Creativity and vocational identity in late adolescence. A study using the person-centred approach

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Abstract

The link between identity and creativity has received attention from developmental psychology only recently, even if these competences are also critical for the formation processes of vocational identity, mainly during late adolescence when young people have to define plans for their professional future. The current study aims at identifying typologies of ‘creativity–vocational identity interplay’ in 190 late adolescence. Using a person-centred approach, our findings confirm the relationship between vocational identity and creativity identifying a two-cluster solution with differences in terms of creativity processes involved in the formation of vocational identity.

Keywords Creativity · Vocational identity · Late adolescence

Résumé

La créativité et l’identité professionnelle à la fin de l’adolescence. Une étude utilisant l’approche centrée sur la personne Le lien entre l’identité et la créativité n’a reçu l’attention de la psychologie du développement que récemment, même si ces compétences sont également critiques pour les processus de formation de l’identité professionnelle, principalement à la fin de l’adolescence lorsque les jeunes doivent définir des plans pour leur avenir professionnel. L’étude actuelle vise à identifier des typologies de “l’interaction créativité-identité professionnelle” chez 190 participant-e-s à la fin de l’adolescence. En utilisant une approche centrée sur la personne, nos résultats confirment la relation entre l’identité professionnelle et la créativité en identifiant une solution à deux clusters avec des différences dans les processus de créativité impliqués dans la formation de l’identité professionnelle.

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Zusammenfassung

Kreativität und berufliche Identität in der späten Adoleszenz. Eine Studie unter Verwendung des personenzentrierten Ansatzes Der Zusammenhang zwischen Identität und Kreativität wird von der Entwicklungspsychologie erst seit kurzem untersucht, obwohl diese Kompetenzen auch für die Herausbildung der beruflichen Identität entscheidend sind, vor allem in der späten Adoleszenz, wenn junge Menschen Pläne für ihre berufliche Zukunft schmieden müssen. Die vorliegende Studie zielt darauf ab, Typologien des "Zusammenspiels von Kreativität und beruflicher Identität" bei 190 spät Adoleszenten zu identifizieren. Unter Verwendung eines personenzentrierten Ansatzes bestätigen unsere Ergebnisse die Beziehung zwischen beruflicher Identität und Kreativität, wobei eine Zwei-Cluster-Lösung mit Unterschieden in Bezug auf die an der Bildung der beruflichen Identität beteiligten Kreativitätsprozesse identifiziert wurde.

Resumen

Creatividad e Identidad Vocacional en la adolescencia tardía. Un estudio que utiliza el enfoque centrado en la persona El vínculo entre identidad y creatividad ha recibido atención de la psicología del desarrollo solo recientemente, incluso si estas competencias también son críticas para los procesos de formación de la identidad vocacional, principalmente durante la adolescencia tardía, cuando los jóvenes tienen que definir planes para su futuro profesional. El presente estudio tiene como objetivo identificar tipologías de "interacción entre creatividad e identidad vocacional" en 190 adolescentes tardíos. Utilizando un enfoque centrado en la persona, los hallazgos confirman la relación entre la identidad vocacional y la creatividad, identificando una solución de dos grupos con diferencias en términos de procesos de creatividad involucrados en la formación de la identidad vocacional.

Introduction

The ability to generate multiple solutions to problems (creativity) and the flexibility to define/redefine one's own identity could turn out to be key competences in today's society, which is based on continuous innovation and de-standardization of development trajectories (Buchmann & Kriesi, 2011). Although this need is emphasized in several sectors (education, vocational training, etc.), there are few specific studies that deal with it in practice (Barbot & Heuser, 2017; Dollinger et al., 2005; Glăveanu & Tanggaard, 2014; Sica et al., 2017). However, the link between creativity and the specific aspect of the construction of professional identity (which is profoundly impacted by changes in the labour market; Aleni Sestito et al., 2015; Fusco et al., 2020) has not yet been explored. Current studies in the creativity area generally examine the correlation between identity statuses and creative production (Chen et al., 2008; Dollinger et al., 2005) or consider antecedents (Farmer et al., 2003) and consequences (Hirst et al., 2009) for creative identity. Dimensions of creative personality such as curiosity, risk-taking and complexity have been found to be

correlated with processes of identity formation (Sica et al., 2017) and specifically seem to have a role in the global self-perception of adolescents (Sica et al., 2012).

