



The Contribution of Trust and Anxiety in Health Care During the CoViD-19 Pandemic

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ABSTRACT

This research aims to extend the knowledge about trust and state anxiety in the relationship between patients and medical professionals, by focusing on the specific situation of medical treatments. This study aims to see if patients' trust in the resort, medical staff and treatment plays a role in decreasing state anxiety. Methods. Patients enrolled in the resort's treatment base (N = 798) after the signing of an informed consent, they were asked about their state and trait anxiety, resilience, general trust (GTR) and fear of CoViD-19 (FCO) during the pandemic restrictions. State anxiety and FCO were measured longitudinally, more exactly on the first day, middle period and at the end of the treatment, whilst GTR, resilience and trait anxiety were measured only in the first day of the process. Results. The results show a significant decrease in state anxiety influenced by GTR and FCO and trait anxiety too. Resilience played a factoring role, but the result is not significant. Conclusions. The results of this study show that the state anxiety of patients with high trust in physicians decreases during the treatment. Since these results are especially robust, they can inform future research and medical practice. Therefore, is important to acknowledge that the integration of psychological components in patients' treatment is unquestionably necessary.

Keywords: state anxiety, trust, medical treatment, coronavirus, resilience

1. INTRODUCTION

The Contribution of Trust and Anxiety in Health Care During the CoViD-19 Pandemic

Balneotherapy treatments (BT), recognized as medical interventions, utilize natural elements like mineral waters and mud thermal therapy, finding widespread application in European countries, Turkey, Japan, and Israel for managing various diseases (Bender *et al.*, 2002). Often synonymous with spa therapy (Falagas *et al.*, 2009), BT is a prescribed medical treatment supervised by physicians and resort doctors. Recent studies highlight their efficacy in addressing conditions such as obesity, metabolic syndrome, cognitive function, and psychological well-being, contributing to the growing recognition of their therapeutic benefits within the medical field (Dubois, 2010; Hanh *et al.*, 2012).

The importance of trust in the health care field in terms of relationships has long been acknowledged (Mechanic, 1996). According to Pellegrino and Thomasma (1993), trust is essential in treatment relationships. Illness, invasive treatment, or a high level of pain can provide remarkable strength or resilience (Zaner, 1991).

Trust is an essential component of any relationship, especially one between doctors and patients. Trust can be defined as a bilateral relationship concept in which a person responds voluntarily to certain motivations, positive expectations, and outcomes on how the person being trusted will react in the future with a degree of vulnerability (Gilson, 2006).

The general relevance of trust to these issues is that when people discuss their experiences with and within health systems, they frequently mention trust. This last point explains why most trust definitions combine expectations about the other's ability or competence with expectations about their value orientation, i.e. their ethics, integrity, and motives (Ammeter *et al.*, 2004). Trusting attitudes are directed as much toward motivations and intentions as they are toward outcomes (Hall *et al.*, 2001, p. 615). To demonstrate care for the client's interests and thus be trustworthy, organisations must provide an environment that allows the development of various sets of mutual trusting relationships (Tendler, 1997). At the level of a health care system, the complexity increases because it includes a variety of organisations that must collaborate as well as multiple sets of individuals working within different organisations.

It is important to observe the psychological path of the patient included in ill treatments in order to have a record of the

entire state of health, both physical and psychological (Rapolienė *et al.*, 2020). Most have focused on the expansion of chronic pain during medical cure, disease and treatment, taking into account anxiety, depression, well-being and quality of life (QoL; Carroll *et al.*, 2004; Lempp *et al.*, 2011; Sąlyga *et al.*, 2008).

Medical rehabilitation represents an intervention focused on human functioning, aiming at an effect of maximizing the physical, mental, social and economic functioning of people diagnosed with a medical condition (Martez *et al.*, 2014). It should also be mentioned that among the medical benefits is the reduction of the pain sensation, which is not entirely satisfactory since the psychological aspects are not included and provided for in the treatment schemes of balneology (Bender *et al.*, 2014; Magni *et al.*, 1993).

Our study aims to follow the patient's progress during the medical cure and how the patient relates to the treatment (trust in treatment, trust in medical staff and trust in the result of the treatment), to social challenges (resilience and FCO) and those on an individual level (state and trait anxiety).

