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# Fluctuations in mental well-being during Study Abroad<sup>1</sup>

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## Abstract

This mixed methods study focuses on the effect of Study Abroad (SA) on the mental well-being of 33 Anglophone students who spent between 4 and 12 months in Francophone countries. It investigates the relationship between well-being and personality traits. Statistical analyses revealed no significant change in well-being between the start, the middle and the end of the SA. A closer look at individual patterns showed large fluctuations, with half of participants scoring higher and the other half scoring lower between the start and the middle of the SA. The narratives of three participants whose well-being scores increased most were not very different from the three participants whose well-being scores decreased most, and only (lower) Emotional Stability was linked with the increase in well-being. At group level, well-being was not significantly linked to personality traits. The apparent stability of well-being during SA seems to be the result of upward and downward patterns cancelling each other out.

**Keywords:** mental well-being, personality, developmental trajectories, longitudinal, mixed-methods

## 1. Introduction

Study Abroad (SA) represents a huge change for students who have typically never lived abroad on their own before. The experience is stressful and therefore psychologically challenging. It can lead to social isolation and avoidance behaviours in the use of the target language, which negatively impact mental well-being and linguistic gains. Zhou et al. (2008) found that many students arriving in novel social and educational environments experienced culture shock and adaptation problems which had repercussions on their mental health. Student-internal variables such as proficiency in the target language, cultural identity and personality and student-external variables such as the distance between the home and the host country, combined with social, political, economic and cultural factors shaped their acculturation process. One of the striking findings is that even when international students experience low levels of loneliness and stress during their SA, they may still struggle with sociocultural adjustment and suffer from psychological distress (O'Reilly, Ryan & Hickey, 2010). As Furnham and Heaven (1999) pointed out, a person's personality is shaped by a combination of internal physiological factors and external social factors. It is thus very likely that the student-internal variables that predicted loneliness and stress in O'Reilly et al. (2010) were probably changing themselves during the SA, as students became more proficient, developed their cultural identity, and may have experienced changes on some personality traits (Tracy-Ventura et al., 2016). Indeed, multilingualism and multiculturalism have been shown to be linked to higher levels of Flexibility, Social Initiative and Open-mindedness (Dewaele & Botes, 2020). We thus agree with Chen, Benet-Martinez and Bond (2008) that it is important to adopt a dynamic view when looking at acculturation: "we need process-

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oriented studies that acknowledge the complex interplay among identity, language, personality, and contextual variables” (p. 832).

The present study is inspired by the work of Kinginger (2004, 2008, 2011) on the myriad of communicative and psychological challenges that students can face, sometimes unsuccessfully, sometimes with brio, during their SA. She collected test results, diaries and interview data at the start, in the middle and at the end of American students’ SA in France in 2003, with the aim of understanding why some made significant linguistic progress and thrived, while others made no progress at all and struggled psychologically.

Kinginger (2004) focused on Alice, for whom life in France did not live up to the romantic image she had constructed in college. Moreover, her linguistic limitations initially hampered her ability to engage in interactions in French, which left her frustrated and angry and led to a severe bout of depression. She did, however, overcome her depression half-way through her SA, after finding a job as an English language teaching assistant, expanding her social networks, developing a political awareness and boosting her resilience. By the end of her SA, she felt like “the Queen of France,” having “these long philosophical conversations using big long French words” (Kinginger, 2004: 236). The SA was a transformative experience for Alice, turning her from “a drifter” into a “great student” (p. 240).

Kinginger (2008) presented case studies of 24 students for whom the SA experience and outcome had been very different. Bill was an extravert whose French was in the elementary range at the start of the SA. He expressed a desire for challenge and opportunities to improve his French and broaden his cultural horizon. He was very fortunate in his homestay placement, staying with a friendly family with whom he had long dinner-time conversations. Although he faced some initial challenges in establishing a new social network, by the mid-point he had developed a large social circle, having joined a church group and a football team. He remained happy throughout his stay and made significant linguistic progress. At the opposite end of the spectrum is Deirdre, who had little prior knowledge of France, an intermediate level in French, and very vague expectations. Before her departure, she dreaded the temporary separation from her boyfriend at home. Once in France, she lived alone in an apartment, where she felt isolated, home-sick, penniless, disoriented, alienated, and confused. She made no attempts to establish new social networks because she felt the French were rude and sexist. She sought refuge in computer-mediated communication with friends and family back home. She complained about the academic programme, the food, the weather and even the beach in Montpellier. Towards the end of her stay, she was using French only for minimal service encounters. She dropped French on her return (Kinginger, 2008).

One could argue that Bill, Alice and Deirdre are exemplars. Bill’s mental well-being seems to have been consistently high, from pre-departure until his return. Alice’s well-being dipped on arrival in France before recovering and surpassing initial levels. Deirdre’s well-being dropped off a cliff at the start of the SA and only recovered back home. Bill and Alice made significant linguistic gains; Deirdre none. In the absence of precise instruments to measure well-being and with just a handful of cases, it is impossible to generalise the findings, but they raise interesting questions about potential patterns. Howard (2021) argues that the SA experience is unique for every individual and involves many personal, social and contextual factors, so that the outcomes remain largely unpredictable.

The present study aims to shed light on the fluctuations in mental well-being among British students spending time in France, and to try to uncover common factors and causes for increases and decreases in well-being. Following the findings in the recent meta-analysis by Anglim et al. (2020) on the associations between Big Five personality traits and well-being variables, we hypothesise that students’ Big Five personality traits may be linked to levels of well-being during SA, and that they may be further shaped by unique circumstances

and experiences. No research has, to our knowledge, used a validated psychological instrument specifically designed to measure mental well-being of students before, during, and after SA. We used a series of online questionnaires in which the *Warwick-Edinburgh Mental Well-being Scale (WEMWBS)* was embedded, which measures how well participants feel and how well they function. A mixed methods design was adopted, combining statistical analysis of quantitative data with qualitative analysis of short written narratives, to establish the fluctuations in well-being of a group of 33 British and Irish students, and linking it to their personality profiles.

## 2. Literature review

### *The psychological framework*

Huppert and Ruggeri (2017) state that despite the fact that interest in mental well-being is thousands of years old and can be traced back to ancient philosophers and religious thinkers, scientific research into well-being is relatively recent. Such research is important because well-being is a desirable state for individuals and good for society. They point out that well-being is linked to better health, better social relationships, higher productivity, and better academic performance. They acknowledge the fact that there is no clear consensus on the definition of mental well-being but argue that it is important to be pragmatic and refer to Tennant et al.'s (2007) widely used *Warwick-Edinburgh Mental Well-being Scale (WEMWBS)*. It has been translated in 25 different languages, with the aim of measuring mental well-being in the general population with a single score combining several dimensions of well-being. It has been used in large population survey in Spain, Iceland and the UK (<https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs/>). The authors explain that strong mental well-being “is much more than the absence of mental illness” (ibid.) and that people who are mentally ill can experience moments of well-being. The authors adopted an interdisciplinary perspective in the conceptualisation of well-being, combining both feeling and functioning aspects of mental well-being. The former is associated with the view that well-being is a “state” and fluctuates according to the context; the latter reflects the view that well-being is a “trait” or a relatively stable psychological trait, that can change through external events or therapeutic interventions (ibid.).

The “trait” versus “state” distinction is at the heart of personality psychology. Pervin and Cervone (2010) explain that personality traits “summarize a person’s typical behavior” (p. 229) and can also include thoughts and emotions. Trait psychologists agree that traits are organised hierarchically with five broad, orthogonal dimensions at the apex (Extraversion versus Introversion; Neuroticism versus Emotional Stability; Conscientiousness versus Negligence; Agreeableness versus Disagreeableness and Openness-to-Experience versus closed mindedness). Distribution on these dimensions is normal, meaning most people have a score somewhere in the middle of a dimension. There are also a larger number of ‘lower-order’ personality traits, which are often correlated with Big Five traits but also explain unique variance (Pervin & Cervone, 2010). Traits are assumed to be universal.

