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Self-Efficacy Beliefs And Representation Of Self And Psychology A Longitudinal Study With Psychology University Students

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Abstract

The present study was aimed to explore the relationship between self-efficacy beliefs and the representation of self and psychology in 67 students attending psychology degree course at University of Catania (East Sicily). Participants were interviewed both at the beginning of the first (T₁) and the last year (T₂) of the course. Measures: empathic, interpersonal-social communication, and problem solving self-efficacy scales (Caprara, 2001); semantic differentials for actual self, future self, and the psychology (see Osgood, Tannenbaum, & Suci, 1957); a 7-point Likert scale to assess the usefulness of psychology. Results: students improved interpersonal-social communication self-efficacy and enhanced the usefulness of psychology. Moreover, students at T₂ evaluated: actual self as more desirable, optimist, resistant, secure, and decided than at T₁ and future self as more forceful and desirable but less reflective, mature, calm, stable, and simple than at T₁. Students at T₂ considered psychology as less deep, quiet, resistant, calm, stable, confident, and consistent than at T₁. Empathic self-efficacy affected representation of psychology both at T₁ and at T₂, and the representation of future self at T₁ and of actual self at T₂. Interpersonal-social communication self-efficacy affected actual self at T₁ and future self at T₂.

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1. Introduction

Self-efficacy beliefs were defined as the individuals' belief of their capability to domain specific aspects of life (Bandura, 1993; 1997) and as the perceived capability to organize and direct cognitive, social, emotional, and

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behavioural abilities in order to solve a problem in a specific context. Self-efficacy affects choices and efforts employed to achieve a goal; it can be improved by means of specific social experiences and learning processes (Bandura, 1997) and is articulated in several specific domains of the individual's functioning (Caprara, 2001). Among these domains, it is possible to underline interpersonal and life skills self-efficacy as very important areas to develop in order to guarantee the adequate qualification of psychologists in terms of the capability to establish good relationships with other people and to find creative solutions to problems. In detail, in interpersonal area, Caprara, Gerbino, and Delle Fratte (2001) included empathic self-efficacy that concerned the beliefs about personal competence to understand feelings and needs of the others in the construction of positive relationships. This domain was closely related to prosocial behavior (Bandura et al., 2003; Caprara & Steca, 2005; Alessandri et al., 2009; Eklund et al., 2012) and the perceived self-efficacy in the expression of positive emotions and the managing of negative ones (see Bandura et al., 2003). In the life skills area, Pastorelli, Vecchio, and Boda (2001) proposed two scales functional to assess, respectively, interpersonal-social communication and problem solving self-efficacy. The first one regarded individual's perceived capability to effectively communicate with the others, actively participate in group setting, and affirm their own rights and opinions; the second one was referred to individual's perceived capability to solve problems creatively and to find innovative solutions. Positive relationships emerged among life skills area self efficacy beliefs and scholastic engagement, involvement, and satisfaction (Pastorelli, Vecchio, & Boda, 2001).

Findings of scientific research showed that, in university students, self-efficacy was positively related to self concept (Falanga, De Caroli, & Sagone, 2012), also in relation to academic self-efficacy and self concept (Choi, 2005; Peterson & Whiteman, 2007; Ferla, Valcke, & Cai, 2009).

The self-concept concerns the image that every person builds of him/herself and could be defined as the sum of beliefs and feelings that individuals have about themselves (Kassin, Fein, & Markus, 2013). According to Markus and Nurius (1986), beyond the image of feelings and cognitions about themselves in the present time (actual self), it is necessary to consider the role of the "possible selves" that are linked to hopes, fears, and fantasies of individuals. Possible selves could be considered identities unrealized in the present, but projected into the future (Owens, 2000); they are dynamic dimensions that contribute to build the reality linking past, present, and future dimensions by means of the active role of subject who tries to give consistency to him/her selves (see Castiglione et al., 2012). In Markus and Nurius perspective, each individual could contemporaneously think about several selves in reference to specific aspects of his/her actual life (e.g., academic self: me as student), or to possible aspects of his/her future life (e.g., to achieve a professional status: me as future psychologist).

In the present study the attention was centered on the representation of actual and future self in relation to the academic and professional life and the relationship among these dimensions in a longitudinal perspective.

2. Methodology

This study was aimed to explore levels of perceived self-efficacy, representation of self and psychology, and relationships among these dimensions in university students attending the first (T_1) and the last (T_2) year of the psychology degree course. In detail, at both T_1 and T_2 , we analyzed: 1) levels of empathic, interpersonal-social communication, and problem solving self-efficacy; 2) representation of actual self and future self; 3) representation of psychology and the usefulness attribute to it; 4) the influence of self-efficacy beliefs on the representation of actual and future self and the psychology.

