




Article

What Do They Want from a Career? University Students' Future Career Expectations and Resources in a Health Crisis Context

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Abstract: Young people and students, in particular, have often been presented as being particularly affected by the health crisis and its various psychological, social, and economic consequences. In this context, the present study sought to better understand the links between the anxiety generated by this crisis regarding one's professional future, the resources available, and future career expectations. A total of 585 higher education students participated in the study during the third lockdown in France and completed a questionnaire that focused on anxiety and apprehension about the future, psychological and adaptive resources, and preferences for dimensions of new careers (kaleidoscopic, sustainable, protean, boundaryless, and opportunistic). The results show, on the one hand, significant links between anxiety, optimism, hope, career adaptability and preferences expressed for dimensions of new careers; on the other hand, dimensions that are more preferred than others. Finally, these results will be discussed in relation to the correlations already highlighted in the literature between individuals and career expectations, and to the more global reflection on the future of work. Possible avenues in the field of career counselling will be proposed.



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1. Introduction

The sudden onset of the COVID-19 pandemic has disrupted the world of work. It has had unprecedented health, financial, and social consequences [1] due, in part, to government restrictions and social limitations [2]. These health measures have affected the daily lives of most of us.

From an economic point of view, the sudden cessation of activity imposed by the various measures to limit the spread of the virus has caused considerable changes in the world of work. In France, following the order of 14 March 2020, approximately 330,000 self-employed people saw their businesses administratively closed, and around 1.8 million employees were directly impacted by these measures introduced to combat the spread of the virus [3]. Those affected were left on short-time working until further notice. In some sectors of activity, workers had the possibility to telework and work part-time. This period of change led, in some cases, to professional reconversions—a move to a job more in line with the aspirations, values, or meaning that the person gave to work and its place in their life. Many articles in the press dealt with this emerging phenomenon: “The Pandemic Revealed How Much We Hate Our Jobs. Now We Have a Chance to Reinvent Work,” wrote *Time* magazine in June 2021; “COVID career changers: ‘Do something you love,’” suggested the BBC in August 2021; “Three in five employees planning career changes because of COVID, survey finds,” announced the *People Management* in April 2021. Regarding the student population, Prospects stated that “27% of students and graduates change career plans due to COVID-19”, based on a survey they conducted between January and March 2021.

This paper aims to contribute to the understanding of this phenomenon. Together with students in higher education, we seek to better understand whether and how the health crisis generates anxiety for the future and how this would be related to students' expectations of their future careers. The preferences expressed for dimensions of new careers will be highlighted and linked to individual vulnerabilities (trait-anxiety, career-anxiety) and resources (visions about future, career adaptability).

After highlighting the impact of the crisis on the lives and health of students, the following sections will present various current career models and theories, and the adaptive and psychological resources classically identified in the literature of guidance and career development to cope with career challenges.

1.1. Students' Emotions, Distress, and Anxiety during the COVID-19 Pandemic

It is already well-known that young people—the 12–25-year-olds—suffer with more mental health problems [4,5]. During the health crisis, and more specifically at the time of lockdowns [6], many studies focused on the mental health of these young people, especially students, hypothesizing that this population could suffer from depressive symptoms and anxiety more than others [7]. Thus, in 2021, Van de Velde et al. [2] used the data collected from over 20,000 students across 26 countries to establish a link between the secondary effects of the COVID-19 pandemic (social isolation or financial worries, for instance) and depressive symptoms (“felt depressed, felt that everything was an effort, slept poorly, felt lonely, felt sad, could not get going, enjoyed life, or felt happy”, p. 3) to sociodemographic, socioeconomic and social support, academic and macro variables (e.g., youth unemployment rate). The variations are significant and students from Turkey, South Africa, Spain, and the USA suffered more than the ones from the Nordic countries; females suffered more than males; the students in the fields of humanities and arts struggled with financial difficulties, worried about their next job search and uncertainty in the labour market in particular, and suffered from depressive symptoms. In Vietnam [8], a study of 1521 students aged 18–23 years old showed that fear and anxiety triggered by COVID-19 generated psychological distress that ultimately had a negative impact on life satisfaction. Finally, in France, [5] showed that students surveyed during the lockdown and curfew periods (from March 2020 to January 2021) were significantly more affected by depressive symptoms and anxiety than non-students. The authors also showed that two lockdown periods were particularly unfavourable for mental health.

It seems important to note from these various studies that, for young people, it was not so much the virus itself but rather its secondary effects (isolation, financial anxiety, tension in the labour market, or uncertainty about the future) that had a devastating impact in terms of mental health.

In Northeast China [9], 734 students completed three scales at three different times after the first confinement to measure loneliness, anxiety, and depression and the relationship between these variables over time. It appears again that the COVID-19 period had an unfavourable effect on these dimensions but also that the effect of loneliness on anxiety and depression was greater.

These studies also emphasised that pre-existing mental health difficulties were reinforced during COVID-19 and that inter-individual differences must be considered. The study by Rettew et al. [10] followed 484 students from January 2020 (pre-COVID-19) to May 2020 (COVID-19). The results first showed that mental health (mood, stress, and wellness engagement) deteriorated during the COVID-19 period but also highlighted the links between personality traits and mental health impact: lower levels of neuroticism and higher levels of extraversion, openness, agreeableness, and conscientiousness seemed to protect against the most negative effects. Others [7,11,12] showed how hope and resilience allowed people to cope with this stressful situation.