Indeed, during adolescence and late adolescence, the exploration of identity is one of the most common processes for discovering oneself, and creativity develops considerably (Kleibeuker et al., 2016). However, establishing one's vocational identity is among the most central developmental tasks of both late adolescence and emerging adulthood periods (Porfeli et al., 2011). To define themselves in this day and age in professional/work terms, young people have to identify a personal life trajectory (Sica et al., 2014), cope with complex contextual factors (Côté et al., 2016) and be open to change in their life-plans and living conditions (Sica et al., 2016). In other words, people who are able to manage complexity, explore alternatives, design a life-project and change this project because of external factors might be better equipped to achieve their identity definition. Thus, this study focuses on the assumption that creative processes could become skills for late adolescents to define their vocational identity, especially for those with no specific references and standardized trajectories of transition to adulthood.

Vocational identity and late adolescence

Vocational identity is conceived as a major domain of overall identity. This close relationship was first assumed by Erikson (1968) and it has been shown by several studies (Aleni Sestito et al., 2015; Nauta & Khan, 2007; Savickas, 1985; Skorikov & Vondracek, 1998). Studies over vocational identity have been conducted according to Marcia's Identity Status classic theory (1966): achievement (commitment following exploration), foreclosure (commitment with little or no prior exploration), moratorium (ongoing exploration with no current commitment) and diffusion (lack of commitment with no or limited exploration). In the vocational identity research, Porfeli et al. (2011) proposed a six-identity status model based on Meeus et al. (2010) and Luyckx et al. (2008a) identity models, considering six dimensions: commitment making, identification with commitment, exploration in depth, exploration in breadth, flexibility and self-doubt. Building a vocational identity and a professional definition of one's self is a major task in adolescence (Erikson, 1968; Porfeli et al., 2011; Savickas, 1985). The construction of vocational Identity in adolescence has different sources: first of all, it comes from vague childhood images of stereotypical and idealized jobs, but during this life stage, those images get integrated with more concrete experiences in the adults' world. Early vocational experiences and exploration of career opportunities in adolescence increase the acquisition of work skills. These two elements can be considered the most important factors for the construction of a more realistic and stable idea of work and of possible selves as workers during adolescence (Skorikov & Vondracek, 2007). Vocational identity is conceived as a domain-specific aspect of overall identity, providing young people with a framework to regulate the pursuit of their academic and career objectives. People featuring an advanced identity status show greater career planning and decidedness (Wallace-Broschius et al., 1994) and more advanced identity (Kroger, 1988; Meeus, 1993; Skorikov & Vondracek, 1998). Therefore, vocational identity

is believed to be a defining feature in teenage and young adult life, a leading aspect of global identity development, even fostered by work experience (Schwartz, 2007; Skorikov & Vondracek, 2011). However, the contemporary post-industrial society has become gradually more complex, more 'fluid' and less stable (Giddens, 1991). The coexistence of different cultural patterns, lifestyles and social norms leading to the modernization and globalization processes (Larson, 2011) seems to underline the young people's need for multiple and flexible developmental trajectories, which requires continuous monitoring, adaptations to specific career and work skills and their continuous development across the lifespan (Côté, 1997, 2000). Opportunities in the modern labour market include a proliferation of new careers and contracts, and the flexibility to redefine one's self and career in a way that is becoming increasingly accepted and, in some cases, normative and even admired (Arthur & Rousseau, 1996). Global economy presents challenges to identity and career in terms of job security and predictability; more and more employers are backing away from the role of caregiver, focusing their long-term employees' development and compensation plans on the basis of their performance in the here and now (Guichard et al., 2012).

Thus, defining and consolidating one's vocational identity may take the form of a true and genuine developmental challenge (Hendry, 2002) associated with specific difficulties pertaining to making and identifying with a set of life commitments (Di Palma & Reid, 2019; Luyckx et al., 2006a, 2006b) and perceiving oneself as an adult supported by a validating adult community (Côté, 1996, 2002; Luyckx et al., 2008b; Schwartz et al., 2010). For these reasons, vocational identity may therefore be understood as a process that is prolonged but also open, de-standardized and characterized by heterogeneous/multiple paths (*patchwork identity*; Kraus, 2007). Indeed, as highlighted by many career scholars (Arthur & Rousseau, 1996; Hall, 2004), since the accountability for career development belongs now to the individual, it becomes more and more important that personal choices create a personal path which conducts one's own career and thus is fundamental for employability (Fugate et al., 2004). At the same time, for positive developmental psychology, it becomes crucial to identify psychological resources (such as the creativity we are dealing with in this study) that can facilitate and adaptively support the process of defining vocational identity.

