

Chapter 6

Well-Being of Greek University Students During the COVID-19 Pandemic



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Abstract The COVID-19 outbreak has affected mental health worldwide, and especially among university students, who stopped attending lessons and had a long break from their social life. The present chapter presents the findings of a study aiming to investigate the relationship between distance learning during the COVID-19 pandemic and well-being dimensions (gratitude, life satisfaction, subjective happiness, positive and negative affect, depression, anxiety, stress) in this population. The sample consisted of 79 Greek university students, all emerging adults aged between 18 and 29 years. Participants completed self-report questionnaires including the satisfaction they experienced regarding distance learning, DASS-21, SHS, SWLS, GQ-6, and mDES. Overall, results showed that Greek university students experienced moderate levels of life satisfaction and positive affect and high levels of subjective happiness and gratitude, moderate stress levels, low anxiety and depression symptoms, and moderate negative affect levels. An important finding of the study is that there is an interaction between satisfaction with distance learning and all well-being indices, except subjective happiness. The findings provide suggestions for further research and applications in the field of education and counseling in emerging adulthood.

Keywords COVID-19 · Distance learning · Gratitude · Well-being · Emerging adults

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6.1 Introduction

6.1.1 *COVID-19 and Education*

The unexpected outbreak of COVID-19 in 2019 led to many changes in everyday life; restrictions such as lockdowns led to the cessation of learning activities and gatherings (Piguillem & Shi, 2020) and the emergence of distance jobs. Among the required changes and adjustments, the pandemic significantly shaped the educational process (Gao et al., 2020; Rajab et al., 2020). While distance learning was first expected to last for a limited period of about six months, in many countries it was eventually extended by two years, as health conditions did not allow for a smooth and safe return to daily life (Nussbaumer-Streit et al., 2020).

6.1.2 *Emerging Adulthood and the COVID-19 Pandemic*

In 2000, Arnett made an important distinction between adulthood and emerging adulthood, recognizing that social-economic factors, studies extension, and the continuous development and specialization delay the autonomy and independence of young people. So, adulthood does not begin at the age of 18, and the period from 18 to 25 years of age can be defined as emerging adulthood (Arnett, 2000). In the light of the continuous social changes, emerging adulthood was subsequently expanded to the age of 30 (Hotez et al., 2021). During COVID-19, emerging adults had to deal with a series of challenges, like isolation, financial problems, and unemployment (Pocuca et al., 2022). They experienced stress (Hotez et al., 2021), especially for their relatives, as well as social worries (Germani et al., 2020), depression, anxiety (Kujawa et al., 2020), and substance use (Pocuca et al., 2022). Moreover, some studies found that about one third of them reported suicidality (Halliburton et al., 2021).

In university, the COVID-19 pandemic led to the transfer of academic courses from an in-vivo environment to an online one and the interaction with fellow students and academic staff via chat and through screens. This new reality has positively and negatively affected students' learning experiences (Nambiar, 2020). Factors such as coexistence with other people in the same space at the time of the lecture, lack of familiarity with computers and distance learning (Surani & Hamidah, 2020), and poor internet connection (Ferdig et al., 2020) prevented the active participation of students resulting in absences, gaps, and difficulties. The transition was even more difficult for students enrolled in courses involving internships and laboratory attendance, as many of these activities were postponed for a later period. While all students were affected, the adverse effects appear to be more pronounced in students facing socio-economic difficulties due to a lack of available resources (Aucejo et al., 2020). This situation had a negative impact on their academic progress and performance (Aucejo et al., 2020). On the other hand, this change

also brought positive results: for example, students were able to stay focused on their goal and manage their new daily life more effectively (Rahiem, 2021).

6.1.3 Stress, Anxiety, Depression, and Negative Emotions During the COVID-19 Pandemic

The effects of quarantine have also been noted in mental health. Quarantined individuals reported psychological difficulties and symptoms of post-traumatic stress disorder, depression, and anxiety (Cullen et al., 2020; Pfefferbaum & North, 2020). A study conducted during quarantine showed that the well-being of students decreased, while there was an increase in perceived stress (Savage et al., 2020). A long-term survey conducted among students in China during two waves of the pandemic showed differences between the two phases. In the second wave, stress on students was lower, but depression and anxiety were higher (Li et al., 2021).

