Emerging adult self-perception and link with adjustment to academic context among Female College Students

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Titre : Perception de Soi des Adultes en Émergence et Lien avec l'Ajustement au Contexte Universitaire chez les Étudiantes Française

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Emerging Adult Self-Perception and Link with Adjustment to Academic Context among French Female College Students

ABSTRACT

Objectives.

This research aimed to investigate female emerging adult students' self-perception in relation to their adjustment to academic context in France.

Method.

First, a preliminary study was a validation of the French version of the Self-Perception Profile for College Students (SPPCS, Neeman & Harter, 2012). Second, the study explored freshman year emerging adult females' self-perception profiles based on the SPPCS, and their association with adjustment to academic context (depression and academic results).

Results.

Cluster analysis revealed seven self-perception profiles characterized by both global self-worth and self-esteem domains. These profiles were differently associated with positive and negative adjustment.

Conclusion.

Overall, the findings highlight the importance of considering both global self-worth and domain-specific self-esteem to emphasize emerging adult students' self-perception and its links with adjustment.

Keywords: *self-esteem, emerging adult students, scale validation, self-perception profiles, adjustment to academic context*

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RÉSUMÉ

Objectif.

Cette recherche a pour objectif d'explorer la perception de soi des adultes en émergence étudiantes et le lien avec l'ajustement au contexte académique en France.

Méthode.

Une étude préliminaire visait à valider la version française du Self-Perception Profiles for College Students (SPPCS, Neeman & Harter, 2012). Ensuite, l'étude principale questionnait les profils de perception de soi des étudiantes de première année sur la base du SPPCS et rendait compte de l'association avec l'ajustement (dépression et résultats académiques).

Résultats.

Les analyses en clusters ont révélé sept profils de perception de soi caractérisés par l'estime de soi globale et par les différents domaines. Ces profils étaient associés à un ajustement soit positif soit négatif.

Conclusion.

Les résultats soulignent l'importance de considérer l'estime de soi globale et l'estime de soi spécifique par domaine afin d'explorer la perception de soi et les liens avec l'ajustement.

Mots clés : estime de soi, adultes en émergence étudiants, validation d'échelle, profils de perception de soi, ajustement au contexte universitaire.

1. Introduction

Emerging adulthood is an in-between period where young people are neither adolescents nor adults (Arnett, 2000). It is the "age of possibilities" characterized by autonomy, relative independence from social roles, self-exploration, and new experimentation. This period of life comprises several psychosocial transitions: between adolescence and adulthood, between dependency while living under the parent's authority and autonomy and/or entering into a stable romantic relationship, between going to school and stable employment (Macmillan, 2006). In that sense, it is a self-oriented period characterized by insecurity and worry about the future (Côté, 2014). According to Schwartz (2016), emerging adulthood is a turning point where life takes a completely different direction.

College represents a specific context of development for emerging adults (e.g., Arnett, 2016). It is a "natural laboratory" where students can explore new situations (Montgomery & Côté, 2003). Identity is then particularly challenged (Luyckx et al., 2013) due to a large panel of alternative career goals, belief systems, and lifestyles (Waterman & Archer, 1990). Thus, college students have many opportunities for exploring, dreaming about the future, experiencing the "being adult" concept, and thinking about themselves (Schwartz, 2016). College can be seen as a "safe haven" for self-exploration (Arnett, 2004), it is a specific period which determines adult life.

More precisely, freshman year is a milestone in emerging adults' lives (Shim & Ryan, 2012). It requires adjustment due to multiple transitions like changes in academic environments, living arrangements, independence, and responsibility (Pittman & Richmond, 2008). Some gender differences are observed in college student experiences as freshman females present more internalizing behaviors than males (Shim & Ryan, 2012). Zuckerman, Li, and Hall (2016) proposed that gender differences across age derived from different expectations about the future: females expect more than males from ages 8-10 to after the college years. Considering emerging adulthood development, freshman year represents a

specific period of adjustment where females seem to be more exposed to depression (e.g., Culbertson, 1997).

1.1. Emerging adulthood in French context

For the French youth, the feeling of "becoming adult" is delayed for an exploration phase characterized by years of studies and unstable unemployment (Lannegrand-Willems et al., 2011). Erner (2014) employed the term *Homo diplomocus* to highlight the "race for diplomas" that occurs in France. The proportion of college students is higher than in other European countries (Kovess-Masfety et al., 2016). Indeed, 85.6% of high school students continued their education at college level in 2016 (http://www.enseignementsup-recherche.gouv.fr), and the number of years of study has increased since the start of the 21st century to reach 6.3 years on average per person. This development is partly explained by the difficulty finding a job without a higher education diploma (Minni & Galtier, 2015). In fact, the unemployment rate for the 15-24-year-old is higher in France than the European Union average rate (e.g., Kovess-Masfety et al., 2016). In the last years, youth insertion on the labor market has been a prominent theme of French youth policy (Pickard, 2014). Integration into "adult life" is a French societal issue, as it generates an insecure context for emerging adult students that influences their psychosocial adjustment. Belghith et al. (2018) showed that 20% of French college students presented psychological distress and females were more exposed than males. This insecure context starts with freshman year and this is a typical French issue (see Litli, Barraux, & Vallée, 2018). In French college context, freshman year comprises many switches: from a class of 30 students to an auditorium with more than 400 students, from close relationships with teachers to anonymity, and from having weekly homework to personal work without instructions. All these changes lead to self-reconsideration and require adjustment to this new context of life. Based on developmental considerations on emerging

adulthood and contextual ones regarding the French context, we aimed to explore French emerging adult students' self-perception and its relation to females' adjustment to academic context in freshman year.

1.2. Self-perception: A construct including global self-worth and domain-specific self-esteem

As a fundamental psychological construct, self-perception plays a major role in individual development. It depends on self-evaluation in different domains of life (e.g., global, social, work, scholastic, physical) (Harter, 1999). A complete vision of self-perception needs to take into account global self-esteem, or global self-worth as outlined by Harter (1999), and domain-specific self-esteem, especially in adolescence and young adulthood (von Soest et al., 2016).

Global self-worth and domain-specific self-esteem both participate in answering the "Who I am?" question (Harter, 2012), but we can distinguish between them. Specifically, global self-worth is a subjective evaluation of individual worth as a person (Trzesniewski et al., 2013), that is, a positive or negative perception toward the self as a totality (Rosenberg, 1965). It refers to general attitude, behavior, and feeling about the self (Rosenberg et al., 1995). During adolescence, high global self-worth promotes positive development and plays a significant role in freshmen's adjustment to academic context (Hickman et al., 2000). For its part, domain-specific self-esteem refers to the feeling of being competent or adequate in a specific area of life such as work, school, or social relationships (Harter, 1999). The more important one considers a domain, the more self-assessment in this domain affects global self-worth. These specific domains fall into two main categories, competencies/abilities and social relationships, and on this basis, Harter and collaborators (1985, 1986, 1988, 2012) have developed models and instruments describing particular self-esteem domains for each stage of life.

In addition, self-perception development appears gender-biased. In each stage of life, there is a small difference in favor of males (Zuckerman et al., 2016). This difference is found in global self-worth (Kling et al., 1999) and in domain-specific self-esteem (Gentile et al., 2009). In a meta-analysis grouping together 114 studies with participants from 5 to 58 years old, Gentile et al. (2009) found that overall males scored higher than females in appearance domain and in athletic domain and that there was no difference in the academic domain and in social relationships domain. More specifically, in adolescence and emerging adulthood, females scored lower than males in global self-worth (Baldwin & Hoffmann, 2002; Chung et al., 2014; Galambos et al., 2006), in appearance domain, and in athletic competence domain (Friedrichsen, 1998; Galambos et al., 2006), but they scored higher in close friendships domain (Friedrichsen, 1998; Neeman & Harter, 2012) and in morality domain (Figueiredo de Barros, 2012; Friedrichsen, 1998).

