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Life Skills in Educational Contexts: Testing the Effects of an Intervention

Program

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Life Skills in Educational Contexts: Testing the Effects of an Intervention Program**Abstract**

This study examined the effects of a training program on students' acquisition of life skills, life satisfaction, life orientation and expectations about academic achievement. Participants were allocated to either an intervention group ($n = 41$) that took part in a life skills program, or a control group ($n = 43$). Participants completed the Youth Experiences Scale 2.0, the Satisfaction with Life Scale, the Life Orientation Test-Revised, and the Expectations about Academic Achievement. Results showed that students who received the intervention reported having more developmental experiences related to life skills, greater life satisfaction and a stronger tendency to be optimistic. Expectations about academic achievement were higher for the intervention group before and after the intervention. In conclusion, there are benefits to providing life skills training to adolescents in educational contexts.

Keywords: Life skills; Adolescence; Life Satisfaction; Life Orientation; Academic Expectations.

Life Skills in Educational Contexts: Testing the Effects of an Intervention Program

The prevention of psychosocial risk situations (such as delinquency, sexual risk behaviour, drugs and alcohol abuse) among youth has been a major concern to healthcare and education systems (Johnston, O'Malley, Bachman, & Schulenberg, 2008; Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002). In response, the healthcare system has attempted to reduce undesirable behaviours by using treatment and prevention models, which connect illness, diagnosis, prescription, therapy and cure within a medical approach. However, this approach has yielded only moderate success despite significant implementation costs (Benson, 1997; Danish & Nellen, 1997).

This aspect has revealed the importance for an intervention to not only focus on problem reduction, but also on the promotion of youth development (Damon, 2004; Fraser-Thomas, Côté, & Deakin, 2005). In fact, in social contexts where there is a need to know how to cope with change, it is advantageous to strengthen the potential and skills of young people, who, in turn, become more likely to make significant differences in society (Peterson, 2004). Therefore, it is crucial to implement programs that provide opportunities for the learning and developing of skills that lead to positive behaviour. By taking a positive approach to youth development, the intervention programs should be seen as opportunities to heighten confidence about the future, and to reinforce people's perceived control over themselves and their environment (Danish, 1996, 1997).

Based on the above reasoning, the training of life skills emerge as a significant preventive strategy to help young people adjust to diverse social contexts (Petipas, Cornelius, Van Raalte, & Jones, 2005). Life skills can be defined as skills that can be learned and used in daily life, and that enable people to be successful in different environments (Danish, Taylor, Hodge, & Heke, 2004). Specifically, "life skills can

facilitate the development of the psychological skills that are required with the demands and challenges of everyday life” (Papacharisis, Goudas, Danish, & Theodorakis, 2005, p. 248).

There are different types of life skills: behavioural (e.g., managing time effectively), cognitive (e.g., managing negative thoughts), interpersonal (e.g., managing conflicts with other persons) and intrapersonal (e.g., managing lack of motivation by setting personal goals). According to Danish and Hale (1981), these life skills are learned and become more automatic through demonstration, modelling and practice. Thus, in contrast to what common sense might suggest, the learning of life skills is not a natural process in human development. Life skills do not arise simply from having enough contact with different situations and challenges across the lifespan.

The increased interest in life skills training has led researchers to analyse the efficacy of these programs in young people (e.g., Brunelle, Danish, & Forneris, 2007; O’Hearn & Gatz, 2002; Papacharisis et al., 2005; Weiss, 2006). As reported by Gould and Carson (2008), initial results seem very promising, but we need to move forward. Specifically, because existing methods have mainly been cross-sectional, descriptive, and correlational in nature, there is a need for better measures of life skills, such as longitudinal evaluations. It is important to analyse the positive development of youth across time and to do so by comparing participants who are trained in life skills and those who are not (e.g., control and/or placebo groups). Furthermore, as proposed by Petitpas et al. (2005), it is necessary for research to evaluate the efficacy of life skills programs in terms of their outcomes, such as their impact on participants’ psychological development. This is important because learning life skills should lead to positive changes in the way in which young people perceived themselves.