According to a survey in Spain, 60% of first-year psychology students reported no way out and experiencing depression, anxiety, and distress (González-García et al., 2021). A similar increase in the levels of stress experienced by university students has also been observed in Greece (Konstantopoulou et al., 2020).

Similar results were also obtained for anxiety measures. In Greece, 35.8% of the university students participating in a survey reported anxiety during the pandemic (Sazakli et al., 2021). Another study conducted with Greek students showed a 42.5% increase in anxiety symptoms (Kaparounaki et al., 2020), while another study showed that 19.5% of Greek participants had moderate and severe anxiety symptoms (Kornilaki, 2021). High levels of stress and anxiety were observed among students worldwide (Aslan et al., 2020; Debowska et al., 2020; Gritsenko et al., 2020; Husky et al., 2020; Islam et al., 2020; Ye et al., 2020). In addition, female students from Poland had higher levels of anxiety than men, and students aged 18 to 24 reported higher levels of anxiety than their older co-students (Debowska et al., 2020). In the same study, psychology students had lower stress levels than medical and other students.

Compulsory quarantine during COVID-19 marked an increase in depression, with a significant risk of suicidality (Troutman-Jordan & Kazemi, 2020). According to one study in Greece, 12.4% of university students reported depressive symptoms (Patsali et al., 2020), while another study showed a 74.3% increase in the rate of depression and a 63.3% increase in suicidal ideation (Kaparounaki et al., 2020). However, no increase in suicidal behaviors was observed (Kaparounaki et al., 2020).

Similarly, moderate to severe depression levels were reported by university students all over the world (Debowska et al., 2020; Islam et al., 2020; Maia & Dias, 2020; Nakhostin-Ansari et al., 2020). In Poland, female students reported higher scores on depression than men (Debowska et al., 2020), while students aged 18 to 24 also reported higher depression and suicidality than students over 25 (Debowska et al., 2020).

Regarding the experiencing of negative emotions during the quarantine, Greek university students primarily experienced concern and anger about the lockdown, followed by anxiety and fear about the pandemic. In lower percentages, participants reported loneliness and indifference, and despair and panic (Karasmanaki & Tsantopoulos, 2021). Another study focusing on Greek university students (Kornilaki, 2021) showed that the participants experienced several negative emotions; most of them reported feeling distressed, upset, and nervous. Conflicting findings emerged from studies in other countries. Overall, students experienced negative emotions during the COVID-19 period (Alemany-Arrebola et al., 2020; Zhang et al., 2020); however, Chinese students experienced low levels of negative emotions (Wang et al., 2020).

In general, previous research was mainly focused on the association between the pandemic-related distance learning, as a social distancing measure, and negative affective symptoms. There is instead limited data on the positive psychological states experienced during the COVID-19 period. Moreover, the existing studies are mostly focused on adults from the general population, rather than emerging adults.

6.1.4 Well-Being Indices During the COVID-19 Pandemic

6.1.4.1 Life Satisfaction

Life satisfaction refers to the cognitive assessment of whether a person's quality of life converges with the criteria that the person sets and considers ideal (Shin & Johnson, 1978). During the COVID-19 period, the results of a global survey showed a reduction in life satisfaction by 16%, while almost 17% of the participants reported being completely dissatisfied with their lives (Ammar et al., 2020). In Greece, a survey showed that over one third of the participants were not satisfied with their lives. These findings however referred to the general population (Anastasiou & Duquenne, 2021). In the Greek literature, there are no studies focused on life satisfaction in the student population during the COVID-19 pandemic. The results obtained from other countries have shown conflicting findings. Some research findings suggest that students experienced life satisfaction (Labrague, 2021; Rogowska et al., 2020), while other studies detected dissatisfaction (Çelik, 2020). Generally, it seems that during the COVID-19 period the levels of life satisfaction decreased (Ammar et al., 2020), possibly due to life changes in many domains and the experience of negative emotions.

6.1.4.2 Subjective Happiness and Gratitude

Two positive concepts that have not been sufficiently studied in the population of emerging adults during the COVID-19 pandemic are subjective happiness and gratitude.