Anglim et al. (2020) present a meta-analysis of 462 studies that investigated links between Big Five personality traits and self-reported subjective well-being and psychological well-being. The authors found “that the overlap between basic personality traits and well-being dimensions is substantial” (p. 18), with an average correlation of .28 (p. 14). Emotional Stability and Extraversion emerged as the strongest positive correlates of well-being, with .46 and .37 respectively, followed by Conscientiousness with .36 (p. 14).

The Multicultural Personality Questionnaire (MPQ) is a Big Five questionnaire which has been developed specifically for the measurement of multi-cultural effectiveness among individuals dealing with cross-cultural contexts (van Oudenhoven & van der Zee, 2002). It

measures five traits that are highly relevant in inter-cultural situations and are labelled according to the positive pole of the dimension: Cultural Empathy defined as the “ability to empathise with the feelings, thoughts and behaviours of members from different cultural groups” (van Oudenhoven & van der Zee, 2002: 680); Flexibility, namely “the ability to learn from mistakes and adjustment of behaviour whenever it is required” (van der Zee & van Oudenhoven, 2000: 295); Social Initiative, defined as “the ability to approach social situations actively, and to establish and maintain social relationships” (van Oudenhoven & van der Zee, 2002: 681); Open-mindedness, defined as “an open and unprejudiced attitude towards out-group members and towards different cultural norms and values” (van der Zee & van Oudenhoven, 2000: 294); and Emotional Stability, which reflects “a tendency to remain calm in stressful situations” (van der Zee & van Oudenhoven, 2000: 294). The opposite pole of this dimension is Neuroticism. The MPQ is perfectly suited for research on multilingual participants spending time abroad (Tracey-Ventura et al., 2016).

### *SLA research on SA including psychological variables*

We define SA as a period abroad where improving skills in the target language is the primary aim. The term ‘study abroad’ is used throughout as an umbrella term for all activities undertaken by students while abroad, including study, work placements and teaching assistantships.

One of the pioneering studies on the psychological effects of SA is the mixed methods study by Kuh and Kaufman (1984), who used a longitudinal design to measure personality change in a group of 126 American students after SA. The authors found that upon their return, students scored significantly higher on a single dimension of the Omnibus Personality Inventory, namely ‘Interest in reflective thought’. They also noted a marginal increase in ‘Feelings of well-being’. Interviews also revealed an increased interest in the welfare of others, combined with increased self-confidence.

In a similar vein, Zimmerman and Neyer (2013) carried out a longitudinal study to examine the impact of SA on change in personality, using the Big Five Inventory. The authors collected data from 527 German university students whose SA in EU countries was either short-term (one semester) or long-term (one academic year), along with a control group of 607 at-home students. The authors found that both short-term and long-term SA were associated with significant increases in Openness, Agreeableness and Emotional Stability. These changes were linked to students’ development of new international support relationships but they also suffered from national relationship losses.

Similarly, Schartner (2016) investigated change in the personality profiles of 143 students with more than 20 nationalities undertaking a full-time one-year SA at the same British university. Participants filled out the MPQ (van der Zee & van Oudenhoven, 2001). Over a period of nine months, levels of Emotional Stability went up significantly, while counter-intuitively levels of Cultural Empathy and Openmindedness dropped significantly. No change was observed for Social Initiative or Flexibility. The authors suggest that students may have overestimated their Cultural Empathy and Openmindedness at the start of the SA, and that at the end of that period they were better able to reflect on their experiences and provide a more accurate self-rating. The authors attribute the increase in Emotional Stability to a temporary drop in Emotional Stability at the start of the SA due to new experience of acculturative stress as they settled in. Chinese students in particular reported that they had been unable to form social ties with British people. Interview data showed that towards the end of their stay in the UK, participants had become more used to living alone, found social support and settled in the new environment. They had also developed their intercultural awareness.

Tracey-Ventura et al. (2016) built on this further, using a mixed methods approach to investigate whether the personality profiles of 58 British undergraduate students shifted as a result of their SA in a French- or Spanish-speaking country. Participants filled out the MPQ before departure and after returning to their home university. All participants were also interviewed at the end of their SA with a focus on perceptions of personality changes. No changes emerged after the SA for Cultural Empathy, Flexibility, Openmindedness, and Social Initiative, but the score on Emotional Stability increased significantly, although the effect size was small. Participants reported on their initial linguistic difficulties in new discourse domains, such as opening a bank account, which made them uncomfortable. A total of 41 out of 53 participants (77%) who were interviewed reported feeling more confident, resilient, empowered and independent after their SA, which implies that they did not quite feel that way at the start of the SA. Twenty participants (38%) also reported feeling more relaxed in social interactions, having overcome initial timidity and nervousness when meeting and talking to new people. These observations correspond with items for Emotional Stability in the MPQ. Less frequent were comments concerning an increased interest in other cultures, in line with items for Openmindedness, and comments on increased tolerance of others and self-reflection on behaviours which refer to increased Cultural Empathy. Two participants reported that they had not grown as a person after their SA, explaining that they had previously lived abroad for an extended stay.

In a further study on the same dataset, Mitchell et al. (2017) reflected on the students' increased self-confidence and self-efficacy on return from the SA. All of them felt they had matured and become more independent as a result of their SA and that it had struck them when they compared themselves with friends who had stayed at home. One participant put it as follows: "I feel like the world's my oyster now, while before perhaps I was a bit scared to live abroad, and now it doesn't faze me" (p. 209). The only personality trait linked to linguistic gain scores was Flexibility which correlated significantly with gains in Elicited Imitation, Speech Rate and proportion of Error-Free Clauses. The authors admit that they "do not have a full explanation" for this finding (p. 225), but they suggest that it might be related to the fact that Flexibility entails adaptability and willingness to seek challenges. Case studies into high gainers revealed that several lacked self-confidence at the start of the SA and had suffered from loneliness and culture shock for a while. One participant complained in her first interview that she had nothing in common with the teenagers around her and that her French interlocutors wanted to practice their English with her, denying her the opportunity to improve her French. However, overall the high gainers had managed to expand their multilingual social networks and maximized L2 engagement, succeeding to a considerable degree, although not always from the start. Psychologically, they had developed a clear vision of their ideal multilingual self, strengthened their flexibility, resilience, openness, responsiveness, emotional engagement and had improved their capacity for self-reflection (p. 247).

Also using the MPQ, Arvidsson, Eyckmans, Rosiers and Lundell (2018) collected data from 59 Swedish and Belgian university students who had participated in SA, and found a positive relationship between Cultural Empathy and self-perceived progress in speaking the target language and a positive link between Cultural Empathy, Openmindedness and amount of target language use. The authors speculate that increased target language use may have enhanced the capacity of the students to empathise with interlocutors and understand their interlocutors, and may have boosted a more general interest in different cultures. The newly established social bonds could simultaneously have "decreased the participants' tendency for prejudice and increased their tolerance for intercultural differences" (p. 158). In considering why so many participants scored lower on the MPQ dimensions at the end of the SA, the authors suggest that it may be linked to "the uniqueness of each individual's experience

abroad in the sense that a sojourn abroad does not bring about the same outcome in terms of personal development” (p. 159). They wonder whether their participants may have experienced frustration in communicating in the target language, leading to an overall decrease of interest in their interlocutors.

