

ASURING THE EFFECTS ON WELL-BEING, SELF EFFICIENCY AND EMPLOYABILITY OF VULNERABLE POPULATION GROUP AFTER IMPLEMENTING A PLATFORM FOR MENTORING

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Abstract

Background. Mentoring is a modern method for a job expert to be communicated with person that needs a personalized direction for seeking or addressing for a job. E-mentoring is the evolution of mentoring applying through electronic communication technologies. E-mentoring advantages were many including flexibility and broader reach. **Aim of the study** is to present information on how the mentees have considered the changes in their employability and their emotional status after the usage of an e-mentoring platform **Methods:** A list of 105 people belonging to vulnerable population groups such as long-term unemployed, single parents, persons with ADHD / ASD disorders, immigrants, etc were asked to define the degree of agreement with a list of 34 statements concerning: the evaluation of platform usage, psychological and emotional changes, development of skills, job search and voluntary participants. Twenty-three of the statements were in a 6-point Likert scale of disagree / agree and eleven statements of no / maybe / yes. **Results.** All statements showed a mean level of agreement to partly agree with the statements. Sex of participants showed to affect only a specific statement related to the affection of professional growth. Educational levels are shown to affect professional growth, improvement of skills, emotional distress, improvement of self-efficacy and improvement of well-being. **Conclusion.** The usage of an e-mentoring platform on vulnerable populations groups showed a lot of benefits not only on their occupation status, growth or skills improvements but there is also a clear effect on self-esteem, optimism and well-being.

Key words: well being, self-efficiency, employability, vulnerable population groups

Introduction

Mentoring is a process characterized by pairwise relationships where an experienced professional provides not only knowledge about its working area but also psychosocial support and role modelling to the mentees. Mentoring thereby is shaping professional identity

and long-term career trajectories (Mullen & Klimaitis, 2021). Mentoring accelerates skill acquisition by enabling the transfer of expert's knowledge and situated problem solving through observation and feedback; this leads to accelerated learning and skill development and faster workplace integration. (Baran & Zarzycki, 2021; Parker et al., 2008).

The relational support between mentor and mentees inherent in the process can enhance confidence and self-efficacy of mentees. Mentees were validated through the process and incremental challenges that build mastery and resilience. The relationship between mentor-mentee gives variety of perspectives through mentor's networks provides broader outlooks and adaptability, while this interaction cultivates personal growth and soft skills such as communication, emotional intelligence, and reflective practice. Finally, the accountability embedded in mentoring relationships—regular meetings, goal setting, and progress review—sustains motivation and goal attainment more effectively than one-off guidance sessions (Eby et al., 2008)

A similar term the career guidance often called as career counselling typically involves shorter-term, structured interventions—assessments, information provision, and decision-making support—aimed at matching interests, skills and opportunities rather than cultivating an enduring developmental alliance. Empirical syntheses in health professions and higher education underline that mentoring contributes uniquely to *professional identity formation* and relational learning processes that are not fully replicated by formal guidance services. (Leavitt et al., 2022). Mentoring and career guidance are therefore **complementary**: mentoring provides relational depth and long-term professional socialization, while career guidance offers structured assessment and decision support; integrating both yields the strongest outcomes for career development and employability. (Toh et al., 2022)

Communities or individuals whose social, economic, environmental, or health-related situations make them more vulnerable to damage are known as vulnerable population groups (VPGs). According to the World Health Organization, vulnerability is a state that is influenced by physical, social, economic, and environmental elements that make a person more susceptible to risks, such as persistent poverty, a lack of institutional support, hazardous living conditions, or social isolation. Vulnerability is multifaceted, with evolving physical, psychological, and social dimensions, and frequently arising from interlocking structural disadvantages like poverty, marginalization, disability, and immigration status, according to recent scientific studies. (Mechanic & Tanner, 2007; Wisner et al., 2002)

Recent literature underscores that VPGs include long-term unemployed individuals, people with disabilities, immigrants and refugees, single parents, ethnic minorities, and those with chronic health or developmental conditions (e.g., ADHD, ASD). These groups experience increased probability of social deprivation, reduced institutional support, limited access to resources, and systemic discrimination, all of which significantly shape their vulnerability trajectories (De Chesnay & Anderson, 2019; Marmot, 2020)

Beyond technical progression, the psychosocial support inherent in mentoring enhances personal growth and soft skills, providing the necessary accountability and motivation for sustained performance. Furthermore, studies indicate that protégés benefit significantly from exposure to broader perspectives, which correlates with increased confidence and self-efficacy regarding their professional capabilities (Allen et al., 2004).