Subjective happiness refers to a state of well-being (Diener, 2000; Lyubomirsky et al., 2005; Sagiv et al., 2004; Sheldon & Lyubomirsky, 2004) and it has two components: the hedonic one and contentment. The first refers to the degree to which the experiences of a person are pleasant, while the second is the degree to which individuals perceive their aspirations to be met (Brülde, 2007; Chekola, 2007; Haybron, 2003; Kashdan, 2004; Sirgy et al., 2006; Veenhoven, 2005). Subjective happiness seems to have been significantly affected during the COVID-19 period. Findings from a prospective study aimed to assess pre-medical students' subjective happiness and perceptions of the educational environment before and during the pandemic (Lin et al., 2021) showed an increase in happiness and educational environment's perception after the pandemic onset, as well as the role of educational environment as predictor of subjective happiness. Another study investigating subjective happiness and psychological well-being among college students during the pandemic (Warrier et al., 2021) indicated that subjective happiness was above average, especially in women. All in all, it seems that subjective happiness in college students was high.

Gratitude refers to the pleasant feeling that individuals may experience for a person from whom they have been benefited (Lambert et al., 2009). To feel gratitude, it is important to recognize the benefits received (Graham & Weiner, 1986). Gratitude is recognized as a temporary feeling after receiving benefits or as a character strength (Pezirkianidis et al., 2020). In the first case, the duration is limited, while as a character strength the person has the predisposition to experience it (Emmons & McCullough, 2003).

In a study with Mexican students, participants reported the experiencing of positive emotions, such as gratitude during the COVID-19 period (Gaeta et al., 2021), while in another one, conducted in the USA, students who did not experience gratitude scored higher on stress levels (Biber et al., 2020). Finally, gratitude's protective role during the COVID-19 was highlighted in another study conducted among US students (Bono et al., 2020). Specifically, gratitude seems to facilitate the management of COVID-19 effects and favor subjective well-being, as well as participants' academic functioning.

6.1.4.3 Positive Emotions

Positive emotions can help people regulate their negative ones (Fredrickson et al., 2000; Fredrickson & Levenson, 1998). Moreover, the existence of negative emotions does not imply the absence of positive emotions and vice versa (Diener & Emmons, 1984).

Positive emotions may have a protective role against health and mental health issues (Tugade et al., 2014). The Broaden and Build Theory explains the functional value of positive emotions for mental health (Pezirkianidis & Stalikas, 2020), positing that positive emotions, such as joy, interest, pride, and love, broaden people's thinking and action repertoire and build long-term personal, mental, and

emotional resources (Fredrickson, 1998, 2001; Fredrickson et al., 2000; Fredrickson & Branigan, 2005; Fredrickson & Joiner, 2002).

The theory suggests the existence of an upward and perpetual spiral interaction between the experience of positive emotions and the expansion, i.e., the enrichment of personal resources (Fredrickson & Joiner, 2002). Moreover, positive emotions may act as “antidotes” to cancel out the negative consequences of negative emotions, by counterbalancing the arousal of the autonomic nervous system elicited by negative emotions (Fredrickson & Levenson, 1998) and by facilitating the restoration of flexible and fruitful thinking (Fredrickson, 1998).

There is limited research on positive emotions experienced by emerging adults during the COVID-19 period. Greek university students reported overall low levels of positive emotions, but also the experience of some specific positive emotions, like optimism and interest, although to a lesser extent (Karasmanaki & Tsantopoulos, 2021; Kornilaki, 2021). Different findings were detected in other countries. Specifically, Mexican students, besides reporting negative emotions, also experienced positive ones, like joy and hope (Gaeta et al., 2021). University students from China reported moderate levels of positive emotions and low levels of negative emotions (Wang et al., 2020).

6.1.5 The Current Study

In Greece, universities remained closed from March 2020 until September 2021, a long period which affected students severely. The lockdown took place suddenly and no one was prepared for it. There was no logistical infrastructure to support distance learning, and some households did not have the equipment or internet to allow for participation from remote. Apart from the technical parts, the students were not very familiar with the process. Students had to face the fear of the unknown regarding major health issues and, at the same time, they had to adjust to the new educational setting.