1.2. Future Career Construction and Expectations

1.2.1. Thinking about a Future Career: Apprehension and Expectation

The world we live in and the world of work are now characterized by changes, instability, insecurity, and uncertainty. This reality contributes to the difficulties experienced by adolescents and young adults, in particular when they think about their future [13,14]. In some areas, such as career guidance, the elaboration of future-oriented thoughts is interesting, as it is necessary to find an equilibrium between the dream (desirability) and the realism (probability) in order to increase our capacity for action [15]. However, the career plans of young people are often unrealistic, and time is necessary to refine them and adjust them to the constraints of the internal (self, skills, etc.) and external (economy, changing careers, etc.) environments [14]. Moyne et al. [16], for their part, stated that students in “Terminale” (final year of high school) were very apprehensive about their professional future. However, it was also these same students who had the most defined professional project. This may seem paradoxical, but in fact, shows that, despite a defined career plan, these students experienced apprehension about the future.

The pressure that young people feel about their future is due in particular to the way career path development is perceived. French students are among the most stressed at school in the world. According to Van de Velde et al. [17], a form of social optimism should be introduced that advocates the right to choose and re-choose one’s career, as is the case in Canada, for example. Indeed, the French model imposes on young people the expectation to “place” themselves in a job, whereas we live in an era when flexibility and adaptability are required [17]. Pisarik et al. [18] defined career anxiety as “anxiety embedded in individuals’ career concerns as they engage in the career development process” (p. 347). An in-depth analysis of student interviews discussed their career anxiety experience and highlighted the desire to find a job that has meaning and gives meaning to life. This generates a fear of making a mistake in the future and of not being able to be happy if one does not make the right choice.

1.2.2. Boundaryless, Protean, Kaleidoscope, and Sustainable Career Expectations

In this context of constant and rapid change, various new career models have been introduced and discussed.

The *boundaryless career* model gives great opportunities for individuals to explore and develop a career according to their preferences [19]. This career model is opposed to the idea of a career that is limited to a single organization. In 1996, the authors discussed six examples of boundaryless careers and suggested that a boundaryless career was one that involved physical and/or psychological occupational mobility. Beyond the number of times a person would actually change jobs or occupations, psychological mobility referred to an individual’s ability to make transitions during his or her life [20].

In 2006, Briscoe et al. [21] identified several characteristics of the *protean career*: it was driven by the individual’s values (rather than the employer’s demands) and it was self-directed (the individual was responsible for the development of their career). According to Baruch and Bozionelos [22], the boundaryless career and the protean career were distinguished according to their objectives: the protean career focused on the values and behaviours of individuals, while the boundaryless career focused on the structure of careers that encompassed individuals’ mental preparation for mobility and flexibility. Tams and Arthur [23] added that the protean career showed changes in individuals taking increasing responsibility for their career management, whereas the boundaryless career reflected changes in career development in response to transformations in the external environment (e.g., downsizing). Furthermore, an individual’s boundaryless career experience enhanced the opportunities to develop a better understanding of their personal identity and thus accumulate skills and knowledge that were subsequently transferable to other work settings [24]. Briscoe et al. [21] finally argued that these two types of careers were both related and complementary concepts.

In 2005, Mainiero and Sullivan [25] used a reflection on women's careers to introduce a more global discussion on a new career model called the *kaleidoscope career*. Borrowing the metaphor of a kaleidoscope that constructs new images by turning and moving the small objects it contains, the authors suggested that individuals would, depending on the facets and stages of their lives, change the "pattern of their careers" (p. 106) and reconsider their roles. There would be three mirrors for the kaleidoscope: authenticity, balance, and challenge. Authenticity is being true to oneself despite personal development and professional or personal problems. Balance refers to making decisions so that all aspects of life form a coherent whole. Finally, challenge refers to participating in activities that allow one to be responsible, in control, and autonomous. The authors used a succession of three kaleidoscopic figures to show the evolution from an early career marked by challenge to a mid-career characterized by balance, and to a late career defined by authenticity. More recently, Sullivan and Al Ariss [26], proposing a review about career transitions, pointed out that millennials, who would experience even more transitions in the future together with increased mobility, favour authenticity and balance in their lives. Similarly, De Hauw and De Vos [27] analysed millennials' expectations during a period of recession and noted that the financial crisis of 2008 and the subsequent recession seemed to have an effect on the expectations of millennials and their work–life balance: it was poorer for students who graduated in 2009 than for those who graduated in 2006.

According to Baruch and Vardi [28], the kaleidoscopic career may, however, imply difficulties in the evolution of the professional career path; progressing in the hierarchy of one's organization would require a particularly strong dedication and commitment [28]. They also pointed out that the kaleidoscopic career was often not a chosen career but rather one that was imposed by the vagaries of life.

The final model of new careers that has been much discussed in recent years is the *sustainable career*. Van der Heijden and De Vos [29] defined sustainable careers as "the sequence of an individual's different career experiences, reflected through a variety of patterns of continuity over time, crossing several social spaces, and characterized by individual agency, herewith providing meaning to the individual" (p. 7). The challenge of this model was taking into account individual career management and the participation of several other actors (from family to society). Sustainable careers could be seen as "dynamic processes", as the individual and its other actors evolved over time [30] (p. 104). These enabled the individual to adapt to their environment and to improve their understanding of themselves, as well as their personal and organisational life as their career evolved. According to De Vos et al. [30], a sustainable career should be considered in the long term as it is beneficial for the individual and the surrounding context, and three indicators could be accepted: a sustainable career could be "healthy", "happy", or "productive" (p. 105). Based on this model, Chin et al. [31] recently developed a scale to measure career sustainability. Nevertheless, given the difficulty of measuring such indicators (health, happiness, and productivity), the authors referred to Newman's model (2011). Newman defined a sustainable career as "renewable, flexible and integrative" and described associated characteristics and consequences for each of these indicators (p. 140). "Renewable" referred to a career that provided an opportunity to reflect on and further one's professional development, in particular through the acquisition of new skills; "flexible" implied the possibility of adapting and changing careers; and "integrative" included the individual's value fit and possible critical thinking. In 2019, Chin et al. [32] added the fourth indicator: "resourceful" (p. 518). This last one referred to the necessary financial resources and the possibility of maintaining them for the future.