One study focused not so much on personality change using a Big Five personality questionnaire, but rather on intercultural adaptation of SA students. Gu and Maley (2008) collected data from Chinese students in the UK looking at how they adapted to their new learning and living environment. Data from interviews with 41 students and a questionnaire with 163 participants suggested that the students did struggle and that their intercultural adaptation depended on psychological, pedagogical and purely personal factors. The authors point out that in addition to having to adapt to a new, more relaxed teaching style, participants struggled with feelings of boredom, loneliness, alienation and a dislike of British food. They also regretted a reduction in their social contacts and friendships in the UK. However, a majority of participants did report that as the SA progressed, they became aware of their linguistic gains made, more active participation in class interaction, and developed a sense of increased self-confidence, personal growth and independence.

Dewey, Belnap and Steffen (2018) collected data from 36 American students of Arabic who spent one semester in intensive classes in Amman, Jordan. Foreign Language Anxiety dropped and Foreign Language Enjoyment increased over the period of SA. However, levels of hair cortisol (a physiological manifestation of anxiety) remained high “comparable to those of moderate consistent stressors, but not as high as those seen in studies of extreme stressors such as those responsible for posttraumatic stress disorder” (p. 154). Participants who had a tendency toward overall anxiety prior to SA, suffered more from Foreign Language Anxiety and those who had lower language proficiency at the start of the SA were more likely to have higher levels of hair cortisol, suggesting persistent high levels of stress.

In a study that complements the present paper as it used the same participants, Dewaele and Dewaele (2021) looked at actual and self-perceived linguistic proficiency gains in French of 33 Anglophone students who spent between four and twelve months in a Francophone country. Both actual proficiency and self-reported proficiency had increased significantly by the end of the SA. The amount of gain was found to be quite independent from participants’ descriptions of how positive their experience had been, and it was instead linked to the quantity and quality of interactions in French with a local French social network. Participants with higher initial actual proficiency were found to have made more modest gains during SA.

In sum, the literature review suggests that SA seems to have relatively limited and weak effects on stable higher-order personality traits such as Emotional Stability and somewhat stronger effects on less stable, lower-order dimensions. Interview data suggest that SA participants go through emotional highs and lows unlike anything they have typically experienced before, linked to a variety of triggers which affect their well-being. What remains to be established is just how much fluctuation in well-being students experience before, during, and after their SA, and whether the levels of well-being are linked to personality traits. It is also worth investigating whether individual developmental trajectories match the group developmental trajectory. A number of psychologists have suggested that more attention needs to be paid to individual differences in patterns of change, in other words, looking at individual developmental trajectories (Bleidorn et al., 2009). Finally, after grouping participants who share developmental trajectories in well-being, it is useful to explore their personal narratives to see whether some common causes for increases or decreases in well-being can be identified.

### 3. Research questions

Considering the previous literature and the gaps identified, the following research questions were formulated:

- 1) Did SA affect participants' well-being?
- 2) In the case of the participants whose well-being increased most, and the those whose well-being decreased most, did they report similar issues in their SA experience, and did they share a similar personality profile?
- 3) Are personality traits linked with the level of well-being at the start and end of the SA? Considering the work of Kinginger (2004, 2008), we hypothesize that a number of different patterns are possible: little or no change over time; a continuous decrease in well-being between the start and the end of the SA; a continuous rise over time; a V-like pattern; or an inverted V-shaped pattern, with levels of well-being in the middle of the SA being very different from the start and end of the SA. Reasons for change are likely to be linked with the sudden change in social, cultural and linguistic environment and the adjustment to the new circumstances. Considering the work of Anglim et al. (2020), we expected that levels of Neuroticism and Social Initiative will be linked with well-being.

### 4. Methodology

This study is based on a longitudinal, mixed methods approach. More specifically, it is a convergent parallel design (Creswell & Plano Clark, 2011), in which quantitative and (some) qualitative data are collected in parallel. Therefore, a number of short narratives by participants describing their SA experience will be included to shed light on the statistical findings. The method received ethical approval from the Social Sciences and Humanities Inter-divisional Research Ethics Committee of the University of Oxford (R52027/RE001).

#### 4.1 Participants

The participants were 33 British and Irish undergraduate university students (mean age = 20.1, SD = .58) from nine different research-intensive universities, who were completing a compulsory period abroad as part of their language studies. The majority were studying French as a joint major, often with another language or with another subject. In addition to French and the languages mentioned earlier, some participants also reported knowledge of Chinese, Russian, Korean and Portuguese.

Students were recruited via a personal email sent through the second author's Year Abroad office and through an open call on the mailing list of the Association for French Language Studies. Participants had been studying French for at least five years, and the mean length of study of French prior to departure was eleven and a half years. All spent at least four months of their year abroad in a Francophone country, with the mean period of time being eight months. There was a fairly even spread in the activities undertaken by participants: ten were enrolled at university, thirteen completed internships, eight worked as teaching assistants, and two combined studies and an internship. Most ( $n = 30$ ) went to France, one student went to French Guyana, one to New Caledonia and one to Switzerland. More demographic information is presented in Table 1.



Table 1  
*Sociobiographical information of participants*

Variable	Category	Number of participants
Gender	Male	7
	Female	26
L1(s)	English only	30
	English, French, Dutch	1
	Czech, Russian	1
	Romanian	1
Multilingualism	Bilingual	9
	Trilingual	12
	Quadrilingual	9
	Pentalingual	3
Level in French at the end of the SA	B1	1
	B2	16
	C1	5
	C2	4
Years of study of French	5-8	6
	9-11	20
	12+	7
Age of onset of acquisition	0-2	2
	3-8	6
	9-12	23
	13+	2
Lived abroad before (more than three months)	No	29
	Yes	4
Length of SA	4-6 months	9
	7-9 months	14
	10-12 months	10

#### 4.2 Questionnaires

Mental well-being was assessed with the *Warwick-Edinburgh Mental Well-being Scale (WEMWBS)* (Tennant et al., 2007) at Time 1, Time 2 and Time 3. It consists of fourteen statements that are positively phrased and relate to how participants have been feeling in the last two weeks, e.g. “I’ve been feeling relaxed.” Possible answers are: none of the time (1); rarely (2); some of the time (3); often (4); all of the time (5). These are added to calculate a total score. The total score ranges from 14 to 70. The scores approximate to a normal distribution, allowing parametric statistics. According to the authors of the instrument, a score of 40 or less suggests probable depression and 41-44 points to possible depression. Scores between 45 and 59 represent average mental well-being and scores of 60 and above signal high mental well-being

(<https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs/using/howto/>). The authors recommend a sample size of at least 30 people (<https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs/using/howto/>). Scale analyses indicated good internal consistency (Cronbach  $\alpha = .91$ ) in the original instrument. Similar results emerged for our study with Cronbach  $\alpha = .92$  at Time 1,  $\alpha = .87$  at Time 2, and  $\alpha = .91$  at Time 3.

Participants then filled out the short form of the *Multicultural Personality Questionnaire (MPQ)* which consists of 40 items (van der Zee, van Oudenhoven, Ponterotto, & Fietzer, 2013). The questionnaire starts with the question “To what extent do the following statements apply to you?” Possible answers are: (1) totally not applicable; (2) hardly applicable; (3) moderately applicable; (4) largely applicable; (5) completely applicable. The Cronbach alpha values revealed satisfactory to good internal consistency (see Table 2).

Table 2 MPQ sample items and reliability measures collected at Time 1.