2.1. Participants

Originally, the sample was constituted by 98 Italian university students, mainly females, attending the first year of psychology degree course at University of Catania (East Sicily). Of these students, 67 (T_1 : $M_{age}=19$, $sd=1$; T_2 : $M_{age}=20.97$, $sd=.76$) were interviewed also at last year of the course; the other 31 students were not followed because they moved out of the psychology degree course or because they didn't pass the exams required to the enrolment on the last year.

2.2. Measures, procedure, and data analyses

A self report questionnaire was administrated, in group setting, at the beginning of the first (T_1) and the last (T_2) year of the psychology degree course. The following measures were used:

I - *Empathic self-efficacy scale* (Caprara et al., 2001), composed by 12 items, evaluable in a 5-point scale (from 1=totally unable to 5=totally capable): e.g. “How much do you think to be able to understand if a person is sad or unhappy?” (Cronbach alfa: $T_1=.75$; $T_2=.79$). Standardized scores for Italian young adults sample were: very low (12-37); low (38-40); on the average (41-44); high (45-47); very high (48- 60).

II - *Interpersonal-social communication self-efficacy scale* (Pastorelli, Vecchio, & Boda, 2001), constituted by 19 items measurable in a 7 point Likert scale (from 1=totally unable to 7=totally capable): e.g., “How much do you think to be able to avoid heated disputes during a meeting?” (Cronbach alfa: $T_1=.85$; $T_2=.87$). Standardized scores for Italian young adults sample were: very low (boys: 19-78; girls: 19-84); low (boys: 79-87; girls: 85-91); on the average (boys: 88-94; girls: 92-99); high (boys: 95-104; girls: 100-107); very high (boys: 105-133; girls: 108-133).

III - *Problem solving self-efficacy scale* (Pastorelli, Vecchio, & Boda, 2001), composed by 14 statements, evaluable in a 7 point Likert scale (from 1=totally unable to 7=totally capable): e.g. “How much do you think to be able to recognize alternative and positive solutions for problems?” (Cronbach alfa: $T_1=.88$; $T_2=.89$). Standardized scores for Italian young adults sample were: very low (14-59); low (60-66); on the average (67-73); high (74-81); very high (82-98).

IV - *Three Semantic Differentials* (Osgood, Tannenbaum, & Suci, 1957), constituted by 36 pairs of opposite adjectives, each evaluable on a 7-point scale (intermediate value= 4), were used to investigate the representation of actual self (“Me as student of psychology”), future self (“Me as future psychologist”), and the psychology (“The psychology”). Internal reliability resulted to be satisfactory with Cronbach’s alfa ranged from .80 to .88 at T_1 and from .84 to .92 at T_2 .

V – A 7-point Likert scale was used to assess usefulness of psychology: “In your opinion, how much is useful the psychology?” (from 1=greatly useless to 7=greatly useful).

The analysis of the statistical significance of the results was carried out by the SPSS 15.0 software, by means of t for paired sample and linear regression with stepwise method.

3. Results

3.1. Self-efficacy

Students displayed levels of empathic self-efficacy on the average, without significant differences between T_1 ($M=43.61$, $sd=4.69$) and T_2 ($M=44.73$, $sd=4.63$). In reference to interpersonal-social communication self-efficacy, significant differences emerged between T_1 ($M=96.83$ $sd=10.91$) and T_2 ($M=101.19$ $sd=10.86$) ($t_{(66)}=-2.71$, $p=.009$). In this sense, at T_2 students showed to perceive themselves more able to communicate with the others and defend their own opinions in group context than at T_1 . In relation to the problem solving self-efficacy, without differences between T_1 and T_2 , students expressed levels overlapping with the average ($T_1=71.40$ $sd=9.18$; $T_2=70.30$ $sd=9.52$).

3.2. Representation of self and psychology

University students expressed a more positive representation of future self than psychology and actual self both at T_1 (actual self=4.96 $sd=.59$; future self=5.59 $sd=.49$; psychology=5.31 $sd=.50$) ($F_{(2,65)}=76.02$, $p<.001$) and at T_2 (actual self=5.06 $sd=.58$; future self=5.50 $sd=.63$; psychology=5.12 $sd=.59$) ($F_{(2,65)}=45.00$, $p<.001$). Significant differences between T_1 and T_2 emerged for the representation of psychology ($t_{(66)}=3.01$, $p=.004$): students evaluated psychology less positively at T_2 than at T_1 . In detail, by means of analysis of opposite adjectives, results showed that at T_2 students evaluated the actual self as more desirable, optimist, resistant, secure, and decided (Table 1) and considered future self as more forceful and desirable but less reflective, mature, calm, stable, simple, and altruistic than at T_1 (Table 2). Additionally, at T_2 students assessed psychology as more desirable but less deep, resistant, calm, active, stable, confident, consistent, and tidy than at T_1 (Table 3).