In light of the limited research on the efficacy of life skills training, the current study was conducted to evaluate the efficacy of an intervention program aimed at promoting life skills in children and youth. Using a repeated measure design, two groups (intervention and control) of youth participants were evaluated in terms of their life skills and in two psychological domains (satisfaction with life and life orientation). Participants' expectations about their academic achievement were also measured. Together, these measures provided sufficient breadth by capturing not only the core dimension (i.e., learning life skills), but also the impact on psychological functioning (i.e., changes in life satisfaction and optimism/pessimism orientation) and the consequences on academic performance (i.e., expectations about academic achievement).

The Program

The Promotion of Positive Experiences-Children and Youth (PPE-CY, Gomes, 2010) is a psycho-educational program that aims to develop participants' potential through the learning of life skills in a context of psychological experience exchange. PPE-CY intervenes in several personal and social domains: the behavioural domain (e.g., knowing how to manage time and follow schedules), the cognitive domain (e.g., being able to solve problems), the interpersonal domain (e.g., maintaining a positive communication in interpersonal relationships) and the intrapersonal domain (e.g., knowing how to formulate goals in a motivational way). The program focuses on the development of six life skills that have been identified as being important in the education of youth (Gould & Carson, 2008; Gould, Chung, Smith, & White, 2006;

Papacharisis et al., 2005). The six skills are stress management, motivation, time management, problem solving, communication and teamwork.

In the case of stress management, participants are encouraged to analyse their thoughts in stress situations and trained to adopt effective ways of thinking. Participants are trained to stay positive in the face of negative events by changing negative thoughts to positive ones (Meichenbaum, 1985) and by taking into account their abilities to deal with specific stress situations. In the case of motivation, participants are trained on goal setting (Latham & Locke, 2007), by defining specific goals according to their personal motivations. In the case of time management, participants are encouraged to define and implement, on a daily basis, a timetable (Maher, 1981) that takes into account their routines and goals. In the case of problem solving, participants are trained on dealing with difficult situations step by step, through learning to define problems, evaluate their causes, implement a solution and monitor the solution (D'Zurilla, 1990). In the case of communication, participants are trained to use a positive approach to communicate and manage conflict (Kimble, 1990), and to evaluate their own behaviour and maintain the positive ones (e.g., reinforcement, arguing assertively). In the case of teamwork, participants learn to agree on a mission and goals for a team, distribute tasks among team members and interact effectively as a group (Johnson & Johnson, 2006).

The PPE-CY consists of 34 training sessions and takes eight to nine months to implement; this corresponds to one academic year in the Portuguese education system. The life skills modules are implemented in four phases: (a) education and development: each life skill and its applications are presented to participants, (b) training and integration: different methods (e.g., role-playing, group discussions, case analysis) are used to help participants implement the life skills in hypothetical situations; (c) transfer

to life contexts: using the role play method, participants apply each life skill to a specific situation in their own lives; (d) generalisation to several life contexts: in the last session of each module, each participant present to the group one situation from the past few days in which they applied the life skill.

In summary, this study evaluated the efficacy of an intervention program based on life skills training by comparing two groups of participants on measures of life skill learning, psychological functioning and expectations about academic achievement.

Method

Participants

The study involved 84 participants from four schools in the same geographical area in northern Portugal. Students were assigned to the intervention group ($n = 41$) or the control group ($n = 43$). Groups were comparable in terms of educational background (all participants had received elementary education), age (intervention group, $M = 11.9$; $SD = 1.63$ and control group, $M = 12.1$; $SD = 1.70$), and sex (intervention group, Boys = 18; Girls = 21 and control group, Boys = 17; Girls = 26).

Instruments

Demographic questionnaire. This questionnaire, designed for the purpose of this study, was used to collect information about each participant's personal (e.g., sex, age) and educational background (e.g., grade year).