There is a gap in the topic outlined in the literature, regarding the role of psychological indicators such as anxiety, resilience, trust and pain perception, in the medical rehabilitation treatment of certain rheumatological, cardiovascular, and pulmonary conditions (Özkuk *et al.*, 2018).

In other words, the assessment of psychological indicators is a primary element in the treatment in order to be able to moderate it with fast and efficient specialist help (Frank *et al.*, 2000). The result of medical rehabilitation includes multiple exogenous and endogenous factors (anxiety, trust, resilience) making the patient vulnerable (Reid-Arndt *et al.*, 2015, pp. 69-106).

Among the comorbidities found in patients diagnosed with a rheumatological condition, there is depression (Woo, 2010) and anxiety (Fioravanti *et al.*, 2018). Patients who have had a stroke report that between 20% and 70% experience depression and between 10% and 25%, anxiety (Carson *et al.*, 2010; Starksein & Manes, 2000). Mental health problems in patients diagnosed with RA are predisposed to a decrease in vitality and social functioning, obviously, to the expansion of chronic pain (Woolf *et al.*, 2012). Moreover, sleep disturbances, poor mood, and increased levels of anxiety are among other comorbidities (Gettings, 2010). Also, a lack of interest and low motivation to maintain daily tasks, social interactions, and even concerns about relaxation are affected (Kats & Yelin, 2001).

Since the interest predominates in the field of disease identification and recovery with the help of allopathic treatments, the identification and treatment of psychological problems are avoided in advance (Fioravanti *et al.*, 2017, Antonelli & Donelli, 2018).

Resilience is related to overall health. Resilience is defined as a positive adaptation or the ability to maintain mental health despite adversity (Wald *et al.*, 2006). Increased resilience corresponds to a higher level of improvement in overall condition. Resilience is not a constant variable that can be improved with treatment (De Goede *et al.*, 2012).

Anxiety plays an important associated role in exacerbating pain perception (Woo, 2010) and is also a factor in recovery. Specifically, it potentiates cognitive and behavioural disorganization. Low control of anxious states may impair the perception of future dangers over time and at the same time may cause a number of imminent medical conditions (Woo *et al.*, 2010). As we encounter a prevalence of anxiety symptoms among the global population; specifically, patients with medical illnesses show a doubling of them compared to those without a diagnosis (McWilliams *et al.*, 2003).

The experience of nociception is felt in different ways by the body. The sum of multiple ascending and descending pathways, both facilitatory and inhibitory, causes the sensation of pain (Aguera-Ortiz *et al.*, 2011; Merskey & Bogduk, 1994). At the same time, pain is subjective, and entirely the person's own experience is influenced by circumstances and various (broad) psychological factors (Lumley *et al.*, 2011; Melzack & Casey, 1968). There are dual models, both functional and evolutionary, that define emotion (pain) as having the potential to facilitate awareness, guide, and maintain adaptive behaviour (Nesse & Ellsmorth, 2009).

Stress plays the role of a primary factor that contributes to the QoL of everyone (Sałyga, 2008). A high level of stress, improperly managed, can transform the flow of emotions, health status and implicitly general well-being in a disadvantageous sense (Kudielka & Wust, 2010).

There is a significantly reduced number of studies examining the relationship between pain and anxiety, depression and resilience in medical treatments (Gebhart & Sengupta, 1995). A meta-analysis includes all studies on the topic mentioned above, but the number is small (Clark-Kennedy *et al.*, 2021).

At the end of 2019, the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) appeared in China (Huang *et al.*, 2020). The impact of the new virus (coronavirus disease - COVID-19) was devastating in most places in the world (Bainv *et al.*, 2020), causing a huge number of deaths and infections with the new virus.

The impact of COVID-19 pandemic has affected the entire globe population of the globe, modifying interests, priorities, and habits and leading to many activities being delayed or neglected. Due to the impact on the medical system and prioritizing all resources for the patients with COVID-19, BT was very much affected by the pandemic. Many psychological burdens have emerged such as anxiety, depression, fear, reduced QoL and many others (Rotter *et al.*, 2021; Bäuerle *et al.*, 2020). In addition, the biopsychosocial system underwent a series of changes in terms of anxiety, and depression, registering up to the highest scores (Goldman, 2020). A high rate of psychological stress has been identified in Europe (Brodeur *et al.*, 2021).