Table 1 – Representation of actual self at T_1 and T_2

Adjectives	Actual self					
	T ₁		T ₂		<i>t</i>	<i>p</i>
	M	sd	M	sd		
desirable/undesirable	4.82	.85	5.24	1.03	-3.18	.002
optimist/pessimist	4.40	1.38	4.91	1.31	-3.21	.002
resistant/weak	4.51	1.47	4.99	1.44	-2.25	.003
secure/insecure	4.21	1.63	4.76	1.45	-2.84	.006
decided/undecided	4.61	1.66	5.22	1.40	-2.84	.006

Table 2 – Representation of future self at T₁ and T₂

Adjectives	Future self					
	T ₁		T ₂		<i>t</i>	<i>p</i>
	M	sd	M	sd		
forceful/mild	2.66	1.34	3.15	1.68	-2.54	.01
reflective/impulsive	6.27	.69	5.82	1.17	2.86	.006
desirable/undesirable	5.18	1.04	5.72	.98	-3.79	<.001
mature/immature	6.31	.74	5.93	1.18	2.66	.01
calm/excited	5.27	1.19	4.76	1.46	2.30	.02
stable/unstable	5.93	.93	5.61	1.22	2.08	.04
simple/complicated	4.88	1.45	4.18	1.55	3.17	.002

Table 3 – Representation of psychology at T₁ and T₂

Adjectives	Psychology					
	T ₁		T ₂		<i>t</i>	<i>p</i>
	M	sd	M	sd		
deep/superficial	6.66	.59	6.18	1.07	3.33	.001
quiet/excited	5.21	1.46	4.48	1.54	3.67	<.001
resistant/weak	5.78	1.08	5.40	1.31	2.06	.04
calm/excited	5.24	1.18	4.28	1.39	4.95	<.001
stable/unstable	5.63	1.10	5.09	1.40	2.89	.005
confident/anxious	4.78	1.19	4.13	1.19	3.47	.001
consistent/inconsistent	5.46	1.35	5.00	1.49	2.23	.03

In reference to the usefulness attributed to psychology, university students considered psychology as more useful at T₂ than at T₁ (T₁=6.28 SD=.59 vs. T₂=6.45, (*t*₍₆₆₎=-2.05, *p*=.04).

3.3. Relationships among self-efficacy beliefs and representation of selves and psychology

The analysis of linear regression, carried out with stepwise method, pointed out that self-efficacy beliefs influenced the representation of actual and future self and psychology both at T₁ and at T₂.

In detail, at T₁ empathic self-efficacy affected the representation of future self ($\beta=.45$, $t=4.03$, $p<.001$) and of psychology ($\beta=.41$, $t=3.63$, $p<.001$); it meant that the more the students perceived themselves as able to recognize other's needs and feelings and the effects of their behavior on other people, the more they showed positive representations of themselves as future psychologists and the psychology. At T₂ empathic self-efficacy affected the representation of actual self ($\beta=.33$, $t=2.80$, $p=.007$) and psychology ($\beta=.25$, $t=2.04$, $p=.04$).

Moreover, at T₁ interpersonal-social communication self-efficacy had an effect on the representation of actual self ($\beta=.69$, $t=7.713$, $p<.001$), in the sense that the more the students perceived themselves as able to effectively communicate with the others, actively participate in group setting, and affirm their own rights and opinions, the more they expressed a positive representation of themselves as students of psychology. At T₂ the interpersonal-social communication self-efficacy affected the representation of future self ($\beta=.57$, $t=5.47$, $p<.001$).

4. Discussion and conclusion

Results underlined that university students expressed levels of empathic and problem solving self-efficacy on the average, without differences between the first and the last year of the degree course. Moreover, results demonstrated a significant improvement in students' interpersonal-social communication self-efficacy, underlining the effects of

academic experience in the perception of themselves as more able to communicate and actively participate in group situations.

In reference to the general representation of self, university students showed at T₁ a positive representation of actual and future self comparable to that expressed at T₂; in detail, in the last year of the course they showed to perceive themselves as more desirable, optimistic, resistant, secure, and decided students of psychology than in the first year. At the last year, university students seemed to have developed a more critical representation of future self and psychology, in the sense that student evaluated future self as more forceful and desirable while, at the same time, less reflective, mature, calm, stable, and simple than at the first year of degree course. Moreover, they considered in a more critical perspective the object of their studies evaluated as less deep, quiet, resistant, calm, stable, confident, and consistent.

The outcomes referred to the effects of analyzed dimensions of self-efficacy on self concepts highlighted that self-efficacy beliefs, especially the empathic and the interpersonal-social communication self-efficacy, affected the representation of psychology and actual and future self.

Findings of this longitudinal study suggested the need to monitor and supervise the features and the quality of the training course in psychology in order to guarantee to the future psychologists a specific qualification useful to work as helping professionals.

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