Personality trait	Example Item	Cronbach $\alpha$
Cultural Empathy	Pays attention to the emotions of others	.75
Flexibility	Tries out various approaches	.81
Social Initiative	Is inclined to speak out	.86
Open-mindedness	Has a broad range of interests	.63
Emotional Stability	Keeps calm when things don't go well	.85

Next, participants completed the LexTALE test for intermediate and advanced language learners (Brysbaert, 2013). The scores, which can range from 0 to 100, can be matched with the proficiency scales on the Common European Framework of Reference. Scores below 0.59 correspond to B1 and lower, scores between 0.60 and 0.80 correspond to upper independent users (B2), scores between 0.80 and 0.90 correspond to lower advanced (C1) users, and scores above 0.90 correspond to upper advanced (C2) users. Most participants fell within the range of Upper independent users (B2) (see Table 1).

After completing their SA, participants were also asked to write a short narrative in French about their experience. They were invited to reflect on the joys and challenges, as well as the psychological, cultural, social and linguistic aspects of their SA. This yielded a corpus of 13,855 words.

#### 4.3 Design

Data collection involved sending potential participants a link to an initial online questionnaire through the method outlined above. Students actively gave their consent to take part in the study, before completing some initial background information about themselves and the period they would be spending in a Francophone country. This information determined the dates when participants were sent an invitation to participate in three further anonymous online questionnaires via email over the course of their year abroad.

Initial background information and information on participants' departure and return dates was collected well before the start of the academic year. It determined the dates when participants were sent an invitation to participate in three further anonymous online questionnaires via email over the course of their SA. Participants completed the MPQ, the WEMWBS and the LexTALE just before their departure (Time 1), they repeated the WEMWBS when they were halfway through their stay in the Francophone country (Time 2), and they completed the WEMWBS and the LexTALE again toward the end of their SA (Time 3). Table 3 presents an overview of the time points. The descriptive statistics for well-being and the personality dimensions are presented in Table 4.

**Table 3.** Timing of the data collection

Time points	Description	Measure
One month before the start of the academic year	Sociobiographical details and information on the SA	N/A
Time 1 (start of SA)	Personality profile	Multicultural Personality Questionnaire
	Mental well-being	Warwick-Edinburgh well-being scale
	Measure of French proficiency	LexTALE test
Time 2 (middle of SA)	Mental well-being	Warwick-Edinburgh well-being scale
Time 3 (towards the end of SA)	Mental well-being	Warwick-Edinburgh well-being scale
	Measure of French proficiency	LexTALE test
	Maximum 250 words in French about SA experience (later translated)	N/A

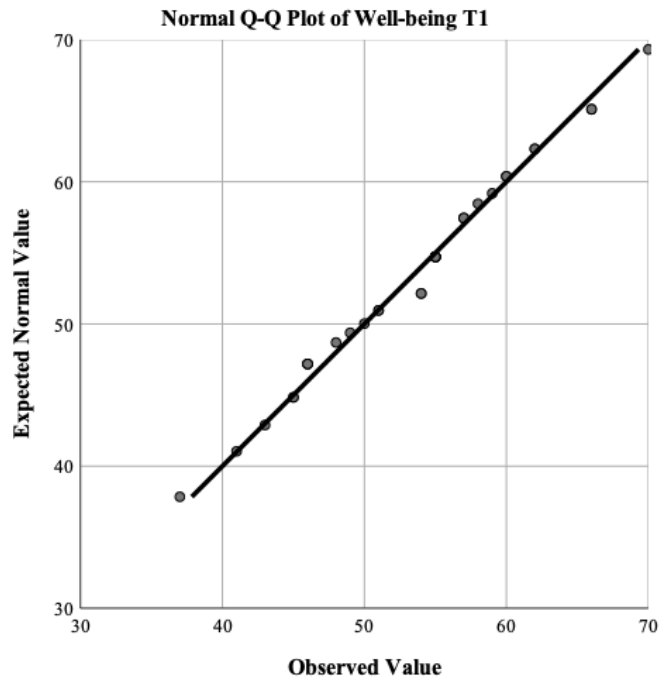
**Table 4.** Descriptive data for well-being and the MPQ dimensions

Variable	Time 1	Time 2	Time 3
Well-being	$M = 53.58, SD = 7.56$	$M = 52.09, SD = 6.77$	$M = 53.76, SD = 7.38$
Cultural Empathy	$M = 4.03, SD = .46$		
Flexibility	$M = 3.08, SD = .62$		
Social Initiative	$M = 2.86, SD = .44$		
Openmindedness	$M = 3.56, SD = .41$		
Emotional Stability	$M = 2.93, SD = .64$		

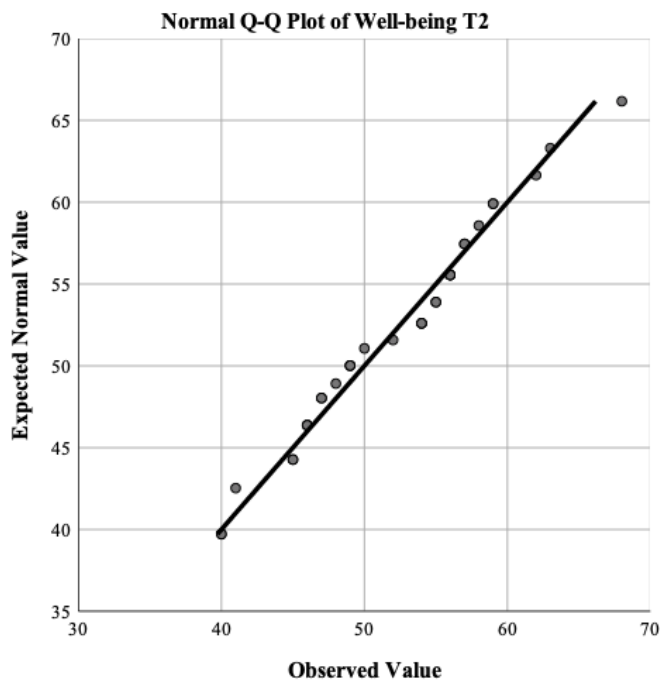
#### 4.4 Data analysis

The quantitative data were analysed with SPSS 26. A Q-Q plot (quantile-quantile plot) showed that well-being scores follow a normal distribution reasonably well except for the extreme tail at Time 3 (values below 45) (see Figures 1, 2 and 3). A series of Pearson Chi<sup>2</sup> analyses was used in order to measure change in three different categories of well-being (depressed, average, high) over time. This was followed by a repeated measures ANOVA to establish the change in mental well-being scores between Time 1, Time 2 and Time 3. Narrative material of the three participants with the biggest increases and three participants with the biggest decreases in well-being between Time 1 and Time 2 was analysed to find common themes.

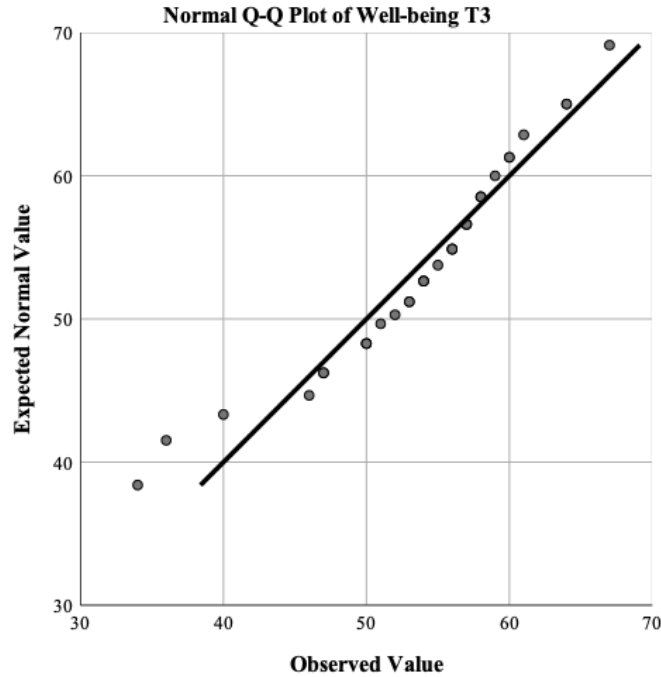
Finally, Pearson correlation analyses were used to identify significant relationships between well-being and personality traits<sup>1</sup>.