Moreover, the SARS-CoV-2 pandemic has triggered an increase in anxiety symptoms among the population, leading to several mental health problems (MHQ). For example, problems are identified in areas such as eating disorders, sleep behaviour and long-term anxiety (Savage *et al.*, 2020). At the same time, problems just mentioned can have a visible result, but at the same time, there is a willingness to access public health institutions for the treatment of these medical conditions, high due the conditions of the pandemic (Xiaon *et al.*, 2020).

In the last 2 years, during the pandemic, the treatment in medical clinics showed variations in the work load; some were even closed (Maccarone & Masiero, 2021). Interest in some medical conditions has also decreased (Kardeş, 2021; Esen-Salman *et al.*, 2021; Rokhmah *et al.*, 2020). In other words, the priorities were focused on protecting against the imminent danger of infection with the SARS-CoV-2 virus.

Numerous authors have focused on the relationship between disability and medical conditions, pain, depression, well-being, and anxiety (states). The problem is that after 2010, a very small number of studies were published in this field, mental health.

Therefore, this study aims to see if patients' trust in the resort, medical staff and treatment plays a role in decreasing state anxiety. Also, FCO could moderate the reduction of state anxiety.

2. MATERIALS AND METHODS

The present study, called "TRATACO", was carried out in a medical resort from March 2021 until October 2021. The non-experimental study followed, as described in the first part, on the one hand, the resilience factoring state anxiety in this context, and on the other hand, trait anxiety in relation to state anxiety in the last stage of the process, mediated by FCO and GTR.

Table 1

Descriptives data of participants regarding age and gender

Demographic data	Total number	of participants
	<i>n</i>	%
Age		
18-25	19	2.4
50-57	223	27.9
82-89	10	1.3
Gender		
Female	455	57
Male	343	43

The longitudinal type is given by the number of measurements, one at the beginning of the medical treatment, then in the middle and the last one at the end of the treatment, in order to see fluctuations in anxiety and FCO in this medical context. The sample formed is of conventional type; there is no selection procedure at this level.

Upon arrival at the resort, patients will be directed to the reception of the treatment base to be scheduled for the cure and also to complete the informed consent form of the study. All 798 patients were included in the study based on the criteria stated above, i.e. their registration in the resort's databases and the presence of a minimum of one medical condition followed (osteoarthritis, asthma, COPD, chronic rhinopharyngitis etc.).

Ethical statement

Ethical clearance for this study was granted through the University of Bucharest Research Ethics Committee, approval number 27 of February 28.

Procedure

Patients enrolled in the resort's treatment base and in the study met all inclusion criteria for the research.

The longitudinal nature is evident from the multitude of measurements applied (in the form of pen and sheet

Participants

The participants ($N = 798$; 57% female gender) aged 18-89 years (category 18-25 = 2,4 %; category 50-57 = 27,9 %; category 82-89 = 1,3 %) were involved in the present research conducted in a medical setting during March and October 2021 (Table 1).

questionnaires) during the treatment such as: (a) the first stage was completed by the patients on the first day of treatment, prior to the start of treatment, in order to accurately observe the level of anxiety as a state, but also the FCO, we also wanted to measure, from the beginning, the level of self-confidence, the level of confidence towards procedures, resilient behaviour in stressful situations; b) the second stage of the study was completed at the mid-point of the treatment period, with subjects being asked to complete items belonging to the state anxiety and FCO instruments; c) finally, at the end of the treatment, we measured the level of state anxiety and FCO. Also, the assessment was made during the year 2021, but we estimate that the prevalence of CoVID-19-related anxiety was an overarching problem and was not a confounding variable.

Measures

The State and Trait Anxiety Inventory 2.0 Form Y (STAI 2.0; Spielberger, 1983) contains two subscales - state anxiety and trait anxiety - that are each compressed into 20 items, for a total of 40 items. The STAI - Y 2.0 instrument sought to measure the variable "anxiety" using the 20 items, with participants scoring on a Likert scale from 1 - "Not at all" to 4 - "Very much". The reliability coefficient for state anxiety ($\alpha = .91$) and for trait anxiety were good ($\alpha = .90$).

The Connor - Davidson Resilience 2 (CD-RISC-2; Connor & Davidson, 2003) is a 2-item instrument measuring the

concept of resilience and is a narrow form of the main scale with high consistency. Participants responded on a Likert scale from 0 - "Not true at all" to 4 - "True most of the time". Scores range from 0 points - indicating a lack of adaptability to stressful situations - to 8 points - indicating a high level of resilience and adaptive behaviour. The total score for the present study appeared to be reliable ($\alpha = .83$).