1.3. The specificity of self-esteem domains in emerging adulthood

Self-esteem is a progressive developmental task. Initially investigated in early childhood, then during adolescence, interest in self-esteem has moved toward emerging adulthood. According to Harter (1999), each stage of life has its own specific domains. For emerging adult students, in addition to *global self-worth*, twelve specific domains have been defined by Neeman and Harter (2012): *creativity* (feeling creative or inventive), *intellectual ability* (feeling smart and intellectually capable), *scholastic competence* (mastering the coursework), *job competence* (feeling proud and confident to do a job), *athletic competence* (feeling competent in physical activities and sports), *appearance* (feeling physically attractive), *romantic relationships* (being able to develop romantic relationships), *social acceptance* (being able to make friends), *close friendship* (being able to have a friend with whom one can share personal things), *parent relationships* (feeling comfortable with the way

one acts with his/her parents), *humor* (being able to laugh at oneself and take kidding by friends), and *morality* (feeling that one's behavior is moral). The first five domains refer to the competencies/abilities category and the seven others to the social relationships category. Items from *scholastic competence*, *job competence*, *athletic competence*, *appearance*, *romantic relationships*, *social acceptance*, and *close friendships* were adapted from the adolescent self-perception model (Harter, 1988), and those of *intellectual ability*, *humor*, and *morality* came from the adult model (Harter, 1986). This choice was justified by the in-between nature of emerging adult students: neither adolescents nor adults. Two new domains were also added, as they were considered important concerns at this stage of life: *creativity* and *parent relationships. Creativity* refers to all the opportunities and possibilities that an emerging adult can imagine for his/her future, and how he/she feels about it. With regard to *parent relationships*, emerging adults become progressively more independent and self-sufficient (Tanner, 2006) and relations with their parents change to become more mutual (Rice et al., 1995).

1.4. Emerging adults' self-perception and adjustment to academic context

Emerging adulthood is an adjustment period with self-reconsideration where depression can increase (Reinherz et al., 2003). Specifically, entering college represents a major transition and a new context of life for emerging adults as students (Shankland, 2009) who have to adjust to academic context in order to face to multiple changes and to succeed in college. Adjustment can be defined as the capacity to cope with new social and emotional situations (Lazarus, 1966). Academic results constitute a strong indicator of students' adjustment to academic context (e.g., Beyers & Goossens, 2003). Conversely, depression indicates a negative adjustment since it compromises students' scholastic and social

achievement competencies (Harter & Whitesell, 2003). In the present study, we used academic results and depression as indicators of adjustment to academic context.

Self-perception seems to be a factor of freshmen's adjustment. With a unidimensional conception of self-esteem, Bum and Jeon (2016) showed that students' positive self-perception was negatively correlated to depression. Using seven dimensions of the adolescent self-perception model (e.g., Harter, 1988), von Soest et al. (2016) demonstrated that this association was stronger with global self-worth than with domain-specific self-esteem. Indeed, domain-specific self-esteem is a predictor of its corresponding measured outcome (i.e., perceived scholastic competence is related to scholastic adjustment); the more competent a student feels in the scholastic competence domain, the better he/she copes with expectations from the college (Friedlander et al., 2007). However, these studies did not investigate the link between self-perception and adjustment to academic context using a specific instrument developed for college students with a multidimensional conception, nor the combination of the different domain-specific self-esteem into profiles.

1.5. The characteristics of female emerging adult students' self-perception

In college context, three domain-specific self-esteem appears more important for females than for males: intellectual ability, scholastic competence, and close friendships (Neeman & Harter, 2012). The first two domain-specific refer to competencies/abilities category whereas close friendships domain is from social relationships category. In that sense, females invest both self-esteem categories. On the one hand, intellectual ability domain and scholastic competence domain are both about college context. Luscombe and Riley (2001) showed that females appeared to be more self-critical about their academic abilities than males. Indeed, females expect more than males from college as a new academic and living context (Mau & Bikos, 2000; Mello, 2008). In adolescence, high expectations are linked to

lower academic performance and to school-related stress (Kaplan et al., 2005). In the specific context of freshman year, females experienced more school-related stress than males (Misra et al., 2000; Pierceall & Keim, 2007) which leads them to more often question their abilities to cope with college expectations and have poorer self-perception (e.g., Pedersen, 2017). On the other hand, concerning close friendships domain, female emerging adults are most likely to create intimate relationships than males (e.g., Daley & Hammen, 2002; Schnyders & Lane, 2018). Difficulties in interpersonal relationships have been related to depressive outcomes (Ibarra-Rovillard & Kuiper, 2011). As lower academic performance and depression are factors of college dropout (Boyraz et al., 2016; Shuman, 1956), a more comprehensive representation of the dynamic of female emerging adult students' self-perception in freshman year would permit to specify which specific dimensions need to be reinforced.

1.6. Present study

The present study focuses on emerging adult students, a stage of life where a complete dimensional conception of self-perception had not yet been explored. While Neeman and Harter (1986, 2012) developed a specific instrument including twelve self-perception domains, all previous studies conducted on college student samples used either a unidimensional concept of self-esteem with Rosenberg's scale (Bum & Jeon, 2016; Galambos et al., 2006; Hickman et al., 2000; Sánchez-Queija et al., 2017; Shim & Ryan, 2012), or a few of Neeman and Harter's domains (e.g., Friedlander, Reid, Shupak, & Cribbie, 2007; Pittman & Richmond, 2008). Thus, the validity of the twelve self-esteem domains in emerging adulthood has not yet been tested. Using a dimensional conception of self-perception could increase our understanding of the self-perception processes in emerging adult students and allow us to identify the specific domains in which these individuals are invested, particularly in the academic sphere.

The aim of the present research was to investigate French emerging adult students' self-perception and its links with females' adjustment to academic context. First, a preliminary study used a variable-oriented approach in order to validate the self-perception instrument (Self-Perception Profile for College Student, SPPCS) developed by Neeman and Harter (2012) among a sample of French college students. Second, the main study used a person-oriented approach in order to identify different profiles combining self-esteem domains among a female college student sample and to explore their links with adjustment to academic context. This approach was retained in order to better capture the "whole-system properties" (Bergman & Andersson, 2010) regarding emerging adult self-perception.

Specifically, the preliminary study examined the validity of Harter's self-perception dimensions (the twelve domain-specific dimensions and global self-worth) in a French emerging adult student sample, by testing the psychometric properties of the SPPCS. Then the main study had a two-fold objective. First, we aimed to determine self-perception profiles based on the SPPCS in French emerging adult females at the freshman level. Freshman year constitutes a major transition involving changes in self-exploration and adjustment to a new context, especially for females (e.g., Zuckerman et al., 2016). Using a person-oriented approach, it was hypothesized that different self-perception profiles would emerge, and in particular we expected to find contrasted clusters characterized by the two main categories of domain-specific self-esteem we have specified above: competencies/abilities and social relationships. Second, we examined the relationships between the self-perception profiles and the indicators of adjustment to academic context we identified: academic results and depression. We assumed that (1) profiles characterized by high self-esteem in competencies/abilities would be associated with higher academic results than those characterized by low self-esteem, and that (2) those characterized by high self-esteem in

social relationships would have a lower depression score than those characterized by low self-esteem.

2. Preliminary Study

2.1. Participants and Procedure

Participants were recruited from a French college at undergraduate and graduate levels in different curricula in order to obtain broad representativeness of the college student population. The sample included 564 participants (M_{age} = 19.5; SD_{age} = 1.7; 64.8% of females) enrolled in freshman (57.9%), sophomore (21.2%), senior (12.1%), and fourth (8.7%) years, in social sciences (41.1%), physics (14.5%), and medicine (43.7%). The self-report questionnaire was completed, voluntarily and anonymously, during classes.

2.2. Measures

2.2.1. Self-Perception Profile for College Student (SPPCS)

The SPPCS is a 54-item questionnaire developed by Neeman and Harter (2012) that assesses twelve domains (creativity, intellectual ability, scholastic competence, job competence, athletic competence, appearance, romantic relationships, social acceptance, close friendships, parent relationships, humor, and morality), and global self-worth. Each domain includes four items except for global self-worth, which counts six items. Items are composed of two opposite sentences (e.g., "*Some students like the kind of person they are BUT Other students wish that they were different*"). Respondents had to choose which one best suited them and indicated if this description was "*really true*" or "*sort of true*" for them. Each item scored from 1 to 4, where a score of 1 indicated low self-perception and a score of 4 reflected high self-perception. The SPPCS items were translated from English into French by four psychologists according to the recommendations of Vallerand (1989) and the International Test Commission (Hambleton, 2001). The four translations were compared, and

disagreements were discussed between the co-authors until a consensus was reached to develop a single final French version of the SPPCS. Two back translations (French to English) were then produced by two bicultural translators. This procedure provided two identical English versions. French items are reported in appendix section.