A new career is an opportunity for Individual (or individual and organizational) development, and it is a dynamic, taken in a social, societal, organizational but also temporal and spatial context, whose transformation depends essentially on the individual. Thus, even if Tams and Arthur [23] declared it was impossible to anticipate the evolution of careers in the future, it becomes interesting to ask how the health crisis context may have impacted the way careers are envisaged in the future.

1.2.3. COVID-19 Impact on Future Career

According to Baruch and Vardi [28], careers are seen as “complex and multifaceted experiences” (p. 367), and individuals, as well as organizations, share the difficulty of “developing meaningful and productive careers under circumstances that are replete with unpredictability, uncertainty and anxiety” (p. 367). If this statement is still true, it takes on a particular meaning in the context of a health crisis marked by “unpredictability, uncertainty and anxiety”.

A study by Henkens et al. [6] investigated whether the first COVID-19 lockdown in March 2020 had an impact on the future orientation of young people in the Netherlands. Their results did not show any changes in this respect before and after the first confinement. Nevertheless, some young people expressed a sense of insecurity about their current life and short-term future because of the pandemic [6]. The researchers, therefore, noted that the coping skills of young people in the Netherlands in the context of the COVID-19 pandemic are quite high. Mahmud et al. [33] looked for a possible link between “fear of COVID-19”, “depression,” and “future career anxiety”. Their results showed that, due to the fear of COVID-19, individuals tended to become depressed, and consequently became anxious about their future careers [33].

Overall, the economic consequences of the health crisis generated increased unemployment rates and aggravated job insecurity. Fouad [34] started discussing the impact of the COVID-19 crisis on the work domain in 2020 and introduced a JVB Special Issue dedicated to this theme. In the US, Ganson et al. [35] reported that 59% of young adults lost their jobs due to COVID-19. For these individuals, indicators of poor mental health were two to six times higher than for those who did not lose their jobs, highlighting a link between job insecurity and mental health among U.S. young adults during the COVID-19 pandemic.

In this context, it becomes more interesting than ever to pay particular attention to the resources [36,37] allowing people to face the possible stress or anxiety experienced in this situation, as well as the stress thus generated regarding the future and future careers.

1.3. Psychological and Adaptive Resources to Cope with Future Career Challenges and Moderate Future Career Expectations

For Kuron et al. [38], some individuals were better able, i.e., better equipped, to manage contemporary careers, thus adopting boundaryless or protean career patterns. In other words, individuals’ career attitudes and motivations (i.e., their career orientation) were well-aligned with contemporary career theory. In turn, Colakoglu [24] showed that having a high level of confidence regarding career-related values, needs, and preferences (knowing why), building a broad network of personal and professional relationships outside one’s current workplace (knowing who), and developing transferable skills and knowledge (knowing how) are paramount for enabling individuals to have a sense of autonomy and to lower the feeling of job insecurity in the face of a borderless career.

In 2018, Ginevra et al. [39] assessed optimism, pessimism, and hope in adolescents. Their results showed that adolescents with high levels of optimism and hope and lower pessimism scores are more able to build their working lives, project themselves into the future, and adapt to the unpredictable needs of the labour market and working conditions.

Research by Parmentier et al. [40] emphasised the role of anticipatory emotions in the transition from high school to higher education. They then highlighted the complexity of the emotional processes involved in anticipating the future and future career and showed that higher levels in career decisions and career adaptability are positively correlated with belonging to a “positive dominant profile” and with positive anticipatory emotions.

Jung, Park, and Rie’s study [41] results pointed out that Korean students with high affect spin “demonstrated lower career decision-making self-efficacy and higher career choice anxiety” (p. 53) and then stressed the importance of considering the role of emotions (with affect spin) on vocational behaviour and career decision.

Furthermore, *career adaptability* is frequently used as an essential concept and resource for a better understanding of career construction and development in general. Career

adaptability is “a psychosocial construct that denotes an individual’s resources for coping with current and anticipated tasks, transitions, traumas in their occupational roles that, to some degree large or small, alter their social integration” [42] (p. 662). Savickas [43] showed that career adaptability is important in facilitating individuals’ career transitions. Most recently, Jia, Hou, and Shen [44] established the links between future time perspective (FTP), hope, career adaptability, and career construction in China. They proposed a model in which career adaptability mediated the relationship between FTP and career construction, and hope moderated it. In China again, another model [45] indicated a positive relation between a protean career orientation and career optimism mediated by career adaptability and career decision self-efficacy. The interest in the protean career model in recent years has already been highlighted above.

More recently, authors have questioned the place of career exploration as a resource in these processes. Indeed, several authors [46,47] noted that new careers need high and continuous career exploration, which is becoming a key dimension of career adaptability. Many studies with students and young adults showed that both individual and contextual variables foster or hinder career exploration. Thus, social support, interests, internal motivations, self-esteem, hope, and positive perception of the future affect career exploration.

For this study, we consider the general impact of COVID-19 on the work domain [34] and the proposal to see the COVID-19 crisis as a career shock for those who work or are engaged in a career [36,48]. These impacts may have, with a rebound, affected those preparing for their future careers, thus bringing students to reconsider their needs and expectations regarding their future working lives. It can then be expected that the negative emotions generated by the anticipated impacts of the health crisis, as well as the appraisal of one’s career-related resources, will influence the expectations of the future career. Using an exploratory approach, we examine the experiences and expectations of university students during the COVID-19 period, by investigating the links between their level of anxiety, their perception of available resources, and their preferences for their future career.