General Trust (GTR) is a self-constructed, multifaceted instrument measuring concepts of trust in procedures, trust in the treatment setting, trust in health care providers, and trust in self. The purpose of introducing this instrument into the present research was to measure, along with the other instruments, the patient's overall trust and perception of what is around them, obviously under the aegis of both the medical and pandemic context. Participants rated each item on a Likert scale from 1 - "Not at all confident" to 5 - "Absolutely confident", with the total ranging from 20 to 50 points. The total score displayed acceptable internal consistency ($\alpha = .89$).

The Fear of Covid-19 Scale (FCV-19 S; Ahorsu et al., 2020) was used with the aim of measuring specific FCO and the

physiological-level implications created by the coronavirus pandemic. Patients responded to items rating it on a Likert scale from 1 - "Strongly disagree", to 5 - "Strongly agree", In relation to the anxiety instrument, it measured a specific fear and/or anxiety, facilitating the process of embedding patients' reporting of pandemic events and the dangerousness of SARS-CoV-2 infection. For FCO, the internal consistency was good ($\alpha = .91$).

Statistical analyses

Path analysis was conducted using the lavaan package (Rosseel, 2012) of the R software (R Core Team, 2017).

As mentioned above, the present study investigates an exploratory model of state anxiety, GTR and resilience during the medical treatment through the COVID-19 pandemic. More specifically, using resilience as a covariate tested the mediation effect of GTR and FCO on the relationship between trait anxiety and state anxiety.

3. RESULTS

Table 2 illustrates the relationships between constructs used in our study. Specifically, GTR has a strong correlation with resilience ($r = 0.449, p < .001$), which indicate, that resilience tend

to decrease instead general trust increases. Furthermore, GTR displays correlations with trait anxiety ($r = -0.502, p < .001$), fear of CoViD-19 ($r = -0.158, p < .001$) and state anxiety ($r = -0.539, p < .001$). In these instances, an argumentation in general trust coincides with an reduction in the aforementioned constructs.

Table 2
Pearson Correlations Between Demographic and Psychological Variables

		Trait Anxiety	Resilience	General Trust	Fear of CoViD-19
Resilience	Pearson's <i>r</i>	-0.499***	-		
	<i>p</i> -value	< .001	-		
General Trust	Pearson's <i>r</i>	-0.502***	0.449***	-	
	<i>p</i> -value	< .001	< .001	-	
Fear of CoViD-19	Pearson's <i>r</i>	0.257***	-0.269***	-0.158***	-
	<i>p</i> -value	< .001	< .001	< .001	-
State Anxiety	Pearson's <i>r</i>	0.728***	-0.521***	-0.539***	0.382***
	<i>p</i> -value	< .001	< .001	< .001	< .001

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

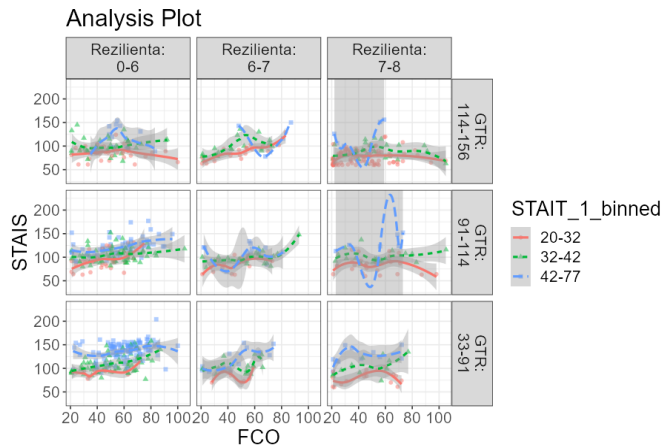
Path Analysis

The model of state anxiety was performed. Overall, the fit indices suggested that the model has a good fit ($CFI = .91$,

$RMSEA = .11$, $SRMR = .06$). Also, the model explained approximately 60% of the variation of state anxiety during the

care treatment conditions. The paths from trait anxiety to GTR ($B = -0.45, p < .001$), respectively, to FCO ($B = 0.14, p < .001$), are significant (Figure 1).