Aim of the study is an exploration to the mentees' views and perceptions regarding their skills, competences and employability after participating in an e-mentoring program offered by the Hellenic Mediterranean University at Crete region during 2021-2022 to individuals belonging to vulnerable groups (e.g. long-term unemployed, single parents, immigrants, individuals with ADHD / ASD disorders and other disabilities) who were beneficiaries of material support and received social benefits via the municipality social services under the FAED program in Crete region.

Methodology

Participants

The study sample consisted of 110 participants belonging to VPGs who were beneficiaries of material support and social benefits via municipal social services under the FAED program. The cohort included long-term unemployed individuals, single-parent families, and persons with disabilities at the higher extent.

E-mentoring platform

The name of the platform was Mentoring and was developed under the collaboration of Region of Crete and the Hellenic Mediterranean University (HMU). The framework was the «Social Partnership of the Region of Crete – Decentralized procurement of food and basic material assistance, administrative costs and provision of accompanying measures 2018-2019». The platform’s purpose was career guidance (mentoring) and the support of personal and professional growth. The platform is accessible through the website <https://mentoring.sw.hmu.gr>.

The “exit” Questionnaire

To evaluate the platform and the mentees' progress, an exit questionnaire comprising 33 questions was developed. The instrument was divided into two types of response formats: Part A: 22 questions utilizing a Likert scale (Not at all, Very little, Little, Enough, Much, Very much). Part B: 11 questions utilizing a categorical scale (No / Maybe / Yes).

The questions were grouped into five analytical categories: Job Search and Employment Assistance (JSEA): Assessed whether the platform helped users discover new job search methods, improve qualifications, or find employment (e.g., "Did you find a job or a better job with the help of the platform?"). Skills Development and Professional Growth (SDPG): Evaluated training and skill acquisition (e.g., "Do you believe that by using the platform... you gained training/education to develop your skills?"). Psychological and Emotional Benefits (PEB): Measured coping mechanisms, confidence, and self-esteem (e.g., "Did the program help you better cope with the fear of failure?") Voluntary Participation (VP): Gauged willingness to participate in future programs, both remote and in-person. Evaluation of Structures and Services Provided (ESSP): Focused on the quality of guidance received. Table 1 roughly describes the number of items of each part (A or B) included in each category

Table 1. Categories of exit questionnaire, acronyms and number of items included

Acronym	Category	Items
JSEA	Job Search and Employment Assistance	A (2) B (3)
SDPG	Skills Development and Professional Growth	A (8) B (4)
PEB	Psychological and Emotional Benefits	A (9) B (2)
VP	Voluntary Participation	B (2)
ESSP	Evaluation of Structures and Services Provided	A (8)

Table 2. Lists the questionnaire items included in each of the categories and the values of internal consistency measures (Cronbach's coefficients α). All coefficients showed acceptable values of >0.700 . Higher values were shown in psychological and emotional benefits in

section A ($\alpha=0.922$) and in skill development and professional development in section B ($\alpha=0.822$).

Table 2. Questionnaire items and measures of internal consistency

Category	Questionnaire item	Cronbach' α
Job Search and Employment Assistance	A5, A19	0.790
	B1, B3, B11	0.771
Skills Development and Professional Growth	A2, A3, A4, A17	0.895
	B4, B5, B6, B8	0.822
Psychological and Emotional Benefits	A1, A6, A7, A8, A9, A10, A11, A16, A18	0.922
	B2, B7	0.721
	B9, B10	0.710
Evaluation of Structures and Services Provided	A12, A13, A14, A15, A20, A21, A22, A23	0.834

A complete list of the questionnaire items / statements can be found at the end of the manuscript in Appendix A (Table 1A)

Intervention

The process of mentoring initiates when the mentee receives an automated confirmation email directing them to the platform, where they can access the profile of their assigned mentor. Prior to the first interaction, the mentee is encouraged to review the mentor’s curriculum vitae or video introduction to prepare for the engagement. Simultaneously, the mentor acknowledges the assignment by transmitting their availability for the initial web-based meeting via the platform’s internal chat system. The framework stipulates that all interactions are conducted on a pairwise basis. The program is provided free of charge, the intervention is finite, capped at a maximum of five sessions. The duration of each meeting determined at the discretion of the mentor.