The current study is aimed to examine both the negative and positive well-being dimensions among Greek university students engaged in distance learning during the COVID-19 pandemic. While negative well-being dimensions were extensively investigated both in the general population and among emerging adults during the pandemic, the positive well-being dimensions were not sufficiently studied. Also, there are limited data in Greece about satisfaction with distance learning during the COVID-19 pandemic and its association with the positive and negative well-being dimensions. The study is thus aimed to answer the following research questions:

1. Is the Gratitude Questionnaire a valid and reliable tool to measure gratitude in Greece?
2. During the COVID-19 pandemic, in which levels did Greek students experience
 - (a) anxiety, stress, depression, and negative emotions?
 - (b) life satisfaction, subjective happiness, positive emotions, and gratitude?

3. Do negative and positive well-being dimensions
 - (a) relate to satisfaction with distance learning?
 - (b) differ according to the levels of distance learning satisfaction?

6.2 Method

6.2.1 Design, Participants, and Procedure

An observational and cross-sectional study was conducted on Greek university students to study the emotions the participants felt during the COVID-19 pandemic.

The present study involved 79 Greek university students, 39 males and 40 females, aged between 18 and 29 years. The demographic characteristics of the participants are reported in Table 6.1.

Following the research ethics principles, students participated voluntarily, and the recruitment method was snowball sampling. Informed consent was obtained before participation and individuals could withdraw at any time. Except for the demographic features, private data were anonymous as no identifying information was collected. Participants were invited to fill a survey distributed in Google form through e-mails and social media. The survey lasted 2 months.

Table 6.1 Demographic characteristics of the participants ($N = 79$)

Demographic variables	University students ($N = 79$)
<i>Age</i>	
18–29	79 (100.00%)
<i>Gender</i>	
Male	39 (49.4%)
Female	40 (50.6%)
<i>Marital status</i>	
Single	72 (91.1%)
Married	7 (8.9%)
Divorced	–
Widow	–
<i>Education</i>	
College student	65 (82.3%)
University Graduate	14 (17.7)
<i>COVID diagnosis</i>	
Diagnosed	9 (11.4%)
Not diagnosed	70 (88.6%)
<i>Family member's diagnosis</i>	
Diagnosed	15 (19.0%)
Not diagnosed	64 (81.0%)

6.2.2 Materials

The data collection included the self-report questionnaires described below, and a set of questions concerning demographic characteristics.

6.2.2.1 Satisfaction with Distance Learning

This questionnaire investigates distance learning satisfaction. It is a single item developed by the research team: “Satisfaction I gained from distance learning.” The statement is rated on a three-point Likert scale (low, moderate, and high).

6.2.2.2 Depression Anxiety and Stress Scales 21 (DASS-21)

This questionnaire investigates depression, anxiety, and stress symptoms; in this study, the 21-item version of the scale was used and validated in a Greek sample by Pezirkianidis et al. (2018). Each statement is rated on a four-point Likert-type scale (0: Did not apply to me at all, 3: Applied to me very much or most of the time). Cronbach’s alpha for this sample was adequate ($\alpha = 0.94$).

6.2.2.3 Subjective Happiness Scale (SHS)

This 4-item scale investigates the subjective perception of happiness (Karakasidou et al., 2016; Lyubomirsky & Lepper, 1999). Responses are rated on a 7-point Likert-type scale, with highest scores indicating a happy person. In this study, the Cronbach’s alpha was adequate ($\alpha = 0.88$).

6.2.2.4 Gratitude Questionnaire (GQ-6)

This instrument assesses the predisposition of people to experience gratitude (McCullough et al., 2002). It consists of six items on a scale from 1 to 7 (1 means “strongly disagree” and 7 “absolutely agree”). Two items are reverse scored to inhibit response bias. The structural validity and reliability of the scale in Greek were evaluated in this study.

6.2.2.5 Satisfaction with Life Scale (SWLS, Diener et al., 1985)

The instrument measures an individual’s level of satisfaction, using 5 items on a 7-point Likert-type scale, ranging from “Strongly Disagree” to “Strongly Agree.”

SWLS was standardized in the Greek population by Galanakis et al. (2017). The internal consistency for this study was adequate ($\alpha = 0.81$).