Figure 1
Analysis Plot of General Linear Model between Factors and Outcome



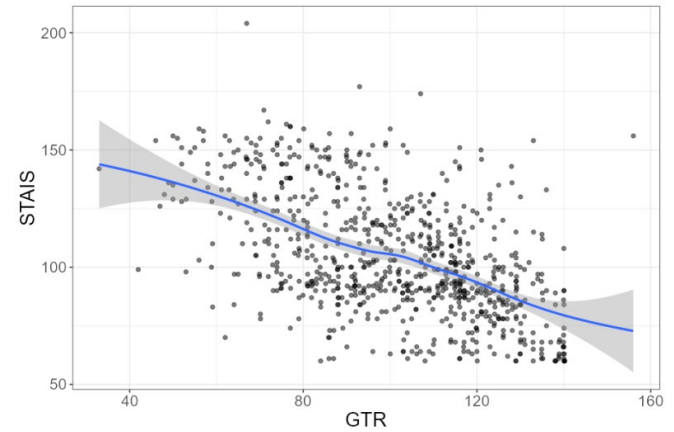
Note. The General Linear Model of factors such as fear of CoVID-19 (FCO), trait anxiety (STAIT), resilience and general trust (GTR) on state anxiety (STAIS)

The covariate variable, resilience ($B = -0.60, p < .197$), has no effect on state anxiety. Both GTR has a significant effect on state anxiety ($B = -0.31, p < .001$), and FCO ($B = 0.35, p < .001$) does explain the variance of the criterion variable (Figure 2). Moreover, is clear that the GTR has a factor effect on state anxiety. Trust tends to increase, whilst the state anxiety is decreasing during the treatment (Figure 2).

However, the indirect effect of trait anxiety on the variance of state anxiety during the care treatment via the GTR is significant ($B = 0.14, p < .001$) and via FCO is significant ($B = .05, p < .001$) (Figure 3). Also, the direct effect between trait

anxiety and state anxiety is significant ($B = .44, p < .001$; Table 3).

Figure 2
Association Between General Trust and State Anxiety



Note. State anxiety (STAIS) significant decrease when general trust (GTR) is increasing

Figure 3
Association Between State Anxiety and Fear of CoVID-19

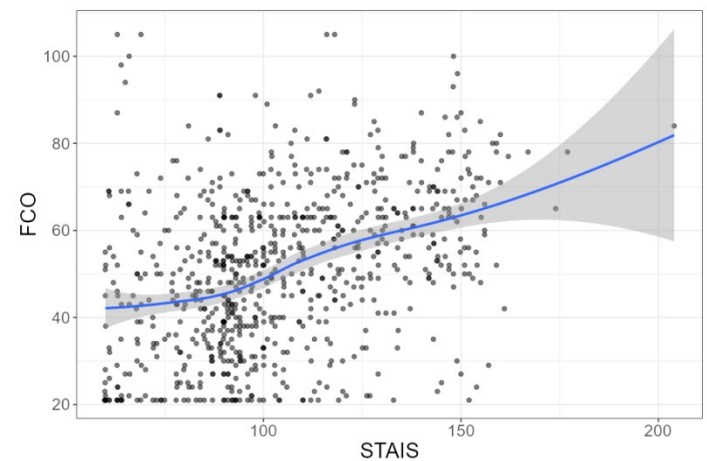


Table 3
Multiple Linear Regression of Predictors for State Anxiety

Variables	Variables	Size Effect
General Trust	← Trait Anxiety 1	-.456***
Fear of CoVID	← Trait Anxiety 1	.141***
State Anxiety	← General Trust	-.319***
State Anxiety	← Fear of CoVID	.351***
State Anxiety	← Trait Anxiety 1	.443***
State Anxiety	← Resilience	-.600***
Indirect effect 1		.146***
Indirect effect 2		.050***
Total effect		-.404***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