2. Materials and Methods

2.1. Participants

The questionnaire was posted online in April 2021 during the third lockdown in France—a period when the mental health of students was of particular concern. Indeed, in France, the first confinement was imposed in spring 2020, and the courses had to be provided totally remotely, without any prior preparation, sometimes without the right equipment, and under lockdown conditions, which were, in some cases, harmful for the students. At the beginning of the new academic year in September 2020, some French universities started offering certain courses onsite again. In November, a new confinement was declared, and the courses were switched back to a remote mode. In January 2021, the containment measures became less strict but the majority of the courses remained online. Finally, in April, the third lockdown came into effect. The situation of the students, worn out by many months of distance-learning and successive lockdowns, became particularly worrying, and various measures (notably psychological support) were put in place and offered to them. In this singular period, it seems important to understand the effects of the pandemic and the health measures on the relationship to the future and the future career.

The questionnaire was distributed on various social networks, in several student groups, and in many regions of France. We chose to focus only on higher education students for several reasons. As the literature review shows, they are regularly the subject or focus of studies in the field—which provides us with points of comparison; they have already selected a specific area of study and thus have given thought to their career path and have developed certain expectations about their future. We were aware that the mechanisms for projecting into the future can encounter various difficulties and therefore wanted to interview young people who could engage with this process.

In total, the questionnaire was online for 17 days, and 591 responses were recorded. Six people were removed from the analysis because they were not students. Participants

($n = 585$) were women (83.2%) and men (16.2%) aged 21.4 years on average ($SD = 2.5$). Four hundred fifty-two respondents were studying at university (77.2%). A total of 197 of them were studying humanities and social sciences (33.6%), and 64 were in the field of health (10.9%), 52 people were studying humanities or languages (8.8%), 49 people were studying economics and management (8.3%), 46 people were studying sciences (7.8%), and 177 people were in a different field of study (30.2%). As a result, the group of respondents can be considered as a convenience sample or, more precisely, “self-administrated survey data from 585 persons”.

2.2. Measures

To meet the objectives of this research, we used a number of existing and self-adapted questionnaires in order to use a quantitative approach adapted to the search for nomothetic structure between different psychological constructs and career preferences. This methodological choice was dictated by the existence of scales relating to these constructs but also by all the advantages linked to the use of questionnaires (for example, ease of use and possibility of use via the internet), their psychometric qualities, and the relevance of their use in the assessment of conative dimensions [49–51].

2.2.1. Anxiety

Spielberger State-Trait Anxiety Inventory (STAI) [52], validated in French by Gauthier and Bouchard [53], was used to measure general anxiety (trait). In Gauthier and Bouchard’s validation study [53], the participants were graduate students. Since we had a similar population in our study, the scale seemed relevant. It consists of 20 items that assess an individual’s general anxiety level without a reference to a particular time (for example, “I feel calm” or “I feel worried”). The response modalities were a Likert scale ranging from 1 (“almost never”) to 4 (“almost always”). We only used the trait anxiety subscale and then considered the future career anxiety as state-like anxiety.

2.2.2. Future Career Anxiety

To measure the future career anxiety caused by the COVID-19 pandemic, first, we used a short scale (five items) developed by Mahmud et al. [33]. The proposed response scale was a 5-point Likert scale ranging from 1 (“strongly agree”) to 5 (“strongly disagree”). Moreover, we constructed a second scale composed of five items that were inspired by the scale of Vignoli and Mallet [54]. These authors created a scale that measures the fear of failing in one’s academic or professional career. We modified some items by integrating the idea of projection into the future in the context of a global health crisis due to COVID-19. For example, the basic item “I feel very nervous when I think about my future” became “I feel very nervous when I think about my future since the COVID-19 pandemic”. The response scale was a Likert scale ranging from 1 (“not at all”) to 5 (“very much so”). We chose a Likert scale of response ranging from 1 (“not at all”) to 5 (“definitely”).

2.2.3. Career Adaptability

Career Adapt-Abilities Scale (CAAS) by Savickas and Porfeli [42], validated in French by Johnson et al. [55], was selected. This scale has 24 items divided into four dimensions: concern (“thinking about what my future will be like”), control (“doing what’s right for me”), curiosity (“looking for opportunities to grow as a person”), and confidence (“learning new skills”). The proposed response was a Likert scale ranging from 1 (“not strong”) to 5 (“strongest”).

2.2.4. Optimism, Pessimism, and Hope

To assess these three concepts, we used the Visions About Future (VAF) scale by Ginevra et al. [13] (for example, “Usually, I am full of enthusiasm and optimism about my future”; “It will be hard to find a job that really suits me”; “I know I will realize my wishes one day”). No French validation exists for this questionnaire, so we translated each

of the 19 items, using translation and back translation to ensure that the meaning of the items was retained. This scale is all the more interesting because it has been validated with a population of adolescents and has very satisfactory psychometric qualities. For the responses, we used a Likert scale ranging from 1 (“This does not describe me at all”) to 5 (“This describes me very well”).

2.2.5. Opportunism

To measure opportunism, we created three items. For this purpose, we drew inspiration from an article discussing opportunities in career growth [56] (e.g., “My career will not be planned, and I will take opportunities as they come”). The measurement scale chosen was a Likert scale ranging from 1 (“Strongly disagree”) to 4 (“Strongly agree”).