2.3 Results

2.3.1. Descriptive statistics and correlations

Descriptive statistics (means, standard deviations, and Cronbach's alpha), loadings, uniqueness, and latent correlations of the dimensions of the SPPCS are reported in Table 1, Table 2, and Table 3. As presented in Table 1, the internal consistency of the 13 dimensions of the SPPCS was acceptable to good (α ranging from .69 to 85). As expected, global self-worth was related to all other specific domains. The first five specific domains (creativity, intellectual ability, scholastic competence, job competence, and athletic competence) that referred to the competencies/abilities category were positively inter-correlated. We also observed that the seven specific domains that referred to the social relationships category were positively inter-correlated, except for appearance and humor.

< Insert Table 1 here >

< Insert Table 2 here >

< Insert Table 3 here >

2.3.2. Factor validity, reliability and invariance of the SPPCS

A confirmatory factor analysis (CFA) with diagonally weighted least squares estimation[1] was performed to test the psychometric properties of the French version of the SPPCS in the whole sample and in females and males separately. This analysis was

[1] In order to take into account the ordinal nature of the data diagonally weighted least squares using a polychoric correlation matrix was used.

performed using lavaan software in R 3.5.2 (Rosseel, 2012). Considering all the data, the percentage of missing values was 1.5%. In order to accommodate this, the listwise deletion was used. The initial estimation of the 13-factor model yielded a good fit to the data in the general population (e.g., Hooper, Coughlan, & Mullen, 2008): $\chi 2$ (1299) = 2243.26, CFI = .98, RMSEA = .04[.038-.043], TLI = .98, and WRMR = 1.19. The scale had good internal consistency in each dimension (see Table 1). Two CFAs were conducted separately for males and females and both showed acceptable criteria. Fit indices are reported in Table 4.

< Insert Table 4 here >

Moreover, we analyzed invariance across gender groups using a series of multiple-group confirmatory factor analysis models with progressively more stringent constraints. Six models were performed to test for measurement and structural invariance: configural, metric, scalar, strict, factor variance/covariance, and latent mean invariance (Putnick & Bornstein, 2016; van de Schoot et al., 2012). Configural, metric, scalar, and strict invariance refer to measurement invariance and factor variance/covariance and latent mean invariance to structural invariance (Milfont & Fischer, 2010). Configural invariance was specified to have the same pattern of free and fixed parameters across groups, but not equality constraints. It enabled us to examine whether the same items measured the same constructs across groups. In metric invariance, only the factor loadings were constrained to be equal across groups. This model implied that the same latent variables were being measured across groups. Scalar invariance was tested by specifying factor loadings and thresholds to be invariant across groups. Strict invariance had an additional constraint that uniquenesses were invariant across groups. Factor variance/covariance invariance implies that the range of scores on a latent factor is invariant across groups and that all latent factors have the same relationships across groups. Finally, latent mean invariance indicated that groups differed on the underlying constructs.

A more constrained model was rejected when (a) the chi-square difference test had a probability lower than .05 (Byrne & van de Vijver, 2010) and, (b) the ΔCFI had a decrease higher than .010 (Cheung & Rensvold, 2002) with the ΔRMSEA had an increase higher than .015 (Chen, 2007). French and Finch (2006) have recommended to use chi-square difference test criterion in multiple-group confirmatory factor analysis with a large number of factors. Thus, this criterion was privileged. This analysis was performed using semTools and lavaan software in R 3.5.2 (Jorgensen et al., 2019; Rosseel, 2012). Each model was tested with weighted least square mean and variance adjusted estimation. Results are presented in Table 5. Configural invariance model showed acceptable criteria and could be used as the baseline model. Metric invariance model demonstrated acceptable criteria. Scalar invariance model had good fit and was not rejected, as the strict invariance model. All loadings, thresholds, and uniqueness provided to be invariant across gender. In addition, factor variance/covariance model presented a non-significant chi-square difference test and was accepted. Finally, latent mean invariance model was rejected and revealed that the latent factor means were gender variant.

< Insert Table 5 here >

2.3.3. Self-perception dimensions according to gender

Latent means invariance tests were used to assess gender differences in each self-perception dimension. The results showed that males had significant higher scores than females (latent means fixed to 0) on seven dimensions: *creativity*, latent mean = 0.27, $p < .05$, $d = 0.25$; *intellectual ability*, latent mean = 0.54, $p < .001$, $d = 0.61$; *scholastic competence*, latent mean = 0.41, $p < .001$, $d = 0.40$; *athletic competence,* latent mean = 0.89, $p < .001$, $d = 0.97$; *appearance,* latent mean = 0.60, $p < .001$, $d = 0.84$; *social acceptance,* latent mean = 0.30, $p < .01$, $d = 0.30$; and *global self-worth,* latent mean = 0.46, $p < .001$, $d = 0.48$.

According to Cohen's (1988) conventional criteria, the size effects were small except for *intellectual ability* (d = 0.61) which was moderate, and *athletic competence* (d = 0.97) and *appearance* (d = 0.84) which were large. Moreover, there were no significant differences in the other six dimensions: *job competence*, latent mean = 0.22, p = .06, d = 0.23; *romantic relationships,* latent mean = 0.09, p = .41, d = 0.08; *close friendships*, latent mean = 0.13, p = .23, d = 0.11; *parent relationships*, latent mean = -0.12, p = .26, d = 0.23; *humor*, latent mean = 0.04, p = .73, d = 0.14; and *morality,* latent mean = -0.10, p = .39, d = 0.17.

2.4. Brief discussion

In this preliminary study, we investigated the psychometric properties of the French version of the SPPCS, using a variable-oriented approach of self-perception. First, the correlations highlighted competencies/abilities and social relationships as the two main categories of domain-specific self-esteem. However, the *appearance* domain was not correlated with *humor*. This was an unexpected result as appearance is related to humor during adolescence (Kirsh, 2006). For young women, humor through parody images can be used to improve body satisfaction (Slater et al., 2019) whereas being teased by friends about weight predicts negative affects (Jones et al., 2005). Thus, emerging adults seem to represent themselves differently depending on the kinds of humor, future research needs to investigate the link between the different kinds of humor and self-perception during emerging adulthood.

Nevertheless, as expected, *global self-worth* was strongly correlated with self-esteem in all the specific domains and particularly with *appearance*. As long as individuals' roles in society are not clearly defined, appearance as an observable characteristic is the easiest way to define oneself (von Soest et al., 2016). That way during college years, a specific context of self-exploration where emerging adults experience the "being adult" concept (Schwartz,

2016), appearance is an important preoccupation (e.g., Fathima et al., 2019). These results are in line with those found by Harter (2012) and von Soest et al. (2016).

Second, CFAs showed acceptable criteria for our sample, as well as for male and female sub-samples. The internal consistency of each dimension was acceptable. The French version of the SPPCS showed internal consistency close to its original US version and to the Portuguese version (Figueiredo de Barros, 2012; Neeman & Harter, 2012). The measurement and structural invariance across gender provided full factor variance and covariances invariance. SPPCS can thus be used to compare males and females on the self-perception dimensions. In that sense, the latent means invariance test showed that males scored significantly higher than females in all dimensions except for *job competence, romantic relationships, close friendships*, *parent relationships*, *humor*, and *morality* in which no significant differences were found. In other words, a lower self-perception was observed in four dimensions of the academic domain, in two dimensions of the social domain, and in global self-worth among females compared to males. There were thus few differences between our results and those of Neeman and Harter (2012) and Figueiredo de Barros (2012). According to Zuckerman et al. (2016), gender differences are due to cultural learning. Although the US, Portuguese, and French versions of the SPPCS are from Western countries, we suppose that there are some minor cultural differences which explain our results. Future research needs to explore these differences with a cultural comparison between Western countries.

3. Main study

3.1. Participants and Procedure

The sample was composed of 177 freshman year emerging adult females enrolled in a psychology department (M_{age} = 18.4; SD_{age} = 0.9). Concerning their living arrangements, 29.3% lived with their parents, 25.9% alone in rental accommodation, and 8.2% alone in

college housing. Furthermore, 59% had a student fellowship. The self-report questionnaire was completed, voluntarily and anonymously, during classes.