Each of the participant (mentee) who follow mentoring lectures was asked to participate in the “exit” questionnaire. Data collection was performed on a voluntary basis. Data collection was on based on anonymity in a online platform created using Google forms.

Results

A total of 110 participants from the VPG group responded to the exit questionnaire. Demographic characteristics of the participants of the exit questionnaire were: Over two thirds (2/3, 67.6%) of the 110 participants were females. Single is most of the sample 51.4%, while 44.8% were married and 33.8% were divorced /widowed. A 45.7% have at least one children and level of education was 6.7% for primary, 49.7% for secondary (Gymnasium or Lyceum) and 43.8% over Lyceum.

Part A and Part B responses of each item and per category were shown in Figure 1. In Part A (6-point Likert questions) agreement was considered as the sum of agree (Enough, Much, Very much). The highest %agreement for each of the questionnaire categories were: 90,4% for JSEA (job search and employment assistance), 86,7 for PEB (Psychological and

Emotional Benefits), 92,4% for Skills Development and Professional Growth, 88,6% for Evaluation of Structures and Services

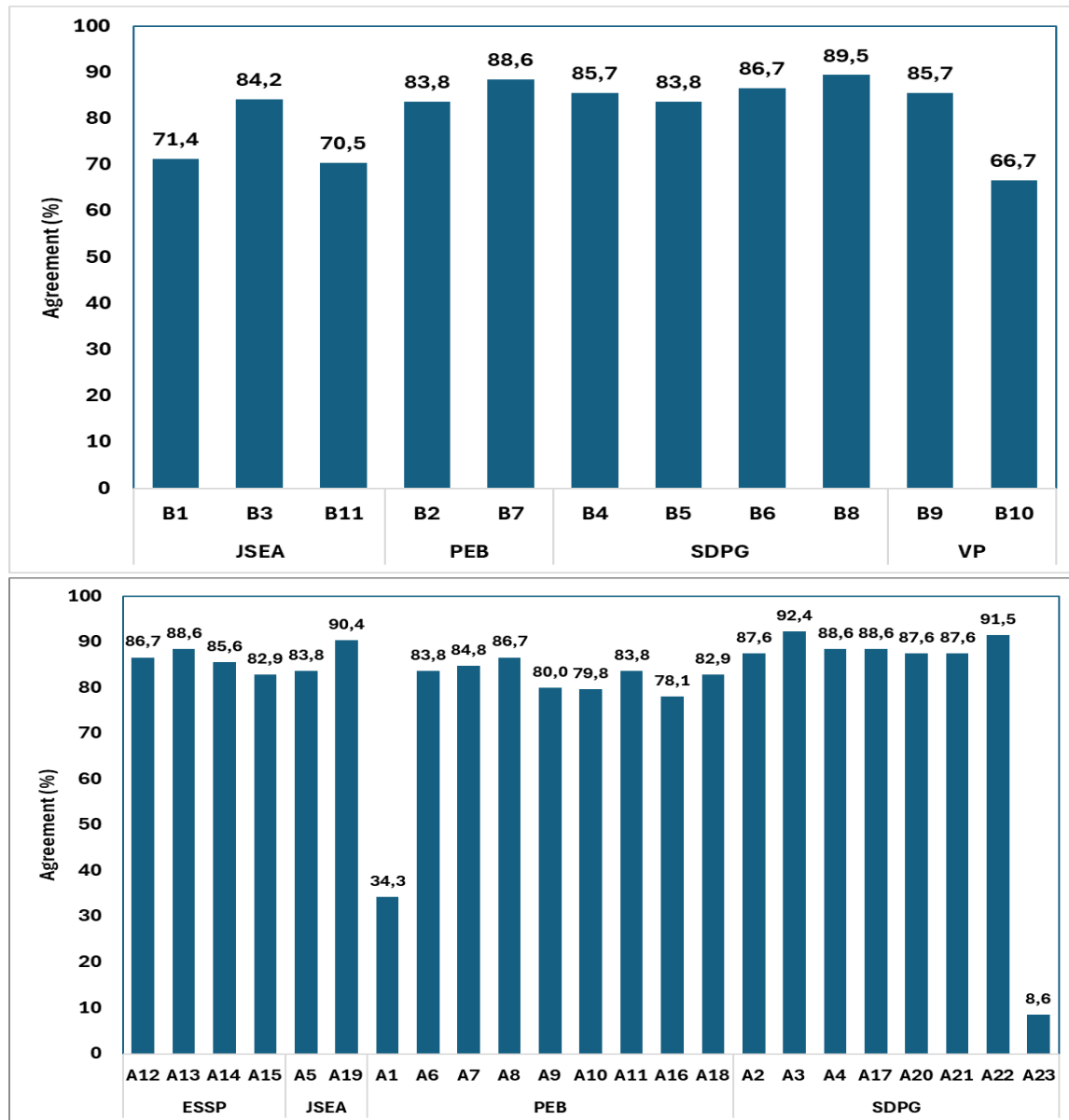


Figure 1 Responses of each item and per category of participants in the exit questionnaire (Part A – upper, Part B – lower) JSEA: Job Search and Employment Assistance, SDPG: Skills Development and Professional Growth, PEB: Psychological and Emotional Benefits, BP: Voluntary Participation, ESSP: Evaluation of Structures and Services Provided

