhance resilience [42] [43] [44] or self-compassion [19] [45] have been shown to be effective. Furthermore, in the context of critical care, previous research has shown that peer support groups assist family members of the patients to cope with depression and anxiety symptoms [46], as well as reduce psychological morbidity and increase social support for the patients [47]. The Vanstone *et al.* (2020) document contains multidirectional demonstrations of compassion between clinicians and family members, forging the type of human connections that may foster resilience [48].

It is implied that specialized trained ICU staff could facilitate peer support groups of family members aiming to enhance self-compassion and resilience. However, further research is required in order to adapt already successful prac-

tices or to explore new interventions targeted in this particular situation. In this context, our additional findings regarding the unfavorable psychopathological position of women and of those who live with the patient confirm previous studies [49] [50], and suggest that future interventions should be particularly targeted in these relative subgroups

Compassion is the beneficial response of an individual to the sufferings and difficulties of others. Self-compassion refers to feelings of concern an individual feel towards oneself. Both may serve as potential buffers in a hospital setting where caregivers attending to patients in critical condition experience emotional distress, which may lead to exhaustion [51]. The emotional strain inflicted on the family members of ICU patients requires ongoing care for themselves. Self-compassion is essential for the caregiver to maintain its long-term self-care and its resilience. The association of self-compassion with resilience was reflected in all the analyses performed in the current study.

The findings of the present study could provide an alternative approach to supporting patients' family members during the particularly stressful experience they are going through. The constructs of self-compassion and resilience may help to revise our understanding of the way that family members of ICU patients perceive their experience and alleviate their mental burden.

5. Strengths and Limitations

Our study is a first step in developing the concept of “self-compassion and resilience” in family members of ICU patients and this is one of its major strengths. There were several limitations in our study. Self-report questionnaires have inherent limitations, including respondent recall bias and selection bias, since the family members who were the most affected by their loved one's critical illness may have elected not to complete the questionnaire. Another limitation was that we did not evaluate family members' resilience and self-compassion following the discharge of the patient from the ICU to determine if these symptoms improved as the critical illness resolved.

6. Conclusion

The hospitalization of a patient in the ICU is considered to be a factor that affects the self-compassion of patients' relatives. Our results highlight the risk of psychologically-induced symptoms in ICU relatives and underline the need for a psychosocial support system for them. Self-compassion is shown to have the ability to essentially eliminate the effect of both resilience and psychopathology on the satisfaction of the ICU experience for a patient's family members. Self-compassion thus emerges as the key personality trait through which family members perceive the stressful experience of the ICU environment.

Ethics Approval and Consent to Participate

The Ethics Committee of the University Hospital of Ioannina approved the study and informed consent was obtained from the patients' family members.

Availability of Data and Materials

The datasets during and/or analysed during the current study are available from the corresponding author upon reasonable request.

Authors' Contributions

Conceptualization, G.P., P.S., M.G., A.P. and V.K.; methodology, G.P., P.S., M.G. and V.K.; investigation, P.S.; writing-original draft preparation, G.P., P.S., Z.K. and M.G.; writing-review and editing, G.P., P.S., M.G., Z.K. and V.K.; supervision, M.G., P.S. and V.K. All authors have read and agreed to the published version of the manuscript.

Competing Interests

The authors declare that they have no competing interests.

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Appendix

Questionnaire <https://www.researchgate.net/publication/360218884>