3.2. Measures

3.2.1. Self-perception

Self-perception was evaluated by the SPPCS, as defined and validated in the preliminary study.

3.2.2. Indicators of adjustment to academic context

Academic results corresponded to the mean grade obtained by students in their first semester at college. In French college, the grades range from 0 to 20 and students have to obtain a minimum of 10 in each semester to pass.

Depression was investigated using the short form of the Beck Depression Inventory (Beck & Beamesderfer, 1974; Bourque & Beaudette, 1982, for French version). This 13-item questionnaire evaluates depression based on diagnostic criteria. Each item is composed of four claims that correspond to four different degrees of symptom intensity. Scoring ranges from 0 to 39, with a high score indicating significant depressive symptoms.

3.3. Results

3.3.1 Descriptive statistics and correlations

All descriptive statistics (means, standard deviations, and Cronbach's alpha) and correlations between self-perception dimensions, academic results, and depression are reported in Table 6. Global self-worth was still related to all specific domains but contrary to the descriptive statistics observed in the preliminary study, there were less significant relations across specific domains. In the competencies/abilities category, athletic competence

seemed to be less related to other dimensions. In the social relationships category, only appearance and social acceptance showed consequent significant relations. In addition, academic results revealed significant correlations with dimensions of the competencies/abilities category (intellectual ability, scholastic competence, and job competence) and global self-worth. Finally, depression was related to all dimensions; excepted athletic competence and humor.

< Insert Table 6 here >

3.3.2. Cluster analysis on Self-Perception Profile for College Students

A cluster analysis of the thirteen dimensions of the SPPCS was conducted using a two-step procedure in order to identify different self-perception profiles. The first step consisted in a hierarchical cluster analysis using Ward's method and squared Euclidean distances. In the second step, the initial cluster centers obtained from this hierarchical analysis were used as non-random starting points in an iterative *k*-means analysis. The final number of clusters was determined according to three criteria (e.g., Luyckx et al., 2008): substantive theorizing, parsimony, and explanatory power (i.e., the most variance explained in each constituting dimension). Combining the 13 domains of SPPCS, we chose the seven-cluster solution which had better parsimony (see Figure 1). These analyses were performed using SPSS Statistics 23.0. The seven-cluster solution accounted for 41.2% of the variance in creativity, 53.1% in intellectual ability, 44.2% in scholastic competence, 24.7% in job competence, 34.6% in athletic competence, 44.2% in appearance, 26.3% in romantic relationships, 46.5% in social acceptance, 33.4% in close friendships, 36.1% in parent relationships, 26.4% in humor, 35.0% in morality, and 57.3% in global self-worth. A discriminant function analysis supported this final cluster solution: Wilks' lambda = .02, $\chi^2(78) = 687.41$, $p < .000$, 89.26% of cross-validated grouped cases correctly classified. The

seven clusters presented different patterns of self-perception equally distributed in our sample. The cluster pattern interpretation was made with Cohen's (1988) conventional criteria: a small effect was defined by an absolute value of 0.2 *SD,* a moderate effect by 0.5 *SD*, and a large effect by 0.8 *SD*. We obtained a global *positive self-perception* cluster which scored high or moderately high in all dimensions, and on the reverse, a *negative self-perception* cluster with low or moderately low scores in all dimensions. Two clusters were characterized by rather positive scores on one of the two categories: *positive creativity vs. negative social self-perception* scored high in creativity but low in social relationships category (close friendships, parent relationships, humor, and morality) and almost conversely, *positive social self-perception* scored high in social relationships category (social acceptance, close friendships, parent relationships, humor, and morality). Two other clusters scored positively in dimensions from the two categories: *positive scholastic and parental vs. negative social and athletic self-perception* had high scores in intellectual ability, scholastic competence, job competence, and parent relationships, but low scores in athletic competence and social acceptance; and *positive creativity, athletic, social, and humor vs. negative intellectual and scholastic self-perception* had high scores in creativity, athletic competence, social acceptance, and humor, but low scores in intellectual ability, scholastic competence, parent relationships, and global self-worth. And finally, one cluster was characterized by very few positive dimensions in one category only: *positive appearance vs. negative competencies self-perception* had a high score in appearance but low scores in the competencies/abilities category (creativity, intellectual ability, scholastic competence, job competence, and athletic competence).

< Insert Figure 1 here >

3.3.3. Relationship between self-perception profiles and adjustment to academic context

To determine whether an association existed between self-perception profiles and the variables assessing the adjustment to academic context, we performed a multivariate analysis of variance (MANOVA) with Tukey post-hoc tests. There was no missing data for self-esteem and depression, and 9% of missing data for academic results. Cases with missing data were omitted from further analysis. MANOVAs revealed significant effects of self-perception profiles on adjustment to academic context (academic results and depression), as reported in Table 7 There were significant effects on academic results, $F(6,154) = 4.38$, $p < .001$, $\eta^2 = .14$ and on depression, $F(6,170) = 13.54$, $p < .001$, $\eta^2 = .32$. According to Tukey post-hoc tests on academic results, participants in *positive scholastic and parental vs. negative social and athletic self-perception* had better results than those in *positive social self-perception*, *positive appearance vs. negative competencies self-perception* profile, and *positive creativity, athletic, social, and humor vs. negative intellectual and scholastic self-perception* profile. On depression, participants in *negative self-perception* scored higher than those in *positive appearance vs. negative competencies self-perception*, *positive social self-perception* profile, in *positive scholastic and parental vs. negative social and athletic self-perception* profile, and in *positive self-perception* profile. All Tukey post-hoc analyses are reported in Table 7.

< Insert Table 7 here >

3.4. Brief discussion

Using a person-oriented approach, we first identified self-perception profiles in female emerging adult freshmen. Next, we investigated the relationship between these profiles and adjustment to academic context with academic results and depression as indicators. As expected, different profiles of self-perception emerged, revealing different configurations of the two main categories of self-esteem (competencies/abilities and social relationships). Indeed, two profiles converged on both categories, one in a positive side (*positive self-*

perception) and the other in a negative one (*negative self-perception*); two others were contrasted by domains of one category (*positive creativity vs. negative social self-perception* and *positive social self-perception*); two others were mixed (*positive scholastic and parental vs. negative social and athletic self-perception* and *positive creativity, athletic, social, and humor vs. negative intellectual and scholastic self-perception*); and finally, one other was characterized by few positive self-perception domains of one category (*positive appearance vs. negative competencies abilities*). Complementing von Soest et al. (2016), this result highlighted the importance of considering both global self-worth and domain-specific self-esteem in order to study self-perception, and showed the great diversity in self-perception dynamics.

The self-perception profiles were differently associated with females' adjustment to academic context. As could be expected (e.g., Nordstrom, Goguen, & Hiester, 2014), *positive self-perception* (high and moderately high in both global self-worth and self-esteem categories) was associated with the best adjustment and *negative self-perception* (low and moderately low in both global self-worth and self-esteem categories) with the worst. Regarding the others self-perception profiles, *positive scholastic and parental vs. negative social and athletic self-perception* was associated with the best adjustment. In contrast, *positive creativity, athletic, social, and humor vs. negative intellectual and scholastic self-perception*, which was characterized by low scores in global self-worth, appearance, and scholastic competence, was linked to the worst adjustment. These results are in line with some results from studies conducted on adolescent samples, since academic achievement was positively correlated to scholastic competence (Friedlander et al., 2007), and depressive symptoms were negatively related to global self-worth, appearance, and scholastic competence (Steiger et al., 2014). In our study, it seems that the scholastic competence domain is a protective factor. According to Neeman and Harter (2012), for female emerging

adult students, scholastic competence is considered as one of the most important domain-specific. So, in regard to our results and to this consideration, the scholastic competence domain appears to be a key variable against maladjustment in female emerging adult freshmen.