Youth experiences survey (YES, 2.0) (Hansen & Larson, 2005; Portuguese adaptation by Gomes, Ramalho, & Dias, 2010). The acquisition of life skills was

assessed using the YES, 2.0, cited as one of the most promising questionnaire in this domain (Gould & Carson, 2008). This survey evaluates aspects of adolescents' self-reported developmental experiences after their participation in extracurricular or community-based activities and programs designed for high school students. Whereas the original instrument includes eighteen scales, for the purpose of this study, we used twelve scales (consisting of 47 items) that represented the main conceptual domains of personal and social development proposed in the instrument. Domain one is identity experiences, which included identity exploration (Cronbach's $\alpha = .52$) and identity reflection ($\alpha = .76$). Domain two is initiative experiences, which included goal setting ($\alpha = .68$), effort ($\alpha = .76$), problem solving ($\alpha = .77$), and time management ($\alpha = .71$). Domain three is basic skills, which included emotional regulation ($\alpha = .87$). Domain four is positive relationships, which included diverse peer relationships ($\alpha = .75$). Domain five is teamwork and social skills, which included group process skills ($\alpha = .78$), feedback ($\alpha = .58$), and leadership and responsibility ($\alpha = .73$). Finally, domain six is adult networks, which included integration with family ($\alpha = .90$). The items were answered using a Likert-type scale that provided four response options (1 = *Yes, definitely*; 4 = *Not at all*). For an easier interpretation of the results, all items and scales were reverse-scored. In other words, higher values in each dimension indicated having a larger number of developmental experiences.

Satisfaction with life scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985; Portuguese adaptation by Neto, 1993). This instrument evaluates respondents' subjective judgment concerning their quality of life. The instrument includes five items that were answered using a Likert-type scale with seven response options (1 = *Totally*

disagree; 7 = *Totally agree*). Higher values indicate greater satisfaction with life (α before intervention = .76; α after intervention = .80).

Life orientation test-revised (LOT-R) (Scheier, Carver, & Bridges, 1994; Portuguese adaptation by Cruz & Gomes, 2007). This instrument evaluates respondents' orientation towards daily life situations, reflecting a tendency to be optimistic (3 items) and a tendency to refuse being pessimistic, named pessimism refusal (3 items). The instrument is answered using a Likert-type scale, with five response options (A = *I agree a lot*; E = *I disagree a lot*). For an easier interpretation of the results, all items and scales were reverse-scored. In other words, higher values indicated a higher tendency to be optimistic (α before intervention = .71; α after intervention = .64) and to refuse being pessimistic (α before intervention = .57; α after intervention = .64).

Expectations about academic achievement (EAA) (Gomes, 2010). This instrument was developed specifically for this research and evaluated students' confidence about receiving approbation in the academic year. The instrument included one item answered using a Likert-type scale, with five response options (1 = *Definitely not*; 5 = *Definitely yes*). Higher values indicated a more positive expectancy about having an academic approval.

Procedure

We started by contacting the schools to assess their interest in implementing the intervention program. The schools were chosen because they were in the same geographical area, which made it easier to maintain contact during the program. A criterion for school selection was the existence of a professional, who had at least one year of experience in working with students, to implement the program. These

professionals, all of whom were educational psychologists, agreed to serve as monitors for the participant groups. The monitors attended two days of training about the program (16 hours in total). After that, seven meetings were held during the implementation of the program to evaluate each module and prepare for the next one.

Next, students were informed about the possibility of taking part in the program. Only students with similar educational background were invited to participate (with no students demonstrating special educational needs). For randomisation purposes, the groups were matched in terms of participant sex and age. Parents/guardians of interested students were contacted and invited to attend a meeting that presented information about the program. After receiving informed consent from parents/guardians, the intervention groups were formed. The control groups comprised students who volunteered to participate in the evaluation protocol and whose parents/guardians provided informed consent. Educational background was comparable across students in the intervention and control groups. By participating in the program, students agreed to the release of their results in the study.