6.2.2.6 Differential Emotions Scale (mDES)

The mDES measures positive and negative emotions, consists of 20 items (Fredrickson et al., 2003), and asks participants to recall the past two weeks and rate their strongest experience on a 5-point Likert-type scale (1: Not at All to 5: Extremely). It was standardized in Greek by Galanakis et al. (2016). The internal consistency index for the two subscales in this study was satisfactory ($\alpha = 0.85$ and 0.88).

6.2.3 Data Analysis

Regarding the validation of the GQ-6, first one professional translated the items into Greek and another one back to English. IBM SPSS Statistics 25 was used for the analyses. Exploratory factor analysis was used to assess the structural validity and reliability of the GQ-6. Then, descriptive statistics (means and standard deviations) were calculated for all the investigated dimensions. Pearson correlation indices were calculated to investigate the relationship between the research variables after checking the assumptions of normality ($p > 0.05$). A MANOVA was used to compare the positive dimensions (gratitude, life satisfaction, subjective happiness, positive affect) and the negative ones (stress, anxiety, depression, negative affect) across three groups of students, based on their levels of satisfaction with distance learning (low, moderate, and high).

6.3 Results

The factor structure of the GQ-6 was examined using EFA. The value of the Kaiser-Meyer-Olkin (KMO) index, with which the adequacy of the sample was assessed, was 0.82, and the value of the Bartlett's sphericity index was statistically significant [$\chi^2(15) = 214.779, p < 0.001$]. The analysis revealed a single factor, which explained 53.2% of the total variance, based on the criteria of Kaiser and Cattell. The factor loadings of the six items ranged between 0.53 and 0.84. The reliability of the GQ-6 scale was calculated with the Cronbach's internal consistency coefficient, indicating an acceptable reliability ($\alpha = 0.80$).

Then, the means (M) and standard deviations (SD) of each scale were calculated (see Table 6.2).

Participants reported moderate stress levels, low anxiety and depression symptoms, and moderate negative affect levels. Regarding positive well-being

Table 6.2 Means and standard deviations of each scale

Variables	M (SD)
Satisfaction with distance learning	1.94 (0.82)
Stress	10.54 (5.05)
Anxiety	7.47 (5.70)
Depression	9.48 (5.34)
Life Satisfaction	20.30 (5.83)
Subjective Happiness	17.34 (5.32)
Gratitude	28.06 (7.21)
Positive Affect	28.48 (6.75)
Negative Affect	24.29 (6.85)

Table 6.3 Correlations of well-being factors with satisfaction with distance learning (SWDL)

Variables	SWDL
Stress	-0.582**
Anxiety	-0.639**
Depression	-0.531**
Life Satisfaction	0.338**
Subjective Happiness	0.143
Gratitude	0.492**
Positive Affect	0.563**
Negative Affect	-0.357**

Note: * $p < 0.05$, ** $p < 0.011$

dimensions, participants reported moderate levels of life satisfaction and positive affect and high levels of subjective happiness and gratitude.

The Pearson correlation test was applied to investigate the relationship between the well-being variables and satisfaction with distance learning, after checking the assumptions of normality ($p > 0.05$).

Significant relationships emerged; in particular, positive well-being dimensions were positively correlated with SWDL, and negative ones negatively (Table 6.3).

A series of multivariate tests were conducted to examine the interaction of the 3 groups of students differing in satisfaction with distance learning (independent variable) with the eight well-being variables. The three groups were: students with low distance learning satisfaction ($N = 29$), students with moderate distance learning satisfaction ($N = 26$), and students with high distance learning satisfaction ($N = 24$). The 8 dependent variables were stress, anxiety, depression, life satisfaction, subjective happiness, gratitude, positive affect, and negative affect. The observed covariance matrices of the dependent variables were equal across groups.