More specifically, for academic results, as expected, profiles with high scores in intellectual ability and scholastic competence obtained a minimum of 10 and passed their semester; those with moderate or low scores failed their semester. The worst results were observed for profiles characterized by low scores in both categories and for profiles with high scores in the social relationships category only. Female emerging adult students who felt competent or adequate only in the social relationships category seemed to be less committed to academic achievement. Developing nonfamilial relationships and close friendships is a central preoccupation of emerging adulthood (Arnett, 2000; Erikson, 1968), especially for females (e.g., Daley & Hammen, 2002; Schnyders & Lane, 2018). Moreover, freshman year promotes personal growth (Arnett, 2016) and a sense of freedom (Jellab, 2011). On the basis of our results and these considerations, future research needs to investigate deeply the dynamic between scholastic competence and social relationships competence during the free period of freshman year and its evolution. For depression, three profiles had the lowest mean scores (*positive self-perception*; *positive scholastic and parental vs. negative social and athletic self-perception*; *positive social self-perception*). These profiles were characterized by high scores in one of the two self-esteem categories or in both self-esteem categories. Conversely, profiles which had the highest score of depression were characterized by low scores in one of the two self-esteem categories or in both self-esteem categories (*positive creativity vs. negative social self-perception*; *positive creativity, athletic, social, and humor vs. negative intellectual and scholastic self-perception*; and *negative self-perception*). As has been shown in the literature, scholastic competence and social acceptance, domains from the

two self-esteem categories, influence depression in addition to global self-worth (e.g., Friedlander, Reid, Shupak, & Cribbie, 2007; Pittman & Richmond, 2008; von Soest, Wichstrøm, & Kvalem, 2016), but in these previous studies, only these two domains were tested. Our results showed that other self-esteem domains are implicated. Future research needs to look in further details self-perception profiles forming at-risk combination for depression.

This study had one noticeable limitation regarding our study sample. The sample represented a small sample but the number of participants was sufficient for conducting analysis. Moreover, the sample was only composed of freshmen enrolled in the psychology department. Self-perception may be influenced by the field of study. Future research needs to investigate self-perception patterns with students in other academic fields. Moreover, some of our findings were in line with those obtained with adolescent samples, but others seemed to characterize female emerging adult self-perception and adjustment, such as the *positive scholastic and parental vs. negative social and athletic self-perception* profile, emphasizing the specificity of female emerging adulthood. Future research should investigate in greater detail the characteristics of emerging adult self-perception profiles, comparing freshman year to later years to elicit the specificity of emerging adult self-perceptions.

4. General discussion

Emerging adulthood is a "two-faced" period where young adults can experiment anything and everything (Schwartz, 2016). During this stage of life, self-perception is questioned, especially in a new context like starting college where students have a lot of opportunities and can redefine themselves. The main aim of our research was to explore self-perception in French female emerging adult students in relation to the quality of their adjustment to academic context. We investigated the validity of Harter's self-perception domains to assess the various forms of self-perception profiles, and their relationships with

two indicators of the adjustment to academic context: academic results and depression. Overall, we showed the diversity of self-perception profiles in female emerging adult students, and their associations with positive vs. negative adjustment to academic context.

Besides the findings pointed out in the two previous Discussion subsections, we focus on the pertinence of each self-perception dimension in female emerging adult students. Indeed, in our study, when identifying self-esteem profiles, we showed that among the thirteen dimensions of the SPPCS, six were more dominant and discriminant than others: creativity, intellectual ability, scholastic competence, appearance, social acceptance, and global self-worth. Intellectual ability and global self-worth being the dominant ones. According to Harter (1985, 1986), intellectual ability refers to the competences/abilities category. This specific domain comes from the adolescent self-perception profile scale and is a core domain in other stages of life like global self-worth. Our results reinforce the assumption that these two dimensions (intellectual ability and global self-worth) are central in self-perception for female emerging adult students. Creativity, scholastic competence, and social acceptance seem to be more specific to female emerging adult students. Indeed, the creativity domain was specifically added for college students. Scholastic competence plays a part in adaptation to academic rules (e.g., Pittman & Richmond, 2008). And though the social acceptance domain is a major domain in each stage of life, it is required to adapt to a new context of life such as in freshman year, during the transition from high school to college. The last discriminant dimension, appearance, is probably due to our sample being composed of females from a Western country (e.g., Harter, 2012). The other seven self-esteem domains (job competence, athletic competence, romantic relationships, close friendships, parent relationships, humor, and morality) were less salient in our sample compared to American samples (Neeman & Harter, 2012). In France, university tuition is cheaper and there is no athletic award, job and athletic competence appear to be less important than in the United

States. For example, only 23% of French students have a job (Zilloniz, 2017), against 70% in the United States (Carnevale et al., 2015). The parent relationships domain was created especially for college students. We assume that the parent relationships domain was not discriminant, as 29.3% of emerging adults from our sample were still living with their parents. When emerging adults are still living at home with their parents, they experience less independence and self-sufficiency (Kins & Beyers, 2010), and their relations with their parents change less. In contrast, when emerging adults leave the nest, relations change to become more reciprocal (Grotevant & Cooper, 1986) and parents may feel the need to help their children to deal with their new life (Nelson et al., 2011). As parent relationships contribute to the transition to adulthood (Bidart & Pellissier, 2007), during a period of major changes as freshman year, it is expected that the parent relationships domain gain importance when emerging adults leave the family home. The romantic relationships, close friendships, humor, and morality domains may gain relevance with age. Freshman year is shortly after high school years, so future research has to test whether these domains are more salient in later years. The analysis of the contribution of each specific domain emphasizes how self-esteem constitutes a dynamic construction which reflects the expression of a specific developmental stage in context.

Overall, our results claim for the identification of the individual dynamics of self-perception dimensions in order to determine whether some of them are positive while others are negative (mixed profiles are the most frequent) and to help the individual to specifically reinforce the lowest self-perception domains. This reinforcement would lead to a better adjustment to a new context of life such as starting college.

4.1. Limitations and suggestions for future research

Limitations had been discussed for each study above. In addition, this research used a cross-sectional design. The way self-perception profiles and adjustment to academic context

evolve over time during the college years needs to be explored. Indeed, the level of self-esteem specific domains between adolescence and adulthood increase (von Soest et al., 2016), meaning that self-perception profiles evolve over time. Concerning the specific period of emerging adulthood, Sánchez-Queija et al. (2017) showed that self-esteem, as a unidimensional concept, increases during this period. In addition, Harter and Whitesell (2003) demonstrated three patterns of self-perception development during the transition from high school to college. This change was explained by the importance accorded to each domain of self-esteem. Considering this could allow for a more comprehensive understanding of self-perception profiles. Moreover, adjustment to a new context of life is progressive. Using a longitudinal design could serve to specify the stability and changes of emerging adult students' adjustment to academic context over time and to explore the potential bidirectional link between adjustment to academic context and self-perception over the college years.

5. Conclusion

We have demonstrated that the self-perception specific domains developed by Neeman and Harter (2012) in addition to global self-worth are relevant in order to study emerging adult students' self-perception. The SPPCS showed good psychometric properties and can be used in future research on self-perception for comparisons across genders. Furthermore, in French freshman females, seven self-perception profiles were found, one of them globally positive, one other negative, and the others mixed. They highlight the diversity and the dynamics of self-perception during this stage of life and their specific expression in context. They were differently related to the quality of adjustment to freshman year that constitutes a new context of life. For a better understanding of the self-perception process in emerging adulthood, future research should analyze this diversity throughout the college years and across genders, and how their relationships with adjustment evolve over time.

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Table 1

Descriptive statistics, loadings, uniqueness, and latent correlations of the Self-Perception Profile for College Students

	Loadings	δ	*M*	*SD*	α	2	3	4	5	6	7	8	9	10	11	12	13
1. Creativity	-	-	2.47	0.64	.82	.41***	.29***	.21***	.21***	.24***	.09	.28***	.08	.10	.08	.11*	.36***
Item 12	.79***	.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 25	.91***	.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 38	.86***	.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 52	.73***	.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Intellectual ability	-	-	2.38	0.64	.77	-	.85***	.46***	.15**	.45***	.17**	.26***	.11*	.19***	.05	.22***	.60***
Item 8	.70***	.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 21	.76***	.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 34	.74***	.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 48	.79***	.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Scholastic competence	-	-	2.42	0.60	.69	-	-	.55***	.14*	.31***	.13*	.21***	.15**	.22***	.09	.25***	.56***
Item 3	.63***	.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 16	.67***	.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 29	.46***	.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 42	.91***	.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Job competence	-	-	2.61	0.59	.71	-	-	-	.21***	.23***	.20***	.30***	.13*	.29***	.17**	.35***	.46***
Item 2	.64***	.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 15	.63***	.60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 28	.71***	.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 41	.76***	.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Athletic competence	-	-	2.52	0.79	.85	-	-	-	-	.35***	.29***	.36***	.12*	.04	.15**	.08	.30***
Item 13	.77***	.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 26	.89***	.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 39	.88***	.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 53	.90***	.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6. Appearance	-	-	2.61	0.80	.83	-	-	-	-	-	.29***	.27***	.17***	.23***	.08	.21***	.72***
Item 5	.76***	.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 18	.74***	.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 31	.90***	.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 44	.92***	.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note. δ = uniquenesses. α = Cronbach's alpha. * $p < .05$. ** $p < .01$. *** $p < .001$. $N = 564$.