2.2.6. Kaleidoscopic Career

We used the Sullivan et al. scale [57], which measures the three dimensions of the kaleidoscopic career: authenticity, balance, and challenge. We translated (translation and back translation) the items into French and proposed the following instructions: “I describe the career I want for the future . . . For each of the following sentences, indicate how true each one is for you by ticking the appropriate number” with Likert scores ranging from 1 (“This does not describe me at all”) to 5 (“This describes me very well”). Out of the 14 items, some were retained in their original wording (for example, “If necessary, I would give up my work to settle problematic family issues or concerns”); for others, we changed the verb tense used to suit the instruction “for the future” (for example, “My work will be meaningless if I can’t take the time to be with my family” or “I will continually be looking for new challenges in everything I do”).

2.2.7. Sustainable Career

We drew inspiration here from the scale of Chin et al. [31]. Therefore, we constructed items in French on sustainable careers that also measure projection into the future on four dimensions: resourceful, flexible, renewable, and integrative. The instruction given is as follows: “For each of the following sentences, indicate how desirable each is for you by ticking the appropriate number. You should look ahead, indicating what you want your future career to be like”. We added the word “future” in all 12 items; for example, “My future career enables me to have a good standard of living”, “My future career allows me to seek new opportunities”; “My future career gives me the chance to reassess my capabilities” or “My future career enables me to critically evaluate information obtained from different sources”. As with Chin et al.’s [31] scale, we had 12 items, and the response used was a Likert scale ranging from 1 (“Strongly disagree”) to 6 (“Strongly agree”).

2.2.8. Protean and Boundaryless Career

Here we used the Porter et al. scale [58], again translated into French. The scale has 13 items. The instruction was the same as the previous one (“You should look ahead, indicating what you want your future career to be like”) and we changed the verbal forms originally used in the items to the future tense (for example, “It won’t matter much to me how other people evaluate the choices I make in my career” or “I will prefer to stay in a company I am familiar with rather than look for employment elsewhere.”) Our response scale was similar to that of Porter et al. [58], i.e., a Likert scale ranging from 1 (“Strongly disagree”) to 5 (“Strongly agree”).

2.3. Analyses

All statistical analyses were carried out with the R packages: Psych and Lavaan. Structural Equations Modelling (SEM) was carried out based on the responses to the different questions. In order to respect the ordinal level of measurement of Likert-type items, the analyses were based on polychoric correlations [59] using the SEM Diagonally Weighted Least Squares (DWLS) estimator [60]. None of the SEM analyses were based on

composite scores. According to the literature [61,62], the χ^2/df (<3), CFI (>0.90 or >0.95), TLI (>0.90 or >0.95), and RMSEA (<0.08 or <0.05) were the criteria used for retaining the adequate structural models. Figure 1 presents the heuristic model of this study.

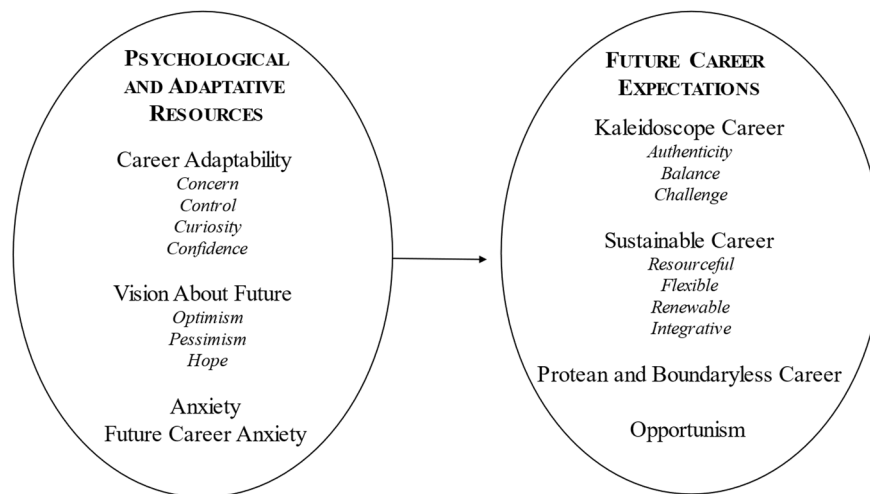


Figure 1. Heuristic model—relationships between psychological and adaptative resources and future career expectations.

3. Results

3.1. Structural and Descriptive Statistics of the Scales

The first series of confirmatory analyses was carried out on each of the scales in the study to verify their factor structure and thus be able to use them in more complex regression models. As can be seen, the structures of the different scales used in the study corresponded to expectations. Only the structure of the opportunism questionnaire developed for this study could not be analysed by CFA as it contained only three items. The internal consistency of each of the dimensions measured, as assessed by Cronbach’s alpha and MacDonal’s omega, was strong or even excellent for a large majority of the measurements carried out.

The results of these analyses are presented in Tables 1 and 2.

Table 1. Confirmatory factor analyses of the scales (personality).

Scales	χ^2	df	CFI	TLI	RMSEA	Alpha	Omega
CAAS 4 factors	750.04	241	0.995	0.994	0.060	0.96	0.97
<i>Concern</i>						0.91	0.94
<i>Control</i>						0.91	0.95
<i>Curiosity</i>						0.88	0.93
<i>Confidence</i>						0.93	0.95
VAF 3 factors	479.13	144	0.993	0.991	0.063	0.93	0.95
<i>Optimism</i>						0.92	0.95
<i>Pessimism</i>						0.87	0.90
<i>Hope</i>						0.88	0.92
ANX	676.14	165	0.973	0.969	0.073	0.92	0.94
FCA	4.82	5	1.000	1.000	0.000	0.95	0.96
EMO	14.57	5	0.999	0.999	0.057	0.92	0.95

CAAS: Career Adapt-Abilities Scale; VAF: Visions About Future Questionnaire; ANX: State-Trait Anxiety Inventory; FCA: Future Career Anxiety with COVID-19 Questionnaire; EMO: Emotion about Future Questionnaire; χ^2 : Chi-squared; df: degrees of freedom; CFI: comparative fit index; TLI: the Tucker-Lewis index; RMSEA: root mean square error of approximation.