**Figure 1.** Normal Q-Q plot of well-being at Time 1



**Figure 2.** Normal Q-Q plot of well-being at Time 2

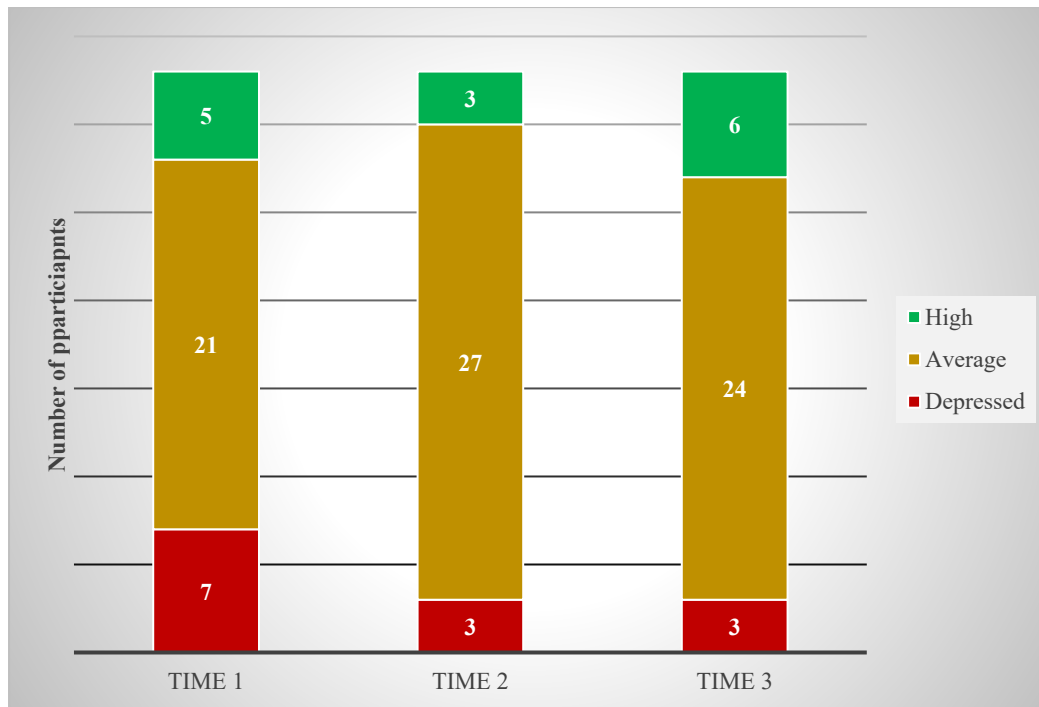


**Figure 3.** Normal Q-Q plot of well-being at Time 3.

## 5. Results

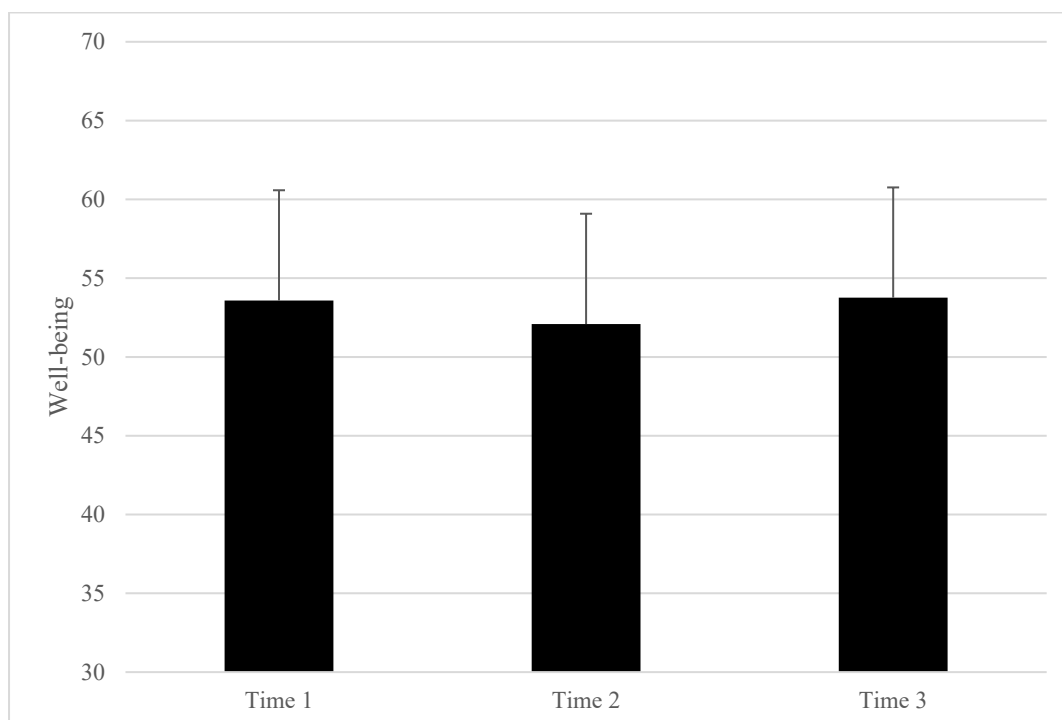
### 5.1 The effect of SA on participants' well-being

Firstly, we looked at the effect of SA on proportions of participants with low, average and high levels of well-being at Time 1, Time 2 and Time 3.<sup>2</sup> Surprisingly, a larger number of participants were depressed at Time 1 than at Time 2 and Time 3 (Figure 4). The number of participants in the average range of well-being was greatest at Time 2. A Pearson  $\chi^2$  analysis revealed no significant difference between Time 1 and Time 2 ( $\chi^2 = 5.28$ ,  $df = 4$ ,  $p = .26$ ). However, a significant difference emerges between Time 2 and Time 3 ( $\chi^2 = 18.23$ ,  $df = 4$ ,  $p < .001$ ), with a higher proportion of participants in the high category well-being. Finally, no significant difference emerged between Time 1 and Time 3 ( $\chi^2 = 2.61$ ,  $df = 4$ ,  $p = .62$ ).