Table 2

Descriptive statistics, loadings, uniqueness, and latent correlations of the Self-Perception Profile for College Students (suite 1)

	Loadings	δ	*M*	*SD*	α	2	3	4	5	6	7	8	9	10	11	12	13
7. Romantic relationships	-	-	2.38	0.75	.77	-	-	-	-	-	-	.37***	.30***	.12*	.12*	.15**	.39***
Item 10	.76***	.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 23	.89***	.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 36	.85***	.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 50	.62***	.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8. Social acceptance	-	-	2.83	0.64	.73	-	-	-	-	-	-	-	.80***	.33***	.44***	.33***	.58***
Item 4	.62***	.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 17	.68***	.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 30	.79***	.37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 43	.73***	.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9. Close friendships	-	-	3.16	0.71	.77	-	-	-	-	-	-	-	-	.37***	.40***	.32***	.43***
Item 7	.71***	.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 20	.77***	.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 33	.76***	.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 46	.88***	.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Parent relationships	-	-	3.15	0.75	.78	-	-	-	-	-	-	-	-	-	.28***	.51***	.41***
Item 6	.71***	.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 19	.77***	.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 32	.92***	.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 45	.72***	.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Humor	-	-	3.43	0.61	.78	-	-	-	-	-	-	-	-	-	-	.28***	.27***
Item 11	.77***	.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 24	.71***	.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 37	.90***	.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 51	.87***	.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12. Morality	-	-	3.04	0.61	.69	-	-	-	-	-	-	-	-	-	-	-	.50***
Item 9	.56***	.69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 22	.58***	.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 35	.73***	.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 49	.83***	.30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note. δ = uniquenesses. α = Cronbach's alpha. * $p < .05$. ** $p < .01$. *** $p < .001$. $N = 564$.

Table 3

Descriptive statistics, loadings, uniqueness, and latent correlations of the Self-Perception Profile for College Students (suite 2)

	Loadings	δ	*M*	*SD*	α	2	3	4	5	6	7	8	9	10	11	12	13
13. Global self-worth	-	-	2.77	0.61	.82	-	-	-	-	-	-	-	-	-	-	-	-
Item 1	.73***	.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 14	.71***	.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 27	.74***	.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 40	.72***	.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 47	.82***	.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item 54	.79***	.37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note. δ = uniquenesses. α = Cronbach's alpha. * $p < .05$. ** $p < .01$. *** $p < .001$. $N = 564$.

Table 4
Confirmatory factor analysis models for general, male, and female population

	χ^2	*df*	RMSEA [90 CI %]	CFI	TLI	WRMR
13-factor model	2243.26	1299	.04 [.038-.043]	.98	.98	1.19
13-factor model on male group	1695.05	1299	.04 [.034-.047]	.98	.97	1.03
13-factor model on female group	1944.78	1299	.04 [.037-.044]	.99	.98	1.10

Note. $N = 564$, $n = 206$ for male group, $n = 357$ for female group.

Table 5

Multiple-group confirmatory factor analysis models for measurement and structure invariance across gender

	χ^2	*df*	RMSEA [90 CI%]	CFI	TLI	$\Delta\chi^2$	Δdf	*p*	ΔRMSEA	ΔCFI	ΔTLI
M1: configural invariance – no invariance	3639.87	2598	.043 [.039-.046]	.984	.982	-	-	-	-	-	-
M2: metric invariance – λs invariant	3893.88	2639	.046 [.043-.049]	.980	.979	20.71	41	.996	.003	.004	.003
M3: scalar invariance – λs, τs invariant	4044.83	2734	.047 [.043-.050]	.980	.979	32.66	95	1	.001	.000	.000
M4: strict invariance – λs, τs, δs invariant	4044.83	2788	.045 [.042-.048]	.980	.980	0	54	1	.002	.000	.001
M5: factor variance and covariances invariance – λs, τs, δs, ξs, Φs invariant	5394.93	2879	.063 [.060-.065]	.961	.961	52.43	91	.99	.018	.019	.019
M6: latent means invariance – λs, τs, δs, ξs, Φs, ηs invariant	6132.23	2892	.071 [.069-.074]	.949	.950	124.27	13	.000	.008	.012	.011

Note. $N = 564$. λ = factor loading. τ = threshold. δ = uniqueness. ξ = factor variance. Φ = factor covariance. η = factor mean.

Table 6

Descriptive statistics, internal consistency, and correlations between self-perception dimensions, academic results, and depression

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Creativity	-	0.28***	0.14	0.17*	0.37***	0.23**	0.14	0.25***	0.02	-0.01	0.14	0.04	0.19*	-0.07	-0.16*
2. Intellectual ability	-	-	0.61***	0.37***	0.01	0.36***	0.18*	0.17*	0.14	0.19*	-0.04	0.18*	0.48***	0.22**	-0.36***
3. Scholastic competence	-	-	-	0.44***	0.12	0.29***	0.07	0.15*	0.06	0.15*	-0.06	0.19*	0.46***	0.53***	-0.40***
4. Job competence	-	-	-	-	0.17	0.19*	0.14	0.19*	0.09	0.17*	-0.06	0.21**	0.30***	0.26**	-0.36***
5. Athletic competence	-	-	-	-	-	0.15*	0.12	0.28***	0.05	0.02	0.07	-0.08	0.19*	-0.04	-0.05
6. Appearance	-	-	-	-	-	-	0.28**	0.15*	0.18*	0.14	0.06	0.15	0.64***	0.09	-0.31***
7. Romantic relationships	-	-	-	-	-	-	-	0.27***	0.25***	0.07	0.00	0.10	0.33***	-0.01	-0.25***
8. Social acceptance	-	-	-	-	-	-	-	-	0.59***	0.14	0.31***	0.21**	0.38***	-0.03	-0.29***
9. Close friendships	-	-	-	-	-	-	-	-	-	0.20**	0.25***	0.21**	0.33***	0.06	-0.37***
10. Parent relationships	-	-	-	-	-	-	-	-	-	-	0.16*	0.36***	0.28***	0.07	-0.34***
11. Humor	-	-	-	-	-	-	-	-	-	-	-	0.15	0.18*	-0.03	-0.14
12. Morality	-	-	-	-	-	-	-	-	-	-	-	-	0.33***	0.02	-0.30***
13. Global self-worth	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24**	-0.66***
14. Academic results	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.32***
15. Depression	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M	2.36	2.21	2.29	2.37	2.11	2.38	2.21	2.71	3.05	3.09	3.41	2.97	3.85	9.59	7.19
SD	0.64	0.64	0.64	0.72	0.80	0.85	0.75	0.71	0.74	0.80	0.58	0.66	1.01	1.93	5.22
α	.77	.70	.80	.88	.86	.80	.83	.72	.76	.77	.84	.89	.88	-	.79

Note. α = Cronbach's alpha. $N = 177$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 7

Academic results and depression by self-perception profiles

Variables	Self-perception profiles							*F*-value	*p*	η^2
	1	2	3	4	5	6	7			
Academic results	9.19^{ab} (1.58)	10.88^{c} (1.82)	10.36^{bc} (1.48)	8.98^{ab} (2.23)	9.51^{abc} (2.13)	8.61^{a} (1.69)	9.43^{abc} (1.73)	4.38	***	0.14
Depression	5.34^{ab} (3.12)	4.65^{ab} (2.88)	3.16^{a} (2.97)	7.96^{bc} (3.95)	9.37^{cd} (5.28)	9.17^{cd} (4.69)	12.26^{d} (6.83)	13.5	***	0.32

Note. Standard deviations are in parentheses. Pairwise comparisons were conducted using Tukey post-hoc tests. Within each row, means sharing a common subscript are not statistically different at $p < .05$. $N = 177$. *** $p < .001$.