Creativity processes as personal skills

A general definition of creativity describes it as the ability to generate ideas, insights and solutions featuring originality and flexibility (Amabile, 1996; Sternberg, & Lubart, 1996) or, more recently, originality and effectiveness (Runco, & Jaeger, 2012). Even though a vast body of research has been conducted in this field in terms of themes, impact and cohesion over the last twenty-five years (see Williams et al., 2016), there is a general convergence on the notion that creative outputs result from cognitive flexibility (flexible and divergent way of thinking) and cognitive

persistence (persistent and systematic way of thinking), as reviewed in Dietrich and Kanso (2010).

All the cognitive abilities related to creativity develop during adolescence: fluency (the ability to generate multiple ideas) and flexibility develop across adolescence with distinct trajectories for divergent thinking and insight (Kleibeuker et al., 2013); explorative thinking characterizes middle adolescence (Johnson, & Wilbrecht, 2011). Recently, one line of research has focused on the possible contribution of creativity on self-definition and ‘on the formation of one’s identity, in general’ (Barbot & Heuser, 2017). Indeed, traditional approaches see creativity as a component or a domain of identity (creative identity; Dollinger et al., 2005), whereas more recent research highlights the applicative role of creativity in terms of positive self-definition and support to identity achievement (Barbot, 2008; Barbot & Lubart, 2012).

The different conception of creativity and its role on individual development reflected in many theoretical interpretations have been analysed to understand the processes underlying creative thinking (see Sternberg, 2006). In brief, creativity can be understood as a combination of several factors (Houtz & Krug, 1995; Treffinger et al., 1983) of both cognitive (primarily related to divergent thinking) and emotional type (primarily related to creative personality).

In this perspective, the classical model provided by Williams (1980, 1994)—summarizing the literature, and mainly Guilford studies on divergent thinking (1950) and Torrance’s creative thinking (1966)—identifies eight creativity factors: four of them refer to the cognitive-divergent aspect of creativity while the other four to the emotional-divergent aspect of creativity.

As for the emotional factors of creative feeling, Williams (1994) indicated the main characteristics of personality: (1) *curiosity* (the capacity to investigate elements and ideas, finding new and not always direct and obvious connections), (2) *complexity* (the tendency to look for new alternatives and solutions to problems, to restore order out of chaos), (3) *imagination* (the ability to visualize the mental images) and (4) *risk-taking* (the inclination to act under unstructured conditions and to defend one’s own ideas). Barbot and Heuser (2017) have identified the role of creative thinking processes on the formation of identity during adolescence and highlighted that ‘identity formation could be seen as a creative process per se’ (p. 90). In order to expand these results, the current study focuses on the emotional factors of creativity since they could possibly constitute resources not only for coping with problem-solving tasks but also for enabling the individual to go beyond task-related skills and directly affect individual identity development (Dollinger, & Dollinger, 1997; Dollinger et al., 1996).

The literature has also highlighted that creativity could be interpreted as an individual resource, mostly in terms of adjustment. Indeed, creativity was considered one of the main personality traits useful for both individuals’ adaptation and maladjustment to environment (Csikszentmihalyi, 1996). In Csikszentmihalyi’s terms (1996), creative individuals are remarkable for their ability to adapt to almost any situation and to make do with whatever is at hand to reach their goals. Furthermore, Ogoemeka (2011) found out that creativity was a potent predictor of social problem-solving and both creativity and cognitive ability were strong predictors of adjustment. Overall, creativity could have an important role in the development of

individuals and can be defined as an ‘inherent latent power’ present in each person (Baran et al., 2011).

Our study aims at exploring the idea that creativity could be a latent skill for the formation of vocational identity, especially in a context such as the Italian one, where flexibility and curiosity could be resources for navigation in the work market.