**Figure 4.** Clustered columns of participants with low, average and high well-being at Time 1, Time 2 and Time 3

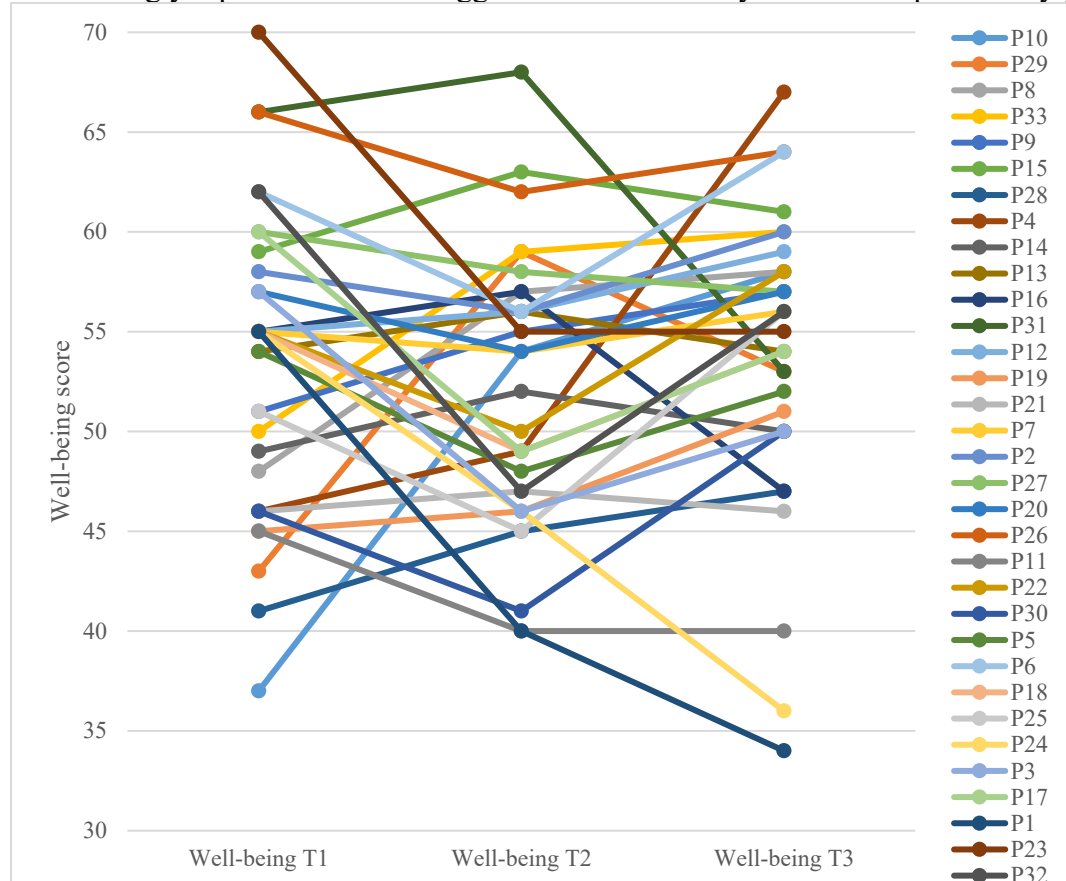
Secondly, in order to obtain a more granular view of the change of well-being over time, a repeated measures ANOVA was run on individual scores for well-being. It revealed that they did not change significantly over time (Wilks' Lambda = .915,  $F(2, 31) = 1.4$ ,  $p = .25$ ).



**Figure 5.** Well-being scores from Time 1 to Time 3

Figure 5 might create the false impression that nothing much changed during the SA. A closer look at the data shows that the well-being scores of 15 participants increased between Time 1 and Time 2 (ranging from 1 to 17), while the scores of the remaining 18 participants decreased over the same period (ranging from -1 to -18). A comparison of the well-being

scores at Time 2 and Time 3 shows that they remained unchanged for two participants, increased for 18 participants (ranging from 1 to 18), decreased for ten participants (from -1 to -15). Figure 6 shows the patterns for every participant. We decided to focus on differences between Time 1 and Time 2 as it reflects the initial impact of the SA on well-being when the effect of culture shock is most acute (Zhou et al., 2008). Participants were sorted according to the direction and amount of change between Time 1 and Time 2. The scores of P10, P29 and P8 increased the most (+17 to +9) while the scores of P1, P23 and P32 decreased the most (-15). We consider their narratives in order to get a sense of what might have caused the changes. Thus, in order to answer the second research question, we analysed narratives looking at whether the six participants whose levels of well-being had increased or decreased most strongly reported common triggers and whether they had similar personality profiles.



**Figure 6.** Patterns in well-being for every participant over time

## 5.2 Experiential and personality characteristics of participants with the strongest increase or decrease in well-being between Time 1 and Time 2

### 5.2.1 Strongest increase in well-being between Time 1 and Time 2

P10 is a trilingual who had not previously lived in a French territory. She spent eight months in French Guiana doing a teaching assistantship. She reported that she had no choice but to use French from the start of her SA as presentations and administrative procedures were conducted in French and she used French casually with colleagues and friends. Her well-being score increased from 37 at Time 1 to 54 at Time 2 and increased further to 58 at Time 3. Reflecting on her SA, she stated in her narrative:

P10: My experience in French Guiana was difficult but also even more rewarding than I had thought before starting my year abroad. I got to know a unique and rich country and corner of the world, and I was fortunate to find a community of international friends who were all drawn to Guyana for various reasons. I learned a lot about the

cultural differences and the diverse experiences in the world. Frankly, I'm not too much looking forward to going back to Oxford and the pressure and stressful environment, but I have decided that my new attitude of positivity is going to last for through my final year, and that I can enjoy my experiences at Oxford as much as possible until the completion of my BA. Overall my experience abroad was exactly what I needed in my life - the opportunity to enjoy nature, relaxed life and the richness of Guyanese culture.

P29 is a bilingual who had not previously lived abroad. She spent ten months studying in a French university. She reported that her most stressful interactions in French happened before the start of the academic year. Her well-being score increased from 43 at Time 1 to 59 at Time 2 and then dropped to 53 at Time 3. In her narrative she stated:

P29: I thought I would find the year abroad more difficult. It is true that there were difficulties - finding accommodation, getting used to a new place, being away from friends. But, in fact, I made new friends very quickly, and I enjoyed living in a new area. Particularly highlighting moments were spending time with my roommates, because they were French and so I could practice my language skills but also learn about a new culture and differences. I even spent a weekend with the family of one of my roommates, it was a very enriching experience. In addition, I have visited many countries and cities around Europe, an opportunity that I did not have before. I was amazed by the administration in France - all things are very long and require several documents and steps. The number of strikes was large - my university was on strike from February until June.

P8 is a trilingual who had not previously lived in France. She spent seven months doing a teaching assistantship in a primary school in Maubeuge in the north of France. Her well-being score increased from 48 at Time 1 to 57 at Time 2 and increased further to 58 at Time 3.

P8: It was a very nice experience. Before going to France I was very anxious and honestly just wanted to go back to Oxford. However, as soon as I got there I was hooked. From my first day I loved the school - the students and my colleagues gave me a warm welcome. I quickly found my place in the team (even if learning 300 new names was a challenge ...). There were times when I felt a bit lonely since I lived in a fairly small town and there weren't many people my age there. But I did my best to fit into the community and really enjoyed it. Also, I think it was important to spend time in a city like this because it gave me a more real feel of life in France. There were some defining moments throughout the year when children touched me with their little drawings - I kept all of them! About my return to Oxford, I can't wait! I'm a little scared because I've made so much personal progress this year and I don't want to lose all of that, but at the same time I feel like I'm more balanced so I hope I'm okay. After all, I am really happy with my stay, and contrary to what I expected, it made me feel good.

These three narratives have in common an acknowledgment of the difficulties faced (the stress of settling in, loneliness, strikes, administrative problems) but the unanticipated joy of discovery, of social bonding and practice of French, and for P10 also a temporary reprieve from the highly stressful environment of the home university to a more relaxing exotic environment. P10 and P8 mention that the SA experience had been transformative, making them more positive, happy and more resilient. P8 seems to have found her vocation as a teacher. All three participants reported feeling anxious before the start of the SA, but this anxiety quickly dissipated once they had settled in.

### *5.2.3 Strongest decrease in well-being between Time 1 and Time 2*

P1 is a quadrilingual who had not previously lived in France. She spent nine months doing two internships in Paris and Biarritz. She commented that she spent much more time reading French in Paris than in Biarritz. The central location of Paris meant she was able to socialise



more easily and more intensely with her British friends, in contrast with Biarritz. Her well-being score dropped from 55 at Time 1 to 40 and Time 2 and 34 at Time 3.