MANOVA analysis showed a significant multivariate effect of the level of satisfaction with distance learning on the eight dependent variables [Pillai's trace = 0.64, $F(78) = 4.14$, $p < 0.01$, $\eta^2 = 0.321$], indicating a statistically significant difference across groups. The univariate F tests showed significant group differences for stress $F(78) = 21.53$, $\eta^2 = 0.362$, $p < 0.01$, negative affect: $F(78) = 5.69$, $\eta^2 = 0.130$, $p < 0.01$, anxiety: $F(78) = 32.46$, $\eta^2 = 0.461$, $p < 0.01$, depression: $F(78) = 17.32$, $\eta^2 = 0.313$, $p < 0.01$, life satisfaction: $F(78) = 6.77$,

$\eta^2 = 0.151, p < 0.05$, gratitude: $F(78) = 15.41, \eta^2 = 0.289, p < 0.01$, and positive affect: $F(78) = 22.56, \eta^2 = 0.373, p < 0.01$. No statistically significant difference between groups was instead found for subjective happiness.

Finally, a series of post-hoc analyses (Fisher's LSD; significance at $p < 0.05$) were performed to compare mean values of all positive dimensions (gratitude, life satisfaction, subjective happiness, positive affect) and the negative ones (stress, anxiety, depression, negative affect) across the three groups of students based on their levels of satisfaction with distance learning (low, moderate, and high).

The results revealed that, on average, students in the low satisfaction group ($M = 14.38, SD = 3.87$) presented significantly higher stress levels than the moderate satisfaction group ($M = 9.23, SD = 5.24$), who, in their turn, reported higher stress levels than the high satisfaction group ($M = 7.33, SD = 2.67$). Regarding negative affect, participants in the low satisfaction group ($M = 27.31, SD = 6.41$) presented higher negative affect levels than those in the moderate satisfaction group ($M = 21.42, SD = 5.71$), $p < 0.05$. Regarding anxiety, students in the low satisfaction group ($M = 12.45, SD = 4.39$) presented significantly higher anxiety levels than those in the moderate satisfaction group ($M = 5.35, SD = 4.83$), who however reported higher anxiety levels than the high satisfaction group ($M = 3.75, SD = 3.26$). Regarding depression, participants in the low satisfaction group ($M = 13.31, SD = 3.70$) presented significantly higher depression levels than those in the moderate satisfaction group ($M = 7.92, SD = 5.16$) who, in their turn, presented higher depression levels than the high satisfaction group ($M = 6.54, SD = 4.56$).

Regarding life satisfaction, students in the low satisfaction group ($M = 17.34, SD = 4.62$) presented lower life satisfaction levels than those in the moderate satisfaction group ($M = 22.04, SD = 5.50$), who presented higher life satisfaction depression levels than students in the high satisfaction group ($M = 22.00, SD = 6.24$). Regarding gratitude, the low satisfaction group ($M = 23.03, SD = 5.54$) presented lower gratitude levels than the moderate satisfaction group ($M = 30.54, SD = 6.59$); the latter presented lower gratitude levels than the high satisfaction group ($M = 31.46, SD = 6.40$), $p < 0.05$. Finally, regarding positive affect, participants in the low satisfaction group ($M = 23.14, SD = 4.29$) presented lower positive affect levels than the moderate satisfaction group ($M = 31.04, SD = 5.54$), who presented lower positive affect levels than the high satisfaction group ($M = 32.17, SD = 6.42$).

6.4 Discussion

Constant restrictions and lockdowns marked the period of the pandemic in Greece, which greatly affected citizens' mental health. The focus of the present study was to investigate whether Greek students experienced positive and negative well-being dimensions during the COVID-19 period, and how these dimensions were related to distance learning satisfaction, both globally and after grouping the participants

according to their level of distance learning satisfaction. Overall, results demonstrated that students experienced both negative and positive well-being during the pandemic; well-being dimensions and distance learning were shown to be related to each other; in addition, negative and positive well-being levels differed according to distance learning satisfaction.

First, the psychometric properties of the Greek version of the Gratitude Questionnaire, a measure included in the study, were assessed (question 1). Findings showed adequate validity of the scale for this population.

As concerns the negative side of the pandemic experience (question 2, part a), participants reported moderate stress levels, low anxiety and depression symptoms, and moderate negative affect levels. These results are consistent with other studies conducted during the pandemic to investigate students' levels of stress (Aslan et al., 2020; Debowska et al., 2020; Gritsenko et al., 2020; Konstantopoulou et al., 2020; Ye et al., 2020) and anxiety (Aslan et al., 2020; Debowska et al., 2020; Gritsenko et al., 2020; Husky et al., 2020; Islam et al., 2020; Kaparounaki et al., 2020; Sazakli et al., 2021). The findings concerning depressive symptoms and negative emotions were also consistent with previous studies conducted in the same period with university students (Alemany-Arrebola et al., 2020; Konstantopoulou et al., 2020; Konstantopoulou & Raikou, 2020; Kornilaki, 2021; Zhang et al., 2020). The pandemic-related difficulties in combination with the lack of social contact and support may explain these results (Elmer et al., 2020).