4. DISCUSSIONS

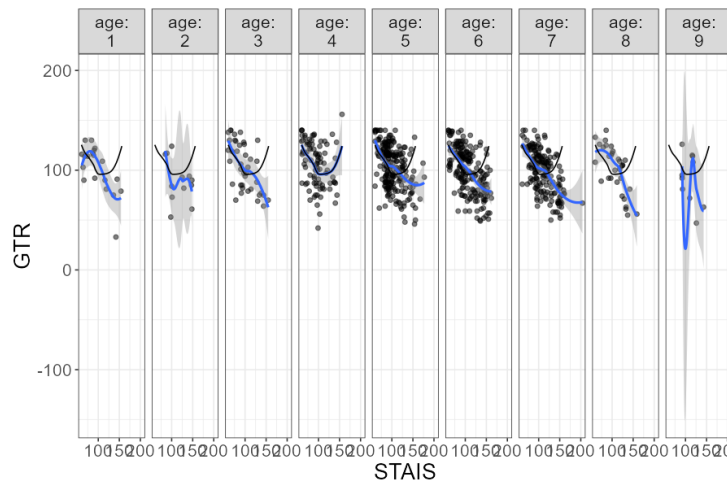
In this paper, we tested the interaction between GTR and anxiety during medical cure. Also involved were resilience, and FCO as factors, respectively, mediator for state anxiety variation.

Our purpose was to assess the anxiety in the medical context of patients and the role of GTR in it. So, GTR was divided into trust in the doctor, the treatment, the resort, and the medical context. These played a mediator role in the variation of state anxiety (from the beginning of treatment until the end of it).

The results showed that the relationship is significant, which translates into the fact that, at the beginning of the medical act, the patients had some concerns regarding the future. Nevertheless, during BT, there is an attitudinal and perceptual change regarding trust in medical acts and their related elements. As a result of said elements, the state anxiety showed a significant decrease (Alenazi *et al.*, 2020; Rossi *et al.*, 2021).

Trust is essential for a successful medical practice (Jneid *et al.*, 2018; Pearson & Raeke, 2000). In recent decades, advances in medicine have been paradoxically coupled with a decline in trust in physicians (Gupta *et al.*, 2020). However, trust in physicians is a more important variable than explaining medical procedures (Pearson & Raeke, 2000) and is closely related to medication adherence in chronic diseases (Du *et al.*, 2020). In chronic diseases, the long duration of treatment administration, years or even decades, requires building strong psychological bridges between physician and patient (Ong *et al.*, 1995). Trust in the doctor and in the procedures and continuity of treatment despite possible relapses seem to be vital factors for long-term survival, in addition to the medical procedures themselves (Petrocchi *et al.*, 2019; Safran *et al.*, 1998). Also, the impact of the diagnosis is difficult for an individual to express (Wu *et al.*, 2015; see Figure 4).

Figure 4
Flexplot for Association Between State Anxiety and General Trust Grouped by Age Categories



Note. The interaction of state anxiety (STAIS) and general trust (GTR) by each category of age. Patients between 50 yo. and 70 yo. (categories 5, 6 and 7) they have a higher level of anxiety, whilst trust is low

There are a few studies on the action of the factors mentioned above in spa treatments. The beneficial effects of BT are based on both medical and psychological factors and result

in improved health and mental well-being (Rapolienė *et al.*, 2020).

In the case of spa treatments, several peculiarities are highlighted. As with hospital treatments, it involves leaving home and undergoing treatment in a new location. Patients' uncertainty about medical staff, location and treatment is highlighted in the literature (Kortte & Wegener, 2004).

Anxiety needs to be measured. Following medical and diagnostic investigations, specific anxieties are underlined among patients (Fioravanti *et al.*, 2018). At the same time, the presence of a condition generates specific symptoms such as pain, migraines, semi-paralysis etc. The manifestation of anxiety states at an anticipatory level is common once they are enrolled in treatment. A close link between these manifestations is also the location of the resort, the medical staff, the doctors and the diagnosis (Frank *et al.*, 1987). Thus, anxiety is codependent on trust (Stein & Stein, 2008), and in the case of spa patients, a relationship with doctors and medical staff based on confidentiality is necessary (Petrocchi *et al.*, 2019).

The benefits of spa treatment are observable for a minimum of 3 months and up to 6, even 12 months after completion (Baroni *et al.*, 2012; Becker *et al.*, 2009). Symptoms directly targeted by the effects of the procedures include coughing, musculoskeletal pain, and hypertension (Nasermoaddeli & Kagamimori, 2005; Stier-Jarmer *et al.*, 2015). Psychological benefits also include improved QoL (Oláh *et al.*, 2011), decreased perceived anxiety and increased self-confidence (Fioravanti *et al.*, 2011). External and/or social factors are mainly well-being enhancers. A high level of confidence leads to the minimization of anxiety, especially concerning the environment and context (Fioravanti *et al.*, 2018). Specifically, it is the fear of interacting with people who might be sick or infected with SARS-CoV-2 (Calbi *et al.*, 2021). Moreover, frequent contact with unknown people is a catalyst for anxiety (Stein & Stein, 2008). During treatment, the level of anxiety from the beginning until the end of treatment is continuously decreasing. This leads to patients becoming more resilient in their relationships with doctors, nurses, spa procedures and the environment (De Goede *et al.*, 2012). Trust in one's powers is related to an increase in resilient behaviours (Kruger, 1996). However, resilience in itself does not play a major role in the treatment.