Current study

In the light of the literature referred to above, the formation of vocational identity in contemporary societies seems to be a complex task for late teens, which thing suggests that young people have to manage and practise personal skills. Specifically in Italy, these social conditions may increase identity instability in adolescence and late adolescence and could be a determining factor in postponing the achievement of important commitments to multiple life domains in young adulthood (Crocetti et al., 2012; Sica et al., 2014, 2016).

In order to address the question that evidence has posed (how to support late adolescents in defining vocational identity in contemporary de-structured societies), we believe that adolescents could resolve developmental tasks pertaining to the formation of their vocational identity through processes which use and integrate different creativity skills. The latter could prepare young people to cope with fluid and unpredictable trajectories of transition to adulthood. Indeed, the courage to expose themselves to failure and to operate well in unstructured conditions, the tendency to look for a number of alternatives and to see the gap between how things are and how they might be, and the power to build mental images, to go beyond the actual characteristics of the situations (that globally define the creative aspect of personality), are all capabilities that could turn out to be key skills for developing vocational identity, following an individualized trajectory.

Furthermore, considering the fact that in today’s ever-changing societies having a more ‘fluid’ identity or expanding the search period might be more adaptive to the context, we wondered if this was true or not in terms of psychological well-being/malaise. Thus, our research question is: do creativity and vocational identity interact in an adaptive (or non-adaptive) way in late adolescents? According to this aim, we intend to explore two possibilities: firstly, vocational identity and creativity could be seen as interrelated processes that enhance each other in a positive direction; secondly, vocational identity and creativity could interact in a negative way.

In the first case, we expect that late adolescents involved in both commitment and exploration of vocational identity processes show high creativity as well, while late adolescents with low scores on creativity dimensions could be less involved in vocational identity formation processes or involved in reconsideration processes. In the second case, we expect that adolescents who are more creative are also less involved in their vocational identity commitments and prolong their exploration, with potential negative consequences for the stability of their identity; on the contrary, less creative adolescents are more focused on the processes of assumption of identity commitment. In order to explore both the described scenarios and see if vocational identity development processes and dimensions of creativity combine in a specific way giving rise to

different subjective profiles, we used a person-centred approach by empirically extracting profiles of vocational identity development processes and creativity processes. The person-centred approach is aimed at individuating constellations of characteristics that are homogeneous within a group of individuals, but heterogeneous across groups, making it possible to analyse patterns typical of a group of individuals who share some characteristics of interest.

Subsequently, to deepen the elements useful to answer our research question, we aimed to explore the association between the identified profiles of the vocational identity–creativity configuration and psychosocial correlates, namely eudaimonic well-being (Waterman et al., 2010) and internalizing symptoms like depression and anxiety. We chose eudaimonic well-being as the positive psychosocial dimension, considering its specificity for an optimal identity development (Waterman, 2008). Eudaimonic well-being is defined as the quality of life derived from the development of a person's best potential and their application in the fulfilment of personally expressive, self-concordant goals (Waterman, 1990, 2008). We chose internalizing symptoms as the negative psychosocial dimension because it is particularly important to study the relationship between identity and internalizing problems in adolescence, since depression and anxiety are most prevalent among the youth of Western societies.

Method

Participants and data collection

A total of 190 late adolescents (51 males and 131 females), aged 16–19 and attending the last year of several high schools in a large Italian city (Naples), took part in this study. Specifically, 29% were attending the so-called *liceo* (i.e. senior high schools that prepare students for university studies), 26.5% were attending a technical school, and 44.5% were attending a vocational school. The mean age of the participants was 17.6 years (ranging from 16 to 19). Before undertaking the study, permission to administer anonymous self-report questionnaires was obtained from the principals of the high schools. For adolescents below the age of 18, parental consent was obtained. The measures were administered during class time. Two researchers familiar with the survey attended classes to assist the respondents with questions about the survey. Participation in the study was voluntary and anonymity was guaranteed, and the respondents did not receive any payment for their participation. Completion time was between 20 and 40 min. Of the total number of respondents, 90% took part in the research.