P1: My year abroad did not go as planned at all. I spent the first part in Paris, and I had a great time there. I lived in an apartment in the 5th arrondissement near the Jardin des Plantes, and I worked in the 6th, in St Germain des Prés. I walked to work through central Paris, often along the Seine, which was amazing. The job was interesting - I worked in a literary agency - and I had a lot of friends from Oxford who were there at the same time as I was, and who came to visit. The second part of the year was much more difficult. I was in Biarritz, in the Basque Country, and I was very lonely and the weather was unbelievably bad. Biarritz is a seaside town, which lives for the summer, so between February and May, there was hardly anyone and not much to do. Plus, I'm used to cities - I grew up in London - so I quickly got sick of being stuck inside in a tiny little town with little to do. I ended up meeting a lot of French people thanks to the Crossfit sport classes. There I met some really nice people, and I learned a lot of sports vocabulary!

P23 is a quadrilingual who had not previously lived in France. She spent six months working in Paris and mentioned an initial lack of confidence in her use of French. Her well-being score dropped from 70 at Time 1 to 55 at Time 2 and remained unchanged at Time 3.

P 23: My year abroad was not as I imagined, due to various things including problems at home in England, but for the most part it was because of my job. There wasn't an office so I had to work in my small apartment and I felt a bit isolated. I had fantastic experiences also for example I had the opportunity to see the National Opera of Paris and to see the ballet too. I have met some interesting people and learned a lot from them. I feel more confident and independent as a result of living alone. I had days without seeing any other person and I also had family problems which impacted my year abroad but I am stronger than before and I understand more of myself.

P32 is a bilingual who had not previously lived in France and spent a full year in Rouen, studying during the school year and working during the summer. She mentioned a certain apprehension at the start of the SA in having to use French to do unfamiliar things like opening a bank account. Her well-being score dropped from 62 at Time 1 to 47 and Time 2 and bounced back to 56 at Time 3.

P32: There were aspects of my year abroad that I had expected and some that I hadn't expected. I had expected some of the French to be rude but not to the extent I experienced. I expected the university to be more helpful. I also expected to feel much more secure than I felt. If I had lived in Paris, I would have understood but I did not expect this feeling of insecurity in Rouen. There are also a lot of strikes in France, which is something that I did not foresee. On the other hand, I was having a lot more fun than I expected. Many teachers understood that French was not my mother tongue. France is also a beautiful country with so much to see and do. It's pretty easy to go anywhere you want with the public transportation system and with private bus companies. I think my experience in France was very beneficial to me even if it was not what I expected.

What these three narratives have in common are unexpected challenges that the participants had to face. For P1 and P23, this was a sense of isolation, compounded by persistent bad weather for P1 in the second part of her SA, and a sense of insecurity for P32. P23 also mentioned problems at home that were unrelated to the SA and suboptimal working conditions. Yet, all three also mentioned the joy of living in a new environment, of cultural and touristic pleasures, of socialising with the French and of unexpected fun. Experience in the workplace and university was positive for P1 and P32, less so for P23. P23 also claims that the SA experience had been transformative, making her more confident, independent and

stronger. It should also be pointed out that P23 had the maximum score of 70 on the well-being scale at Time 1 and that it dropped to 55 at Time 2 which is within the average range. The MPQ profiles of these six participants are presented in Table 5.

**Table 5.** MPQ profiles of the participants with the sharpest increase and decrease in well-being

Participant	Cultural Empathy	Flexibility	Social Initiative	Openmindedness	Emotional Stability
P10	4.38	3.13	3.75	4.13	2.75
P29	3.38	3.38	2.25	2.88	2.13
P8	4.13	1.88	2.88	3.50	2.25
P1	4.50	3.50	3.13	3.38	3.38
P23	4.63	3.13	3.63	4.25	2.88
P32	4.00	4.13	2.50	3.63	3.38

An independent t-test showed no significant differences between the three participants with the strongest increase in well-being and those with strongest decrease during the SA for four out of five dimensions (see Table 6). Counter-intuitively, those who experienced the sharpest decrease in well-being were those with the highest scores on Emotional Stability. Table 6. Comparison of the MPQ profiles of the three participants whose well-being (WB) decreased most with the three participants whose well-being increased most during SA

Variable	WB Change	Mean	SD	<i>t</i>	<i>p</i>
Cultural Empathy	Decrease	4.38	0.33	1.17	0.31
	Increase	3.96	0.52		
Flexibility	Decrease	3.58	0.51	1.45	0.22
	Increase	2.79	0.80		
Social Initiative	Decrease	3.08	0.56	0.23	0.83
	Increase	2.96	0.75		
Openmindedness	Decrease	3.75	0.45	0.56	0.60
	Increase	3.50	0.63		
Emotional Stability	Decrease	3.21	0.29	3.29	0.03
	Increase	2.38	0.33		

### 5.3 The relationship between well-being and personality traits

In order to answer the third research question, we ran a Pearson correlation analysis with the scores on the five MPQ dimensions collected at Time 1 as the independent variables and the well-being scores collected at Time 1, Time 2 and Time 3 as the dependent variables (see Table 7). Adopting a Bonferroni correction for multiple testing ( $p < .01$ ), no significant relationship was found. Cultural Empathy is only marginally linked with well-being at Time 1 but this weak relationship disappears at Time 2 and Time 3. Emotional Stability is marginally linked with well-being at Time 1 and Time 3 but not at Time 2.

**Table 7.** Pearson correlation analyses between personality traits and well-being at T1, T2 and T3

Personality trait	Measure	Well-being T1	Well-being T2	Well-being T3
Cultural Empathy	<i>R</i>	.372	.116	.240
	<i>P</i>	.033	.520	.178
Flexibility	<i>R</i>	.089	.100	.030
	<i>P</i>	.623	.580	.867
Social Initiative	<i>R</i>	.172	.154	.006
	<i>p</i>	.338	.393	.972
Openmindedness	<i>r</i>	.264	.235	.301
	<i>p</i>	.138	.189	.088
Emotional Stability	<i>r</i>	.390	.302	.345
	<i>p</i>	.025	.088	.049

## 6. Discussion

The first research question focused on the changes in mental well-being between the start and the end of the SA period. To answer the question, we used a three-pronged approach. Firstly, we looked at the distribution of three broad levels of well-being over time (depressed, average and high) and found relatively little change. A majority of participants belonged in the average category at each data collection point. More participants were depressed at the start than at the end of the SA, when a higher number of participants reported a high level of well-being. Pearson Chi<sup>2</sup> analyses revealed no significant differences in the proportions of the broad levels of well-being between Time 1 and Time 2, nor between Time 1 and Time 3. The only significant difference occurred between Time 2 and Time 3, with a larger number of participants in the highest category of well-being at Time 3. This finding echoes the non-significant increase in ‘Feelings of well-being’ in Kuh and Kaufman (1984). It is possible that the daunting prospect of spending a substantial period of time away from their home country may have weighed on the well-being of some participants at the start of their SA. This could have been replaced with a feeling of achievement and pride on their return.

Secondly, we ran a repeated measures ANOVA on the individual well-being scores collected at Time 1, Time 2 and Time 3. No significant change was found over time, which again confirms Kuh and Kaufman’s (1984) finding that feelings of well-being at group level remain largely constant over the SA and seem to reflect Bill’s relatively smooth pattern of high well-being reported in Kinginger (2008).