In our study, resilience played a factoring role in anxiety state, but the results remain statistically insignificant. The explanation is that resilience is a behaviour based on social support (Carpenter and Brock, 2004), and in balneology, individual factors and the doctor-patient relationship are relevant

(Frank *et al.*, 2000). Moreover, resilience encompasses those social and individual behaviours that enable people to overcome a particular obstacle (Holling, 2004). In our case, the most important element in the balneological context is trust towards the doctor, the course of treatment, the nurses and the environment (Frank *et al.*, 2000). As previously mentioned, a high level of patient trust is correlated with low anxiety in our results (Zwingmann *et al.*, 2017).

Resilience is related to a low level of distress (Brunkhorst, 2002). Also, the role of resilience is not quite observable in this relationship. The human capacity to adapt to everyday situations is determined by a series of events and is part of the process of implementing protective resources (Curtis *et al.* 2000). In addition, it is involved in situations perceived as risky, dangerous, threatening to the person, directing the whole attitudinal system towards their removal (Marshall and Marshall, 2007). Elements such as improvement of the medical condition, habituation to the environment, and relating to the resort staff were associated with a low level of anxiety. This may be related to a high level of trust.

Furthermore, the final aim of our study included the FCO as a mediator between trait anxiety and state anxiety. Fear is directly related to trust, and in our research, it had a significant effect in decreasing anxiety during treatment. Fear and anxiety were associated with elements outside the patient's psycho-individual system, such as medical context, the unknown, contact with sick people, contact with new people, dealing with doctors and uncertainty about the course of treatment. Also, experiencing severe pain may be associated with anxiety (Gettings, 2010), anticipatory worry (Woo, 2010) or a decrease in QoL (Gutenbrunner *et al.*, 2010).

The SARS-CoV-2 pandemic, caused by the spread of the coronavirus (Huang *et al.*, 2020), has had a significant effect

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Declaration of Interest statement

No potential conflict of interest was reported by the author(s).

Informed consent statement

Informed consent was obtained from all participants involved in the study.

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on exacerbating anxious dispositions such as fear or chronic whole-body tension (Rotărescu *et al.* 2020). Anxiety, measured longitudinally, showed a variation during severe restrictions in the spring of 2020 (Rotărescu *et al.*, 2020). The previous events (fluctuation in the number of infections among people) had effects on balneological patients at the perceptual, attitudinal and relational levels (Rotter & Schmitz, 2021).

Conclusions and Limits

To summarise, regardless of whether the patient is in a balneological, hospital, or a nursing home setting, there are a number of psychological factors that influence his perception of his future treatment, the recovery process, and response to balneoclimatic treatment. These include fear of SARS-CoV-2, anxiety about the environment, trust in medical personnel, and faith in one's own abilities (divided into trust in the doctor, trust in the treatment, trust in the resort and trust in the medical context). Furthermore, the resilience discovered in the relationship between general trust and anxiety demonstrates that it is not always manifested, as the balneological context has several peculiarities and differences from typical social contexts.

The limitations of this study are the following: a) the type of sampling chosen, convenience or conventional, based on exclusion and inclusion criteria, is not representative of the general population to which it is reported (David, 2006); b) the health status of patients at the end of treatment, from a medical point of view, was not taken into account, leading to a narrowing of the results; c) the longitudinal design brings with it high costs, a high drop-out rate (Carauna *et al.*, 2015) and d) the cultural background of the patients. I recommend for future research in this field, taking into account, in addition to what has been mentioned above, the psychological component of the medical staff (involvement in work, perception of the patient and his illness, social relationships, etc.).

Declaration of Ethical Approval

a) Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and was approved by an Institutional Review Board/Ethics committee. See details under Methods.

b) The study received an exemption from an Institutional Review Board/Ethics committee; See details under Methods.

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