Measures

Vocational identity

The Italian version (Aleni Sestito et al., 2015) of the Vocational Identity Status Assessment (VISA; Porfeli et al., 2011) was used to assess vocational identity in the current study. The Italian version of VISA (Aleni Sestito et al., 2015) consists of

30 items divided in three scales of 10 items according to Porfeli (2011) vocational identity measure. The scales analyse the dimension of commitment, exploration and reconsideration of commitment. Each scale contains 2 subscales with 5 items: the dimension of career commitment has been distinguished in commitment making (i.e. 'I have known for a long time what career is best for me') and identification with commitment (i.e. 'I chose a career that will allow me to remain true to my values'). The dimension of career exploration has been distinguished in exploration in breadth (i.e. 'thinking about how I could fit into many different careers') and exploration in depth (i.e. 'learning what I can do to improve my chances of getting into my chosen career'). Finally, the dimension of reconsideration, following the English version of VISA (Porfeli et al., 2011), has been divided in career commitment flexibility (i.e. 'I will probably change my career goals') and self-doubt (i.e. 'I doubt I will find a career that suits me'). Participants responded to the items on 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alphas were .82 for commitment making, .84 for identification with commitment, .79 for flexibility, .82 for self-doubt, .81 for exploration in breadth and .75 for exploration in depth.

Creativity

In order to assess the affective–feeling behavioural components of creativity (curiosity, complexity, imagination and risk-taking), we used the Italian version of the Test of Creative Personality (TPC; Williams, 1994), which constitutes one of the two parts of the Test TCD of Divergent Feeling (TCD; Williams, 1980, 1994). This test has been widely used in the Italian school context with different age samples (De Caroli, 2009; De Caroli & Sagone, 2010). The TPC evaluates the four dimensions described and a unique index of creativity (overall creativity); it consists of 50 statements against which respondents evaluated themselves on a 5-point scale (always true, always false, partially true, partially false, I don't know) for the exploration of the four factors. Sample items are as follows: 'Generally, I ask questions when I don't know anything' (curiosity), 'I like ideas which are different from others' (complexity), 'When I'm reading a newspaper or watching TV, I like to pretend to be one of the protagonists' (imagination) and 'I like experiencing new things to see what will happen' (risk-taking). Cronbach's alpha ranged from .73 to .85.

Psychosocial correlates—eudaimonic well-being

The questionnaire for eudaimonic well-being (QEWB; Waterman et al., 2010) was used. The QEWB includes 21 items with a response scale ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). Sample items read: 'I believe I have discovered who I really am' and 'When I engage in activities that involve my best potentials, I have this sense of really being alive'. Cronbach's alpha was .87.

Depressive symptoms

Depressive symptoms were measured using an Italian version of a Depressive Symptom Subscale (Dell’Erba, 1999) adapted from the SCL-90 (Derogatis, 1977). It includes 13 items rated on a 3-point scale ranging from 0 (not at all) to 2 (very often). A sample item is: ‘Have you been feeling run-down and out of sorts?’. Cronbach’s alpha was .94.

Anxiety

Anxiety was measured using an Italian version of an Anxiety Symptom Subscale (Dell’Erba, 1999) adapted from the SCL-90 (Derogatis, 1983). It comprises 13 items rated on a 3-point scale ranging from 0 (not at all) to 2 (very often). A sample item is as follows: ‘Have you been feeling nervous and strung up?’. Cronbach’s alpha was .93. In order to assess the level of each study variable, we calculated the average score of the items composing each dimension.

Data analysis

With the aim to define identity–creativity profiles, a hierarchical cluster analysis was conducted on both vocational identity and creativity dimensions. We used Ward’s methods as the aggregation criterion and average linkage as the ultra-metrics distance (Lebart et al., 1994).

To decide on the number of clusters, we looked at both the dendrogram and the changes in the ratio of inertia explained by clusters (cluster inertia over total inertia). Two- to five-cluster solutions were evaluated in terms of substantive interpretability, parsimony and explanatory power. To interpret and analyse the cluster solution, we performed a procedure named Decla, i.e. cluster description, involving multivariate ANOVA. This enabled us to examine the extent to which the clusters would be differentiated by each dimension, compare the scores of each cluster with respect to the average scores, determine the scores that significantly differ and describe the cluster profile. Looking at the dendrogram, at the variation in the percentage inertia accounted for by the clusters, and at the size of the resulting clusters, the best solution corresponds to 2-cluster solution since it provided the greatest increase in the explained inertia with a limited number of clusters. This cluster solution explained about 44.4% of the total inertia. The label for each cluster stems from the standard procedure of classes nomination based on the separate interpretation by two judges; discordant labelling has been resolved. Subsequently, one-way analyses of variance (ANOVA) were conducted to determine the effects of cluster membership on psychosocial correlates.