Intervention and Evaluation Designs

PPE-CY was implemented during the academic year (with an average of one 90-minute session per week), with sessions focusing on six different life skills: stress management (five sessions), motivation (six sessions), time management (five sessions), problem solving (five sessions), communication (six sessions) and teamwork (six sessions).

Before starting the program, both groups responded to the Satisfaction with Life Scale, the Life Orientation Test-Revised, and the Expectations about Academic

Achievement. The measures of life satisfaction and life orientation were selected because they evaluate these dimensions independently of the participant's background and context, which was necessary given the conditions of this study.

After completing the program, both groups responded to the same measures and, in addition, the Youth Experiences Survey. For the Youth Experiences Survey, participants in the intervention group responded to the questions based on their experiences in the intervention, whereas participants in the control group answered based on their experiences in all of their classes during the academic year. A minimum of seven months elapsed between the two assessments. Questionnaires were administered, for both groups, one week before the start of the program and at the end of the last session. Participants completed the questionnaires in the classroom, in the presence of the monitors, who assured participants of the confidentiality of their responses. To guarantee confidentiality, one of the participants collected all the completed questionnaires in an envelope, which was then sealed. Finally, the envelopes were delivered to the research team.

Data Analysis

First, we analysed the internal consistency of each scale and observed acceptable levels of reliability for most of them (refer to the descriptions of each instrument). We accepted alpha values above 0.60 given that there were only four or fewer items per scale (Cortina, 1993). However, the examination of alpha coefficients revealed problems with two scales, namely identity exploration and feedback, in YES, 2.0, and the pessimism refusal scale (before intervention) in LOT-R. These scales were excluded from the following analyses.

Then, we analysed differences between groups in the developmental experiences evaluated by the YES, 2.0. Multivariate analysis of variance (MANOVA) was performed for the ten scales of the instrument. By reducing the number of tests carried out, multivariate analyses are more robust and lower the probability of Type 1 error. Prior to performing the MANOVA, an exploratory data analysis was done to test the assumptions for using parametric tests, with no problems found in most of the variables tested. Based on the recommendations by Fife-Schaw (2006), whenever violations of the assumptions were found, both parametric and their equivalent non-parametric tests were performed. Because the conclusions drawn from both set of tests were the same in all cases, only the results of the parametric tests will be presented.

Finally, we tested the differences between the intervention and control groups, before and after the academic year, in terms of student responses to the Satisfaction with Life Scale, the Life Orientation Test-Revised, and the Expectations about Academic Achievement. A 2X2 repeated measures MANOVA was performed, with SWLS, LOT-R and EAA as the dependent variables, moment of evaluation as the within-subjects factor, and groups as the between-subjects factor.

Results

Differences in the Developmental Experiences and Life Skills Learning

The comparison between groups revealed significant results in the YES, 2.0 measure (Wilks' $\lambda = .66$, $F_{(10, 68)} = 3.54$, $p < .01$, $\eta^2 = .34$). Tests of between-subjects effects showed that PPE-CY participants had higher values than participants in the control group on all measures except the diverse peer relationships scale (Table 1).

Thus, participating in the program resulted in a more positive developmental experience.

Differences in Life Satisfaction, Life Orientation, and Expectations about Academic Achievement

In terms of life satisfaction, multivariate tests were significant based on a p -value of 0.10 (Wilks' $\lambda = .96$, $F_{(1, 76)} = 3.41$, $p = .07$, $\eta^2 = .04$). Tests of within-subjects effects showed an interaction between the two moments of evaluation. Whereas the intervention group showed increased life satisfaction after intervention, the control groups showed a decrease across the two time points (Table 2). Because the effect was only marginally significant, we observed the differences between groups based on tests of between-subjects effects ($F_{(1, 76)} = 10.79$, $p < .01$). In this analysis, the intervention groups showed greater life satisfaction than did the control group, with the difference being particularly evident after the intervention.