Table 2. Confirmatory factor analyses of the scales (career).

Scales	χ^2	df	CFI	TLI	RMSEA	Alpha	Omega
KALEI 3 factors	226.80	72	0.993	0.991	0.061	0.85	0.90
Authenticity						0.71	0.75
Balance						0.88	0.93
Challenge						0.87	0.88
SUST 4 factors	141.89	48	0.993	0.991	0.058	0.90	0.92
Resourceful						0.77	0.79
Flexible						0.70	0.71
Renewable						0.74	0.78
Integrative						0.84	0.85
PBC 2 factors	164.92	59	0.980	0.974	0.055	0.71	0.81
Protean						0.76	0.84
Boundaryless						0.73	0.87
OPPORT	-	-	-	-	-	0.69	0.71

KALEI: Kaleidoscope Career; SUST: Sustainable Career; PBC: Protean and Boundaryless Career; OPPORT: Opportunism; χ^2 : Chi-squared; df: degrees of freedom; CFI: comparative fit index; TLI: the Tucker-Lewis index; RMSEA: root mean square error of approximation.

The first set of descriptive analyses was carried out on different variables related to the types of careers to which the students in the study were attracted. Table 3 presents this information. From these analyses, little can be deduced. We can only note that students had a slight tendency to positively appreciate all the types of careers proposed in this study. Indeed, no one type of career was chosen or neglected by the majority.

Table 3. Descriptive statistics of the career scales.

Scales	Modalities	Mean	CI (Mean)	Stddev
KALEI	1–5			
Authenticity		3.75	[3.69–3.81]	0.72
Balance		3.41	[3.33–3.49]	0.98
Challenge		3.20	[3.12–3.28]	0.95
SUST	1–6			
Resourceful		5.24	[5.18–5.30]	0.71
Flexible		5.11	[5.05–5.17]	0.72
Renewable		4.99	[4.92–5.06]	0.84
Integrative		5.16	[5.09–5.22]	0.83
PBC	1–5			
Protean		3.83	[3.78–3.88]	0.64
Boundaryless		3.38	[3.32–3.44]	0.75
OPPORT	1–4	2.99	[2.94–3.04]	0.62

KALEI: Kaleidoscope Career; SUST: Sustainable Career; PBC: Protean and Boundaryless Career; OPPORT: Opportunism; CI (mean): 95% Confident Interval; Stddev: Standard Deviation.

Taking into account the number of items and the number of response modalities, the individual scores on each scale were transformed to make them comparable. The means of the ten career appreciation scores in the study were compared by analysis of variance for repeated measures. These were found to differ from each other ($F(9, 576) = 159.66$, $p < 0.001$). In order to check which types of careers were significantly different from the others, a series of *t*-test analyses for paired samples was performed. These comparisons show that the order of appreciation of the career types is as follows:

Challenge < Boundaryless-Balance < Opportunism-Authenticity < Protean < Renewable < Flexible-Integrative < Resourceful

–: no-significant mean difference

3.2. Correlations between Career Dimensions

To better understand the links between the different types of careers, correlations were calculated between the different dimensions of projection into the professional future operationalised by their composite scores (item means). In addition, a SEM model with all the items of these dimensions was carried out and the Psi values (correlations between the latent factors measured by this model) were recorded. Table 4 presents these indicators of the relationship between the different career types calculated according to different statistical methods.

Table 4. Correlations between the career dimensions.

	Auth.	Bal.	Chal.	Res.	Flex.	Renew	Int.	Prot.	Bound.	Opport.
Authenticity		0.349 ***	0.430 ***	0.134 ***	0.220 ***	0.258 ***	0.220 ***	0.112 ***	0.195 ***	0.240 ***
Balance	0.488 ***		0.154 ***	0.086 *	0.057	0.100 *	0.064	0.046	−0.094 *	0.132 ***
Challenge	0.608 ***	0.197 ***		0.181 ***	0.304 ***	0.356 ***	0.272 ***	0.222 ***	0.390 ***	0.229 ***
Resourceful	0.236 ***	0.132 **	0.260 ***		0.499 ***	0.348 ***	0.276 ***	0.201 ***	−0.009	0.050
Flexible	0.371 ***	0.075	0.503 ***	0.793 ***		0.617 ***	0.521 ***	0.231 ***	0.293 ***	0.222 ***
Renewable	0.374 ***	0.131 **	0.467 ***	0.526 ***	0.947 ***		0.615 ***	0.175 ***	0.298 ***	0.223 ***
Integrative	0.320 ***	0.064	0.352 ***	0.436 ***	0.805 ***	0.810 ***		0.099 *	0.259 ***	0.131 ***
Protean	0.172 **	0.073	0.289 ***	0.298 ***	0.351 ***	0.240 ***	0.173 ***		0.060	0.205 ***
Boundaryless	0.302 ***	−0.088	0.498 ***	0.103	0.538 ***	0.452 ***	0.448 ***	0.169 ***		0.301 ***
Opportunism	0.400 ***	0.180 **	0.319 ***	0.127 *	0.372 ***	0.292 ***	0.206 ***	0.332 ***	0.346 ***	

The upper part of the matrix includes the Bravais–Pearson correlations between the composite scores of the different career dimensions. The lower part presents the *psis* calculated between the latent factors of a SEM model operationalising these same career dimensions. ***: $p < 0.001$; **: $p < 0.01$; *: $p < 0.05$.