Self-perception profiles: 1 = Positive, 2 = Positive creativity vs. Negative social, 3 = Positive social, 4 = Positive scholastic and parental vs. Negative social and athletic, 5 = Positive creativity, athletic, social, and humor vs. Negative intellectual and scholastic, 6 = Positive appearance vs. Negative competencies, 7 = Negative.

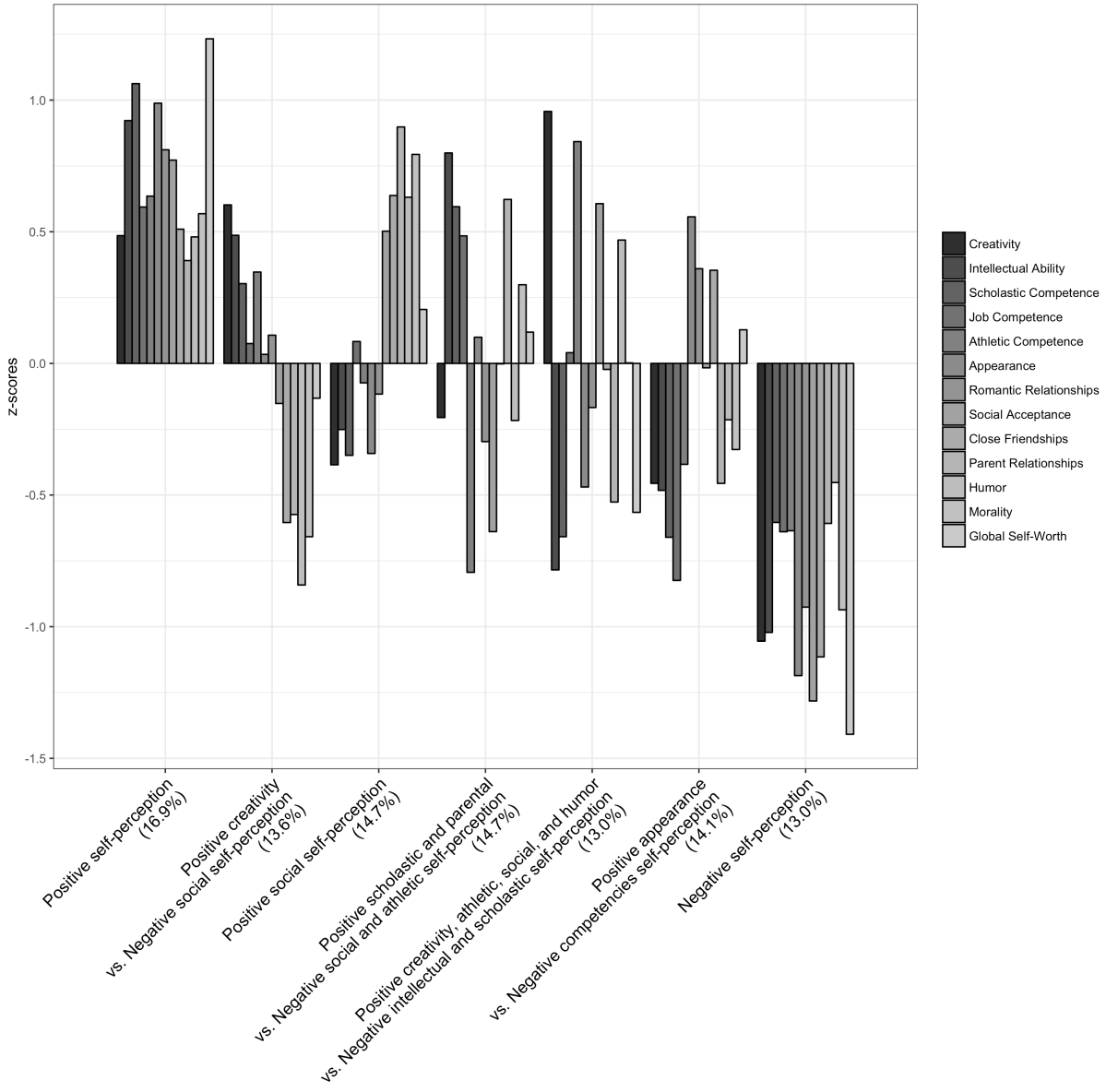

Figure 1. Final cluster solution for self-perception profiles. $N = 177$.

Appendix: French version of the SPPCS (Neeman & Harter, 2012)

	Me ressemble beaucoup	Me ressemble un peu				Me ressemble un peu	Me ressemble beaucoup
1	☐	☐	Certains étudiants aiment le genre de personne qu'ils sont	ALORS QUE	D'autres étudiants souhaiteraient être différents	☐	☐
2	☐	☐	Certains étudiants ne sont pas très fiers du travail qu'ils fournissent dans leur job étudiant	ALORS QUE	D'autres étudiants sont très fiers du travail qu'ils fournissent dans leur job étudiant	☐	☐
3	☐	☐	Certains étudiants sont confiants dans le fait de maîtriser leurs cours	ALORS QUE	D'autres étudiants ne se sentent pas si confiants	☐	☐
4	☐	☐	Certains étudiants ne sont pas satisfaits de leurs compétences sociales	ALORS QUE	D'autres étudiants pensent que leurs compétences sociales sont satisfaisantes	☐	☐
5	☐	☐	Certains étudiants ne sont pas contents de leur apparence	ALORS QUE	D'autres étudiants sont contents de leur apparence	☐	☐
6	☐	☐	Certains étudiants aiment la manière dont ils agissent en présence de leurs parents	ALORS QUE	D'autres étudiants souhaiteraient agir différemment en présence de leurs parents	☐	☐
7	☐	☐	Certains étudiants se sentent seuls car ils n'ont pas d'ami(e) proche avec qui partager des choses	ALORS QUE	D'autres étudiants ne se sentent généralement pas seuls car ils ont un(e) ami(e) proche avec qui partager des choses	☐	☐

	Me ressemble beaucoup	Me ressemble un peu				Me ressemble un peu	Me ressemble beaucoup
8	☐	☐	Certains étudiants sentent qu'ils sont aussi intelligents, ou plus intelligents, que les autres étudiants	ALORS QUE	D'autres étudiants se demandent s'ils sont aussi intelligents	☐	☐
9	☐	☐	Certains étudiants s'interrogent souvent sur la moralité de leurs comportements	ALORS QUE	D'autres étudiants pensent que leurs comportements sont généralement en accord avec les principes moraux	☐	☐
10	☐	☐	Certains étudiants pensent être attirants aux yeux des personnes pour qui ils ont des sentiments amoureux	ALORS QUE	D'autres étudiants s'inquiètent de ne pas être attirants aux yeux des personnes pour qui ils ont des sentiments amoureux	☐	☐
11	☐	☐	Certains étudiants trouvent difficile de rire d'eux-mêmes quand ils font quelque chose d'un peu stupide qui apparait comme très amusant après coup	ALORS QUE	D'autres étudiants peuvent facilement rire d'eux-mêmes quand ils font quelque chose d'un peu stupide qui parait très amusant après coup	☐	☐
12	☐	☐	Certains étudiants se sentent aussi créatifs, voire plus créatifs, que les autres étudiants	ALORS QUE	D'autres étudiants se demandent s'ils sont autant créatifs que les autres	☐	☐

	Me ressemble beaucoup	Me ressemble un peu				Me ressemble un peu	Me ressemble beaucoup
13	☐	☐	Certains étudiants sentent qu'ils peuvent être bons dans n'importe quelle activité sportive qu'ils n'ont jamais pratiquée avant	ALORS QUE	D'autres étudiants ont peur de ne pas être bons dans une activité sportive qu'ils n'ont jamais pratiquée	☐	☐
14	☐	☐	Certains étudiants sont souvent déçus d'eux-mêmes	ALORS QUE	D'autres étudiants sont généralement assez contents d'eux-mêmes	☐	☐
15	☐	☐	Certains étudiants ont le sentiment d'être très bons dans leur job étudiant	ALORS QUE	D'autres étudiants se demandent s'ils sont capables de faire leur job étudiant	☐	☐
16	☐	☐	Certains étudiants réussissent très bien dans leurs études	ALORS QUE	D'autres étudiants ne réussissent pas très bien dans leurs études	☐	☐
17	☐	☐	Certains étudiants trouvent difficile de se faire de nouveaux amis	ALORS QUE	D'autres étudiants sont capables de se faire facilement de nouveaux amis	☐	☐
18	☐	☐	Certains étudiants sont contents de leur taille et de leur poids	ALORS QUE	D'autres étudiants souhaiteraient avoir une taille ou un poids différents	☐	☐
19	☐	☐	Certains étudiants trouvent difficile d'agir naturellement en présence de leurs parents	ALORS QUE	D'autres étudiants trouvent facile d'agir naturellement en présence de leurs parents	☐	☐