A similar pattern of results was observed in the LOT-R tendency to optimism. In this case, the interaction effects were significant (Wilks' $\lambda = .92$, $F_{(1, 77)} = 6.44$, $p < .05$, $\eta^2 = .08$). Participants in the intervention group showed an increase in their tendency to be optimistic after intervention, whereas participants in the control group showed a decrease across the two moments (Table 2).

Given the concern regarding the alpha value for pre-intervention responses on the LOT-R pessimism refusal scale, we only analysed differences between groups after intervention. In this case, no significant differences were observed ($t_{(77)} = -.70$, $p = \text{n.s.}$).

Finally, analysis of responses to the expectations about academic achievement revealed no significant differences (Wilks' $\lambda = 1.00$, $F_{(1, 74)} = .01$, $p = \text{n.s.}$, $\eta^2 = .00$)

(Table 2). However, a main effect of the moments of evaluation, was found.

Specifically, both groups showed higher expectations about their academic achievement after the intervention compared to before the intervention ($F_{(1, 74)} = 8.62, p < .01$). Also, tests of between-subjects effects revealed differences between groups ($F_{(1, 74)} = 11.64, p < .01$), with the intervention group showing higher academic expectations than the control group.

Table 1

Differences between the intervention and control groups in the YES, 2.0

YES, 2.0: Domains and scales	<u>Intervention group</u>	<u>Control group</u>	<i>F</i> (1, 77)
	<i>M (SD)</i>	<i>M (SD)</i>	
i) Identity experiences			
Identity reflection	3.47 (.57)	3.01 (.52)	14.06***
ii) Initiative experiences			
Goal setting	3.49 (.57)	2.94 (.56)	18.57***
Effort	3.39 (.51)	2.98 (.64)	9.78**
Problem solving	3.30 (.63)	2.73 (.73)	13.50***
Time management	3.31 (.59)	2.90 (.73)	7.19**
iii) Basic skills			
Emotional regulation	3.34 (.61)	2.58 (.87)	19.79***
iv) Positive relationships			
Diverse peer relationships	3.18 (.70)	3.15 (.59)	n.s.
v) Teamwork and social skills			
Group process skills	3.39 (.52)	3.07 (.52)	7.27**
Leadership and responsibility	3.18 (.64)	2.91 (.68)	3.15 ⁺
vi) Adult networks			
Integration with family	3.49 (.77)	2.52 (1.06)	20.50***

n.s. = not significant; ⁺*p* < .10; ***p* < .01; ****p* < .001

Table 2

Differences between the intervention and control groups before and after the intervention in the SWLS, LOT-R and EAA

Variables	<u>Before intervention</u>		<u>After intervention</u>		<i>g.l.</i>	<i>F</i>
	Intervention group	Control group	Intervention group	Control group		
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>		
SWLS: Satisfaction with life	5.41 (1.16)	4.93 (1.01)	5.64 (.91)	4.67 (1.37)	1, 76	3.41 ⁺
LOT-R: Optimism	3.89 (.95)	3.96 (.78)	4.12 (.76)	3.68 (.81)	1, 77	6.44*
LOT-R: Pessimism refusal	2.66 (.80)	3.10 (1.04)	3.12 (1.05)	3.26 (.82)	--	--
EAA: Academic expectations	4.43 (.85)	3.85 (1.01)	4.77 (.68)	4.22 (.94)	1, 74	n.s.

n.s. = not significant; ⁺*p* < .10; **p* < .05

Discussion

In today's society where it is necessary to know how to deal with change, it is crucial for children and youth to play an active role in their own learning and development process. The society of the XXI century demands independent, responsible and active human beings who are able to make controlled and autonomous decisions. PPE-CY was developed based on this logic and aims to promote positive development in young people through the training of six life skills. This study contributes regarding the effectiveness of the program and the impact of the training on participants' psychological functioning.