Generally speaking, almost all career dimensions are positively correlated with one another. This indicates that these new career dimensions have a common base and/or that the students all project themselves at least somewhat into them. This is especially true for the career dimensions “Authenticity”, “Challenge”, and “Opportunity”. The different dimensions of a sustainable career (“Resourceful”, “Flexible”, “Renewable”, and “Integrative”) are strongly related to each other. Finally, the “Balance” dimension is the most independent of the career types.

3.3. Career Dimensions and Resources

In order to verify the links between the psychological variables measured in this study and the types of careers, an SEM analysis was conducted. The independent variables of this analysis consisted of all the personality, emotional, and psychological resources assessed. The dependent variables were the individual assessments for the different possible careers.

Figure 2 presents the results of this path analysis. Only statistically significant causal paths were retained. Although the analyses were based on individual responses to the items, only the latent factors considered as VI and VD were presented in order to simplify the representation of the selected model.

The fits of this analysis were excellent at indicating that the predictions of career types by the selected psychological variables were relevant and meaningful. As the number of significant relationships was very large, it is possible to synthesize these results more efficiently. Firstly, the dimension “Hope” influenced the most types of careers (eight out of ten dimensions) and always in a positive way. Only the dimensions “Integrative” and “Boundaryless” were not linked with the respondents’ hope. Conversely, people’s optimism and pessimism had little influence on career types. “Optimism” was positively related to an “Authenticity” career type, whereas “Pessimism” was positively related to “Balance” and negatively related to “Resourceful”.

Secondly, the psychological dimensions of “Anxiety”, “Control” (sub-dimension of “Adaptability”), and “Emotion” about “Future” had an impact on a small number of career types. The first one was positively related to “Authenticity”, the second one was negatively related to “Balance”, and the third one was negatively related to “Protean”.

Thirdly, people with higher scores on the “Confidence” dimension were more likely to enjoy “Renewable”, “Integrative”, “Boundaryless”, and “Challenge” and to choose opportuni-

ties more readily. Similarly, people who were more anxious about their future careers were more attracted to careers “Resourceful”, “Balance”, “Renewable”, and “Protean”.

Finally, people with a higher score on the “Confidence” dimension were more positively attracted to the types of careers “Renewable”, “Challenge”, “Integrative”, and “Boundaryless” and were ready to take up more opportunities.

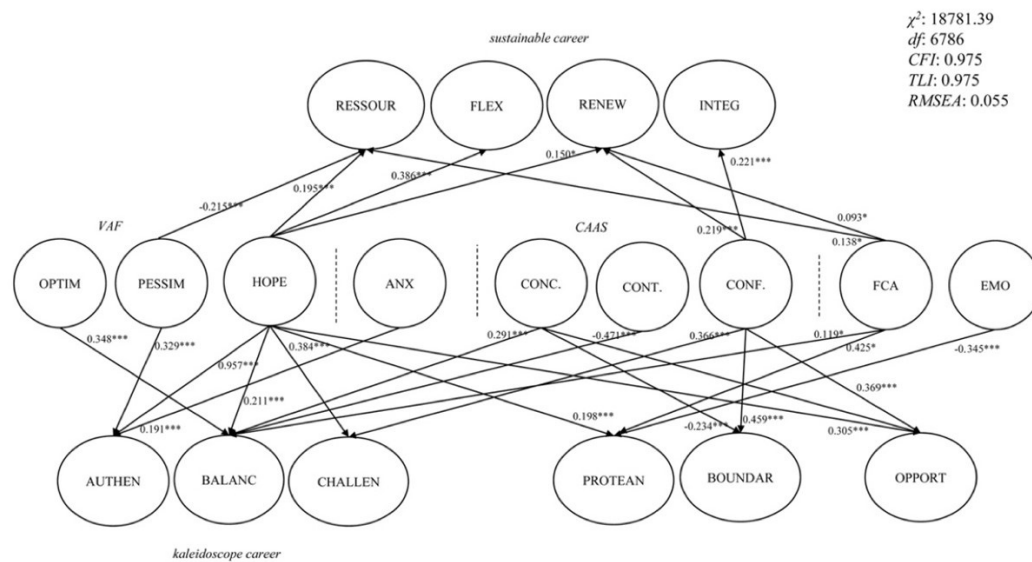


Figure 2. Path analysis of the psychological variables and the types of careers. VAF: Visions About Future Questionnaire; CAAS: Career Adapt-Abilities Scale; AUTHEN: Authenticity; BALANC: Balance; CHALLENG: Challenge; RESSOUR: Resourceful; FLEX: Flexible; RENEW: Renewable; INTEG: Integrative; PROTEAN: Protean; BOUNDAR: Boundaryless; OPPORT: Opportunism; OPTIM: Optimism; PESSIM: Pessimism; HOPE: Hope; ANX: Anxiety; CONC.: Concern; CONT.: Control; CONF.: Confidence; FCA: Future Career Anxiety with COVID-19; EMO: Emotion about Future. χ^2 : Chi-squared; df: degrees of freedom; CFI: comparative fit index; TLI: the Tucker-Lewis index; RMSEA: root mean square error of approximation. ***: $p < 0.001$; *: $p < 0.05$.

4. Discussion

Young people and students in particular have often been portrayed as being especially affected by the health crisis and its various psychological, social, and even financial consequences. The present study sought, in this context, to better understand the anxiety generated by the crisis (in addition to anxiety trait) about one’s professional future, the resources available, such as optimism, hope or career adaptability, and the links with expectations in the way one envisages one’s future career. For this purpose, we decided to use the main models of “new” careers—kaleidoscopic, sustainable, protean, boundaryless, and opportunistic.