Thirdly, we plotted the individual well-being scores of participants at Time 1, Time 2 and Time 3 in Figure 6. What emerged was much more variation in individual developmental trajectories than might have been imagined after the first two group-level analyses (cf. Bleidorn et al., 2009). Indeed, well-being scores of 15 students increased between Time 1 and Time 2, while the scores of the remaining 18 students decreased. Similarly, the well-being scores increased for 18 participants between Time 2 and Time 3, and decreased for ten participants. In an attempt to shed light on possible causes for the change between Time 1 and Time 2, we considered the narratives of the three participants with the strongest increase and those of the three with the strongest decrease in well-being. The striking finding was how similar the narratives in the two groups were. All mentioned the psychological, linguistic and administrative challenges of finding oneself in an unfamiliar environment, which is reminiscent of O’Reilly et al. (2010), Zhou et al. (2008) as well as

Kinginger (2004, 2008). Yet all also mentioned the joys of discovery of a new culture, a new country and of gaining a better understanding of themselves. The SA experience was transformative as they had gained linguistic and psychological confidence but the process was not linear. A positive experience in the first part of the SA did not imply immunity from unhappiness in the second part of the SA. Indeed, some participants reported that the first part of their SA in one location had been much happier than the second part of their SA in a different region for a variety of reasons. Moreover, several participants reported anxiety about reverse culture shock on the return home. Like a rollercoaster ride, the knowledge that there would be highs and lows did not stop them from gasping at the unexpected dips or the sharp curves.

These results broadly echo previous studies (Arvidsson et al., 2018; Gu & Maley, 2008; Mitchell et al., 2017; Schartner, 2016; Tracy-Ventura et al., 2016; Zimmerman & Neyer, 2013). They also confirm the hypothesis based on the narratives in Kinginger (2004, 2008) that a number of different developmental trajectories in well-being are possible during SA. The patterns mostly matched the V-like developmental trajectory of Alice in Kinginger (2004) and some matched those of Bill and Deirdre in Kinginger (2008). However, contrary to Deirdre, nobody regretted their SA, all made linguistic progress (Dewaele & Dewaele, 2021) and expressed an intention to continue their study of French. The hypothesis linked to RQ2 about causes of change in well-being was confirmed. Most participants' well-being was affected by the radical change in their life and some coped better in adjusting to the new circumstances. Only in-depth interviews could potentially provide an answer to the intriguing finding that roughly half of the participants experienced a decrease in well-being at some point in the SA while others experienced an increase in well-being. It is likely that participants chose not to fully disclose their negative emotions in their short narratives and mentioned only mildly negative things such as occasional frustration and loneliness. One can imagine that the SA put strain on existing romantic relationships at the start of the SA (cf. Kinginger, 2008). Of course, it may also have provided an opportunity to start new ones, which may then have been broken off upon the return home and provoked heartache. Mitchell et al. (2017) acknowledged that romantic partnerships may influence the SA experience, providing "rich opportunities for cross-cultural experiences" (p. 162) for those who started local relationships, but it may also have resulted in a resistance to fully engage with local networks among those who stayed loyal to partners from the home country. Mitchell et al. also noted that few students mentioned romantic partnerships during the interviews and that "it is likely that not all emotional relationships were disclosed, especially short-term ones" (p. 159). It is also possible that more generally the SA means a disruption in the students' home social networks and relationships, and then another disruption of newly established social networks upon return, which may dampen the sense of achievement on return.

Another possible interpretation of the diverging patterns in well-being in our data is that some participants may have had a personality profile that allowed them to see the glass as being half full rather than half empty. This hypothesis was tested through the final research question on the relationship between personality traits and well-being. Only a weak, non-significant relationship emerged for Emotional Stability and well-being. Participants who were closer to the Neuroticism end of the dimension were slightly more likely to experience lower well-being, which is consistent with the literature but does not confirm our initial hypothesis (Anglim et al., 2020; Hills & Argyle, 2001). An equally weak relationship was found between Cultural Empathy and well-being at Time 1 only. Cultural Empathy presents conceptual similarity with Agreeableness, which was found to have a .25 correlation with well-being in Anglim et al. (2020: 14). This suggests is that personality profiles did not significantly predict well-being at the start, during and at the end of the SA. It seemed to

depend on a set of unique circumstances and unique reactions to these circumstances (cf. Chen et al., 2008) which were not necessarily disclosed. It thus seems that there is no clear profile for happy SA participants, just as there is no psychological profile for the good language learner (Dewaele, 2012). This was confirmed after a more focused comparison of the MPQ profiles of the participants with the strongest increases and decreases in well-being. The profiles were very similar with the exception of Emotional Stability, with those who had increased most in well-being having significantly lower scores on Emotional Stability. Considering the small sample size, this analysis can only be described as explorative. It echoes the finding in Mitchell et al. (2017) that the students who had made most linguistic progress were those with the lowest levels of self-confidence at the start of the SA. One could speculate that students who are closer to the Neurotic end of the dimension might discover that the SA experience is not as bad as they anticipated, resulting in higher levels of well-being. Students with higher levels of self-confidence and Emotional Stability might go through the opposite process, discovering that the SA is not the smooth sailing experience they imagined, which may have had an adverse effect on their well-being.

The current study is not without limitations. Firstly, only 33 out of the initial 54 participants provided data three times. It is not impossible that those who failed to complete the second and third survey may have had a slightly different profile and SA experience from those who did complete the three surveys. In other words, we cannot assume that our 33 participants are representative of the whole cohort. Secondly, our sample is rather heterogeneous in terms of age of onset, previous experience of living abroad, variation in distance between home and host culture, activity during the sojourn, number of locations throughout the SA and amount of time spent abroad. We acknowledge that all these variables could affect mental well-being (cf. Masgoret & Ward, 2006) but it was impossible to constitute a more homogeneous sample of this population of British and Irish learners of French.

## **7. Conclusion**

This longitudinal, mixed-methods study yielded different results depending on the degree of granularity of the analysis. No significant change was observed at the lowest level of granularity: mean levels of well-being for the group remained stable during the SA. Zooming in on changes in the distribution of participants with low, average and high well-being revealed some change, with more participants being depressed at Time 1 than at Time 3. The proportion of participants with high levels of well-being was significantly higher at Time 3 than at Time 2. A look at individual development trajectories in levels of well-being revealed wide variation, with roughly half of participants showing an increase and the other half showing a decrease. This suggests that the apparent stability at group level masked divergent patterns that cancelled each other out. The qualitative analysis allowed the highest level of granularity. It confirmed the uniqueness of the SA experience and the lack of common patterns in the narratives of participants whose levels of well-being decreased compared to those levels of well-being increased over time.

We started the introduction by referring to the cases of three American students (Kingingier, 2004, 2008) whose narratives suggest that they went through very different developmental trajectories in well-being during their SA in France and we wondered whether these could be considered exemplars. Bill's developmental trajectory turned out to be the one that best described the group average, although at an average level of well-being rather than a high one. Looking at individual developmental trajectories, more diversity emerged. A few participants displayed a continuous decrease in well-being, like Deirdre. More participants displayed a V-like developmental trajectory like Alice, namely a rebound after an initial

decrease. Finally, a few participants also displayed a more or less pronounced inverted V-shaped developmental trajectory, with the highest level of well-being reached in the middle of the SA. The narratives on the joys and pains of SA of participants who had experienced the sharpest decrease and increase in well-being between Time 1 and Time 2 were surprisingly similar, possibly because of self-censure. Finally, well-being turned out not to be significantly related to personality traits. In other words, we have no evidence to support our initial hypothesis that students' personality combines with personal, social and contextual factors to shape mental well-being.

Metaphorically, the experience of SA and its effects on the well-being of students could be described like a rollercoaster ride. Having been on a rollercoaster before does not lessen the intensity of the experience. Similarly, the twists and turns past the half-way point will elicit equally strong thrills at the succession of feelings of weightlessness contrasted with the sinking feeling in the stomach. Some will enjoy it more than others but it is impossible to predict how much or how little. What is certain is that rollercoaster rides, like SA, require a strong stomach.

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<sup>1</sup> We initially also investigated the relationship between personality traits, well-being, and actual proficiency gains. As these turned out to be non-significant, this research question was dropped.

<sup>2</sup> “probably” and “possibly depressed” were merged into a single category.