Results

Vocational identity development processes and creativity dimensions

Table 1 presents descriptive statistics for the identity, creativity and psychosocial measures used in the study. As shown in Table 1, and in line with previous research, all creativity dimensions (curiosity, complexity, imagination, and risk-taking) were positively related to each other; concerning identity vocational dimensions, the vocational identity commitment dimension was positively related to the vocational identity in-depth exploration dimension, the vocational identity in breadth exploration dimension was positively related to the vocational identity commitment flexibility dimension. Instead, the vocational identity commitment self-doubt dimension was negatively related with both the vocational identity commitment making and the identification with commitment dimensions.

With regard to the relationship between vocational identity and creativity, results indicated a negative relation between curiosity and vocational identity identification with commitment dimension, and a positive relation between curiosity and vocational identity commitment doubt dimension.

Defining vocational identity–creativity interplay: the profiles

On the basis of recurring associations between creativity and identity that have emerged in previous research (Sica et al., 2017) and with a view to defining vocational identity–creativity profiles, we adopted a person-centred analytical method using a cluster analysis. Figure 1 presents the final two-cluster solution. Profile one ('creative diffused'; 41.49%) was characterized by middle–high scores on creativity dimensions, low scores on both vocational commitment dimensions and high scores on vocational reconsideration dimensions; profile two ('un-creative achieved'; 59.05%) was characterized by middle-low scores on creativity dimensions, high scores on both commitment dimensions and low scores on reconsideration dimensions.

As shown in Table 2, creative diffused profile scores middle–higher on anxiety and depression, while un-creative achieved profile scores high on eudaimonic well-being.

Discussion

In the present study, we tried to figure out how to support late adolescents in defining vocational identity in contemporary de-structured societies in line with the belief that adolescents could resolve developmental tasks pertaining to the formation of vocational identity through processes which use and integrate different creativity skills. Those meant as resources to cope with fluid and unpredictable trajectories of transition to adulthood.

Table 1 Summary of intercorrelations, means and standard deviations for scores on the dimension of interest of the study

Measure	1	2	3	4	5	6	7	8	9	10	<i>M</i>	<i>SD</i>	
1. Commitment making	—	.50***	.17*	—	—	.30***	—	.086	—	.09	.01**	3.04	.81
2. Identification with commitment		—	.27***	.10	—	.35***	—	.139	—	.12	—	.10***	.67
3. Exploration in depth			—	.44***	—	.06	—	.13	—	.10	—	.09	.67
4. Exploration in breadth				—	.29***	—	—	.09	—	.04	—	.09	.68
5. Career flexibility					—	—	—	.01	—	.01	—	.04	.73
6. Career self-doubt						—	.10	.16*	.09	—	.07	2.35	.91
7. Risk-taking							—	.75***	.73***	.61***	.61***	2.03	.33
8. Curiosity								—	.74***	.68***	.68***	1.98	.36
9. Complexity									—	.66***	.66***	1.92	.36
10. Imagination										—	—	2.07	.41

For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed.

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

Figure 1 Patterns of career commitment, exploration, reconsideration and creativity for the two identity clusters

Table 2 Means and SDs for scores (in parenthesis) on VISA and TDC for the two clusters

Variable	Clusters		F-value
	confused creatives	Solids	
Eudaimonic well-being	2.42 (.26)	2.68 (.29)	44.66***
Depressive symptoms	2.09 (.55)	1.87 (.42)	12.15**
Anxiety	2.03 (.55)	1.82 (.44)	9.34*

* $p < .05$, ** $p < .01$, *** $p < .00$

Yet, several studies (i.e. Kraus & Mitzscherlich, 1995; Sica et al., 2014) highlighted that having a more ‘fluid’ identity or expanding the search period might be more adaptive to the context as previously described. So we wondered if late adolescents’ creativity and vocational identity interact and in what terms, in adaptive or non-adaptive ways. Thus, to analyse the research question, we investigated if vocational identity and creativity could be seen as interrelated processes that enhance each other in a positive direction, or if they could interact in a negative way.