The literature already allowed us to identify or anticipate some correlations between these different variables. Firstly, it appears that young people, described as “job hoppers,” are now characterized by the desire to change jobs regularly; they “jump” on professional opportunities as soon as they can and are not as loyal to their organization as the previous generation [63]. As early as 2008, in France, Delay [64] suggested that young people had integrated the fact that the development of skills and career paths now required a multiplicity of professional experiences. Without seeking to provide a “generational” explanation that is often very limited [65], it seems interesting to reflect on these studies as well. According to our results, however, mobile and change-oriented careers are not the most desired; the dimensions “challenge”, “boundaryless,” and “opportunistic” are even the least desired. The first possible explanation lies in the context. The crisis in which we were all fully involved at the time of answering the questionnaire led to a reconsideration of priorities and a preference for sustainable dimensions. De Hauw and De Vos [27], who

looked at millennials' expectations in the period of the financial crisis of 2008, noted an evolution in the expectations expressed. Another possible explanation was suggested by Sullivan and Al Ariss [26], who put forward the idea that millennials, as they prepared for more transitions, were also looking for more authenticity and balance in their lives. Similar to Delay [64], the hypothesis here is that mobility is an integrated reality and that, when asked to express their preferences, young people and students favour other aspects of their future careers. Nevertheless, it is interesting to note that authenticity and balance are not the most desired dimensions in our study either. Note that "Authenticity" is linked with the psychological dimensions of "Hope", "Pessimism", and "Anxiety"; "Balance" is linked with "Hope", "Optimism", "Concern", and "Future career anxiety" and is negatively correlated with "Control". The level of anxiety seems to be important for understanding expectations on these two dimensions. There are also links between the three expected career dimensions of "Challenge", "Boundaryless", and "Opportunistic" and "Confidence" in career adaptability.

Furthermore, it is interesting to point out the preferences expressed for the dimensions of a sustainable career. Several authors [36,66] emphasised the crisis context as an opportunity to reconsider one's priorities and refocus on what makes sense. The sustainable career model could respond to these new aspirations, indeed focusing on the sustainable development of an individual [31]. These dimensions are essentially linked to those of hope and confidence in career adaptability.

This study allows one to reconsider career expectations in the context of crisis. One of the main objectives of this research is to propose a set of dimensions representing today's "new" careers and an integrative framework of career orientations. In most articles in the field, studies consider only one or the other type of these careers and then focus on the importance of one or the other dimension. A more global perspective allows the importance of each to be put into perspective. Furthermore, the links with psychological resources are essential to understand the preferences expressed and not to generalise them.

Of course, like any study, this one has its limitations. The most important one is that we do not have data from the period before the health crisis and we cannot really measure the impact of the crisis context on the evolution of career expectations. Following Spruk's [67] recommendations, we must indeed be cautious about presenting and interpreting the results in relation to COVID-19. Nevertheless, as he pointed out himself, in career and vocational behaviour, it is important to understand what has happened in order to better understand what we can expect in the future, especially since we know that career expectations and choices can have an impact on career outcomes. Furthermore, the set of 10 career dimensions proposed here carries a positive connotation, marked by self-career management and a vision of a career as an opportunity to face challenges, develop new skills, be consistent with one's values, etc. However, one could also consider the "dark side of contemporary careers," to use the expression of Baruch and Vardi [28]. This would allow us to understand how students integrate, for example, job insecurity, unemployment, or involuntary transition into their future career path.

Despite the limitations, these results provide important leads for thinking about the future career, vocational behaviour, and career counselling. Firstly, for those who have experienced this period as particularly anxiety-provoking, it seems essential to be able to refer them to professionals in mental health counselling [68]. Furthermore, it is quite essential, in addition to interventions aimed at self-knowledge, to offer students interventions that make it possible to explain what these "new" career models are, what the expectations are, and to help them situate themselves, according to their resources, in relation to them. For some years now, authors have been insisting on the need for young people to develop flexibility (a flexible "professional self" as proposed by Guichard [69]), or to work on career resilience (a capacity to cope with negative professional experiences), or career preparedness [70] (a way of knowing how to cope with uncertainty and hazards without necessarily being able to plan everything). It would probably also be useful not to present these new careers as injunctions for the future, but rather to allow them to invent their own.

5. Conclusions

In recent months, a number of studies have sought to better identify the possible impacts of the COVID-19 health crisis, especially on students whose living and study conditions have often been particularly disrupted. Among these impacts, the ones concerning orientation and future careers must be investigated. Young people, or millennials, are often presented as opportunists and “job hoppers” looking for mobility and change. However, our results show preferences for the following dimensions of a sustainable career: Flexible, Integrative, Resourceful, linked to *Hope* and *Confidence*. The highlighted links between preferences for future careers and individual resources may also suggest avenues of work in the field of guidance counselling for young people, at least to facilitate awareness of these links ((non)resources and (non)choices concerning the future). Career counselling interventions, for example, could first consist of a presentation of these different possibilities in the way of considering and developing one’s career, and then encourage reflection and expression on what might be best for the person. Then, drawing on studies on psychological capital development and interventions [71–73], it would be useful to propose discussions around past experiences, the resources used in successful past experiences as well as those that were necessary to overcome failed experiences, and to help them identify their most effective strategies to develop their future career. Finally, now that we have some results that can serve as a comparison, it will be interesting to replicate the study to understand in greater detail the long-term effects of the crisis on career expectations and vocational behaviour.

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