The first main conclusion of the study is that the participants in PPE-CY showed a larger number of developmental experiences than did their peers in the control group, namely in five of the six domains evaluated by the YES, 2.0 (e.g., identity experiences, initiative experiences, basic skills, teamwork and social skills, and adult networks). This finding is significant because the control group responded to YES 2.0 based on their experiences in all of their classes during the academic year. This finding suggests that academic programs and classroom experiences do not particularly promote the development of life skills. Thus, it is clear that life skills should be presented to young students in an intentional manner, through students' participation in programs with this specific goal. This finding aligns with other studies demonstrating the efficacy of teaching life skills to youth (e.g. Brunelle et al., 2007; Papacharisis et al., 2005; Weiss, 2006). For example, Papacharisis et al. (2005) trained young people on life skills in a sport context and observed that participants in an intervention group developed better knowledge of the life skills taught, showed better skills in solving problem and defining goals, and performed better physically than participants in a control group.

In terms of psychological functioning and academic expectations, results suggest that life skill training benefits domains related to life satisfaction and the tendency towards optimism. Most significantly, participants in the intervention group showed higher life satisfaction, optimism, and expectations about their academic achievement after the intervention. Regarding the academic expectations, although the same gains were also observed in the control group, the mean values were greater for the intervention group at both time points.

Therefore, these findings show that the training of life skills can indeed produce positive changes and yield advantages similar to those resulting from intervention programs developed as an extracurricular activity (see Goudas & Magotsiou, 2009; Hansen, Larson, & Dworkin, 2003; Prichard, Stratford, & Bizo, 2006). This is in line with Larson (2000) who pointed out the advantages of implementing after-school activities, which, by fostering motivation and intense concentration in adolescents, allow them to develop positive skills such as initiative and the ability to set and achieve goals. In addition, it is interesting to note that adolescents themselves see as important those extracurricular activities that train skills such as goal-setting, time management, and emotional control, and consider them as significant contributions to their personal growth (Dworkin, Larson, & Hansen, 2003).

Moreover these encouraging findings, two limitations should be addressed. First, some sessions of PPE-CY involved the training of the six life skills in daily life situations by using the last session of each module for a discussion on participants' use of the life skill in the previous days. However, we have not collected data about the effective use of the skills in daily life after the application of the program. This problem should receive further attention in future research, because life skills are truly developed

only when the skills are applied across different settings that the young students encounter on a daily basis. The second limitation relates to the way participants were assigned to the experimental and control groups. The ones who were in the intervention groups may have been more motivated, despite their similar educational background. Nevertheless, the assignment method used in this study resembled a real-life situation because such programs tend to be provided as an extracurricular and voluntary activity.

Future research should considerate the collection of additional outcome measures. For example, the grades of students could have been compared across not only the intervention and control groups, but also, if possible, across each student using the grades before and after the participation in the life skills program. Another question relates to the evaluation of developmental experiences. In this study, the evaluation of developmental experiences using the Yes, 2.0 occurred only at the end of the academic year where the intervention was also finalized. The reason for that was comparing the developmental experiences of both groups, using the experiences in the PPE-CY for the intervention group and the experiences in all of the classes during the academic year for the control group. So, this comparison made only sense at the final of the academic year and at the final of the intervention. However, future research could also evaluate the differences between groups in the developmental experiences before the intervention, but for that it should be used specific instructions in the Yes, 2.0, asking the participants of both groups to answer the questionnaire thinking about their developmental experiences in general, not making reference for any specific context. Despite this interest, it should be mentioned that there were no reasons to believe that intervention and control groups were different in this study regarding their developmental

experiences before intervention, because they all had similar educational background, age, and sex.

Considering all the results, this study demonstrates the potential impact of life skills in educational setting. Results suggest that life skills training can promote young people's autonomy in the decision making processes and their confidence when facing new challenges.

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