In detail, we expect that late adolescents involved in both commitment and exploration of vocational identity processes show high creativity as well, while late adolescents with low scores on creativity dimensions could be less involved in vocational identity formation processes or involved in reconsideration processes. Yet, we expect that adolescents who are more creative are also less involved in their vocational identity commitments and prolong their exploration, with potential negative consequences for the stability of their identity; on the contrary, less creative adolescents are more focused on the processes of assumption of identity commitment.

So we can say that our findings support the second route. Let's see in detail how the results of the study provide support to the negative route.

Concerning the relationship between vocational identity and creativity, findings showed a negative association between curiosity and commitment identification and a positive association with commitment doubt. Then, we explored the possibility that the interplay of vocational identity development processes and emotional dimensions of creativity could give rise to different profiles.

The results produced two profiles (fairly balanced in numerical terms), which we defined as un-creative achieved and creative diffused. The two profiles clearly indicate that the most creative subjects are also more involved in the process of reconsidering vocational identity, while the less creative subjects are substantially vocational identity achieved. This result suggests, therefore, that the propensity for imagination, curiosity and risk-taking can imply a continuous questioning of vocational identity, complicating the path of definition and perhaps even of the choice of the working dimension of one's self (as assumed for the negative route). In fact, when creativity is less relevant, there is also a clear identity consolidation in the adolescents involved in our study.

The report, then, with negative and positive correlates, provides further evidence for the negative route. Indeed, the creative diffused seems to be characterized by anxiety and depression, while the un-creative achieved are characterized by eudaimonic well-being.

Although this evidence leads us to lean towards the negative route, it should, however, be immediately stressed that particular attention in the interpretation of the data must be paid to the relationship between identity and psychosocial correlates. Our results, in fact, are in line with the literature related to the relationship between vocational identity and well-being, as they indicate that commitment and exploration in depth are associated with well-being, while the reconsideration processes are to be considered substantially maladaptive (Fusco et al., 2019).

At the same time, they also confirm an Italian peculiarity relating to the processes of reconsideration of the vocational identity already underlined in previous studies (Fusco et al., 2019). For young Italians, in fact, both dimensions making up the reconsideration of vocational identity seem to be associated with dimensions of anxiety and depression, while studies in the American context indicate a differentiation in size. They argue on a 'positive' reconsideration linked to the processes of flexibility of commitment, as well as on a negative reconsideration linked to self-doubt which activates dimensions of anxiety and depression. The results of our study confirm the trend traced in young Italians of a maladaptive effect for both dimensions of reconsideration.

In our context, questioning the commitments made could imply a critical and uneasy dimension.

In this perspective, the role of creativity seems to be more attenuated (as the medium-high/medium-low scores that characterize the profiles also indicate), but it certainly indicates a trend: creativity and consolidation of vocational identity do not get along very well. During adolescence, that is, having a clear work project (or study) with few margins of flexibility or imagination and engaging in this increase the feeling of well-being. Another possible interpretation of the

results of this study leads to consider the creative dimensions that could be key skills in most demanding stages of life such as adulthood. During this stage, in fact, there are more frequent requests of adaptation to adults in vocational identity development process. Yet, lingering in alternatives and imagination is associated with a complementary exploration and questioning of one's work projects which, in turn, increases the identity crisis and the feeling of being unwell.

Limitations and suggestions for future research

Before discussing the implications, we should note that this study has a number of limitations that need to be considered in the future research. Firstly, the study focuses on one group of late adolescents; therefore, longitudinal research is needed to support a more specific set of conclusions around identity development. Secondly, all the measures used were self-reported, and therefore, the data may be influenced by a reporting bias. In order to overcome this limitation, future research could use a mixed approach to data collection (quantitative and qualitative) to allow a more in-depth study of both identity development (Seginer, 2009; Sica, 2009) and use of creative processes. Finally, the study could benefit from an in-depth study on the cognitive-divergent aspects of creativity and on their link with identity styles that represent socio-cognitive orientations that could have common processes with creativity.

Overall, a better understanding of the role of creativity in the consolidation of vocational identity could offer useful indications to implement support interventions based on creativity dimensions for late adolescents putting effort into that vocational identity development process of consolidation.

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