	Me ressemble beaucoup	Me ressemble un peu				Me ressemble un peu	Me ressemble beaucoup
20	☐	☐	Certains étudiants sont capables de se faire des amis proches en qui ils peuvent avoir vraiment confiance	ALORS QUE	D'autres étudiants ont du mal à se faire des amis proches en qui ils peuvent avoir vraiment confiance	☐	☐
21	☐	☐	Certains étudiants n'ont pas confiance en leurs capacités intellectuelles	ALORS QUE	D'autres étudiants ont confiance en leurs capacités intellectuelles	☐	☐
22	☐	☐	Certains étudiants font généralement ce qui est moralement juste	ALORS QUE	D'autres étudiants ne font pas toujours ce qu'ils savent être moralement juste	☐	☐
23	☐	☐	Certains étudiants trouvent difficile d'établir des relations amoureuses	ALORS QUE	D'autres étudiants n'ont pas de difficulté à établir des relations amoureuses	☐	☐
24	☐	☐	Certains étudiants n'ont pas de problème à ce que leurs amis les taquinent	ALORS QUE	D'autres étudiants sont embêtés quand leurs amis les taquinent	☐	☐
25	☐	☐	Certains étudiants s'inquiètent de ne pas être aussi créatifs ou inventifs que les autres	ALORS QUE	D'autres étudiants se sentent très créatifs et inventifs	☐	☐
26	☐	☐	Certains étudiants ne se sentent pas très sportifs	ALORS QUE	D'autres étudiants se sentent sportifs	☐	☐
27	☐	☐	Certains étudiants s'aiment généralement en tant que personne	ALORS QUE	D'autres étudiants souvent ne s'aiment pas en tant que personne	☐	☐

	Me ressemble beaucoup	Me ressemble un peu				Me ressemble un peu	Me ressemble beaucoup
28	☐	☐	Certains étudiants se sentent confiants quant à leur capacité de faire un nouveau job étudiant	ALORS QUE	D'autres étudiants se demandent s'ils pourront faire un job étudiant qu'ils n'ont jamais fait avant	☐	☐
29	☐	☐	Certains étudiants ont des difficultés à comprendre ce qui est demandé dans les travaux à rendre	ALORS QUE	D'autres étudiants ont rarement de difficultés avec les travaux à rendre	☐	☐
30	☐	☐	Certains étudiants aiment la façon dont ils interagissent avec les autres	ALORS QUE	D'autres étudiants souhaiteraient que leurs interactions avec les autres soient différentes	☐	☐
31	☐	☐	Certains étudiants souhaiteraient que leur corps soit différent	ALORS QUE	D'autres étudiants aiment leur corps comme il est	☐	☐
32	☐	☐	Certains étudiants se sentent à l'aise d'être eux-mêmes en présence de leurs parents	ALORS QUE	D'autres étudiants ont des difficultés à être eux-mêmes en présence de leurs parents	☐	☐
33	☐	☐	Certains étudiants n'ont pas d'ami(e) proche avec qui ils peuvent partager leurs pensées et sentiments personnels	ALORS QUE	D'autres étudiants ont un(e) ami(e) suffisamment proche pour partager leurs pensées les plus personnelles	☐	☐
34	☐	☐	Certains étudiants sentent qu'ils sont aussi brillants, ou plus brillants, que la plupart des gens	ALORS QUE	D'autres étudiants se demandent s'ils sont aussi brillants	☐	☐

	Me ressemble beaucoup	Me ressemble un peu				Me ressemble un peu	Me ressemble beaucoup
35	☐	☐	Certains étudiants aimeraient être une meilleure personne sur le plan moral	ALORS QUE	D'autres étudiants pensent être une personne suffisamment morale	☐	☐
36	☐	☐	Certains étudiants sont capables de développer des relations amoureuses	ALORS QUE	D'autres étudiants ne trouvent pas facile de développer des relations amoureuses	☐	☐
37	☐	☐	Certains étudiants ont du mal à rire des choses ridicules ou stupides qu'ils font	ALORS QUE	D'autres étudiants trouvent facile de rire d'eux-mêmes	☐	☐
38	☐	☐	Certains étudiants ne se sentent pas très inventifs	ALORS QUE	D'autres étudiants se sentent très inventifs	☐	☐
39	☐	☐	Certains étudiants sentent qu'ils sont meilleurs que les autres en sport	ALORS QUE	D'autres étudiants ne se sentent pas aussi bons que les autres en sport	☐	☐
40	☐	☐	Certains étudiants aiment vraiment la façon dont ils mènent leur vie	ALORS QUE	D'autres étudiants n'aiment généralement pas la façon dont ils mènent leur vie	☐	☐
41	☐	☐	Certains étudiants ne sont pas satisfaits de la manière dont ils font leur job étudiant	ALORS QUE	D'autres étudiants sont plutôt satisfaits de la manière dont ils font leur job étudiant	☐	☐
42	☐	☐	Certains étudiants ne se sentent pas toujours compétents intellectuellement dans leurs études	ALORS QUE	D'autres étudiants se sentent généralement compétents intellectuelle-ment dans leurs études	☐	☐

	Me ressemble beaucoup	Me ressemble un peu				Me ressemble un peu	Me ressemble beaucoup
43	☐	☐	Certains étudiants sentent qu'ils sont socialement acceptés par de nombreuses personnes	ALORS QUE	D'autres étudiants souhaiteraient que plus de personnes les acceptent	☐	☐
44	☐	☐	Certains étudiants aiment leur apparence physique telle qu'elle est	ALORS QUE	D'autres étudiants n'aiment pas leur apparence physique	☐	☐
45	☐	☐	Certains étudiants trouvent qu'ils ne sont pas capables de bien s'entendre avec leurs parents	ALORS QUE	D'autres étudiants s'entendent plutôt bien avec leurs parents	☐	☐
46	☐	☐	Certains étudiants sont capables de se faire des amis très proches	ALORS QUE	D'autres étudiants trouvent difficile de se faire des amis très proches	☐	☐
47	☐	☐	Certains étudiants préfèreraient vraiment être différents	ALORS QUE	D'autres étudiants sont très heureux d'être comme ils sont	☐	☐
48	☐	☐	Certains étudiants se demandent s'ils sont très intelligents	ALORS QUE	D'autres étudiants se sentent intelligents	☐	☐
49	☐	☐	Certains étudiants vivent en accord avec leurs propres valeurs morales	ALORS QUE	D'autres étudiants ont du mal à vivre en accord avec leurs propres valeurs morales	☐	☐
50	☐	☐	Certains étudiants s'inquiètent d'aimer sans être aimé en retour dans une relation amoureuse	ALORS QUE	D'autres étudiants pensent que dans une relation amoureuse quand ils aiment quelqu'un, cette personne les aimera en retour	☐	☐

	Me ressemble beaucoup	Me ressemble un peu				Me ressemble un peu	Me ressemble beaucoup
51	☐	☐	Certains étudiants peuvent vraiment rire de certaines choses qu'ils font	ALORS QUE	D'autres étudiants ont du mal à rire d'eux-mêmes	☐	☐
52	☐	☐	Certains étudiants pensent avoir beaucoup d'idées originales	ALORS QUE	D'autres étudiants se demandent si leurs idées sont très originales	☐	☐
53	☐	☐	Certains étudiants ne réussissent pas bien dans les activités nécessitant des compétences physiques	ALORS QUE	D'autres étudiants sont bons dans les activités nécessitant des compétences physiques	☐	☐
54	☐	☐	Certains étudiants sont souvent mécontents d'eux-mêmes	ALORS QUE	D'autres étudiants sont généralement satisfaits d'eux-mêmes	☐	☐