Answering part (b) of question 2, the participants experienced moderate levels of life satisfaction and positive affect, and high levels of gratitude and subjective happiness during the COVID-19 period. In line with the literature (Labrague, 2021), a negative correlation was detected between life satisfaction and stress. Students reported moderate levels of life satisfaction during the pandemic; the lack of previous evidence, however, does not allow for drawing any comparative conclusion.

Overall, the study participants experienced moderate levels of positive affect. Even if positive emotions have not been studied sufficiently, previous studies showed that during the pandemic the levels of positive emotions were moderate (Wang et al., 2020) or minimal (Karasmanaki & Tsantopoulos, 2021; Kornilaki, 2021). The current study participants experienced both positive and negative emotions at a moderate level; it is worth noting that the existence of the negative emotions does not cancel the existence of the positive ones and vice versa (Diener & Emmons, 1984).

In the current study, participants experienced high levels of gratitude. These results are consistent with previous surveys (Gaeta et al., 2021). The cultivation of gratitude is particularly important as it helps students face difficulties and overcome obstacles (Bono et al., 2020). Also, gratitude presents a negative relationship with stress (Biber et al., 2020). During the COVID-19 period, people faced problems and difficulties in different domains (e.g., health, social distance, economic difficulties); on the other hand, they started to reframe the situation and feel more grateful for small things in their lives (Jans-Beken, 2021).

Subjective happiness was high in the current survey. The same results were observed in other studies (Lin et al., 2021; Warrier et al., 2021). Literature found specific factors which may influence subjective happiness during the COVID-19 period. Higher happiness scores were detected among women compared to men (Warrier et al., 2021) and among those who had a good aspect and were satisfied with the educational environment (Lin et al., 2021). Perceived happiness can help students cope with their academic duties and have better academic achievement (Datu et al., 2017).

The third research question investigated the interplay between negative and positive well-being factors and distance learning satisfaction. As concerns part (a) of the question, a moderate positive relationship was detected between distance learning and depression; this result may be related to feelings of sadness experience by students during the compulsory lockdown due to the sudden lack of social contacts and abrupt and drastic changes in their daily lives (Elmer et al., 2020). Student identity is a crucial point of reference for emerging adults, which is enriched through the acquisition of knowledge and the development of social skills (Long, 2012). The lockdowns during the pandemic limited contact and connection, which was reflected in the present study results.

The comparison of the values of negative and positive psychological dimensions across groups of students with different levels of distance learning satisfaction (part b) highlighted significant group differences for stress, negative affect, anxiety, depression, life satisfaction, gratitude, and positive affect, but not for subjective happiness.

As this study constitutes one of the few attempts to understand and describe Greek students' mental health and distance learning satisfaction during COVID-19 pandemic, additional studies are needed in the future to better clarify these findings.

This research also presented some limitations. Self-report questionnaires are often biased because individuals may provide socially desirable answers. One further limitation concerned the low loading value of the sixth item of the Gratitude Questionnaire; moreover, the Cronbach's alpha of mDES was only minimally acceptable (DeVellis, 1991). One possible explanation for these low values is the small sample. So, larger samples should be included in future studies.

6.4.1 Implications

Overall, results from this study suggest the coexistence of negative and positive well-being dimensions in Greek students' experience during the pandemic, as well as their relationship with distance learning satisfaction. A better understanding of the role and interaction of these dimensions could help researchers and therapists to design appropriate intervention plans to treat depression, anxiety, and stress and to enhance well-being in problematic conditions involving distance learning. During the lockdown, distance learning has become an everyday habit of education. The present findings showed its negative relation to well-being for students perceiving it

as unsatisfying and suggest that this specific group may benefit from interventions implementing both distance learning procedures and students' technological competences.

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