The effect of gender on the scales of exit questionnaire were presented in Table 2 Gender of mentees do not affect the JSEA (job search and employment assistance) category ($p>0.100$), the PEB (Psychological and Emotional Benefits) ($p>0.05$), the VP (Voluntary Participation) ($p>0.100$), the ESSP (Evaluation of Structures and Services Provided) ($p>0.100$). There is only one significant difference between women and men on the agreement in item A17 (Do you believe that the use of new technologies was beneficial for your professional development?) where women shown higher acceptance 93.0% than men 79.4% ($p=0.041$)

Table 2. Effect of gender on JSEA, SDPG, PEB, VP and ESSP scale of the exit questionnaire

		Man		Woman		p
		n	%	n	%	
JSEA	A5	28	82.4	60	84.5	0.779
	A19	29	85.3	65	92.9	0.220
	B1	21	61.8	54	76.1	0.129
	B3	28	82.4	57	85.1	0.723
	B11	22	64.7	52	73.2	0.37
SDPG	A2	28	82.4	64	90.1	0.257
	A3	29	85.3	68	95.8	0.053
	A4	29	85.3	64	90.1	0.465
	A17	27	79.4	66	93.0	0.041
	B4	27	79.4	63	88.7	0.202
	B5	28	82.4	60	84.5	0.790
	B6	29	85.3	62	87.3	0.775
	B8	30	88.2	64	90.1	0.765
PEB	A1	13	38.2	23	32.4	0.555
	A6	26	76.5	62	87.3	0.158
	A7	26	76.5	63	88.7	0.102
	A8	27	79.4	64	90.1	0.130
	A9	24	70.6	60	84.5	0.095
	A10	24	70.6	59	84.3	0.103
	A11	27	79.4	61	85.9	0.397
	A16	26	76.5	56	78.9	0.397
	A18	26	76.5	61	85.9	0.23
VP	B1	21	61.8	54	76.1	0.129
	B9	29	85.3	62	87.3	0.775
	B10	28	82.4	62	87.3	0.496
	B11	21	61.8	49	69.0	0.461
ESSP	A12	28	82.4	63	88.7	0.368
	A13	28	82.4	65	91.5	0.166
	A14	27	81.8	62	87.3	0.457
	A15	27	79.4	60	84.5	0.517
	A20	28	82.4	64	90.1	0.257
	A21	28	82.4	64	90.1	0.257
	A22	29	85.3	67	94.4	0.120
	A23	2	5.9	7	9.9	0.496

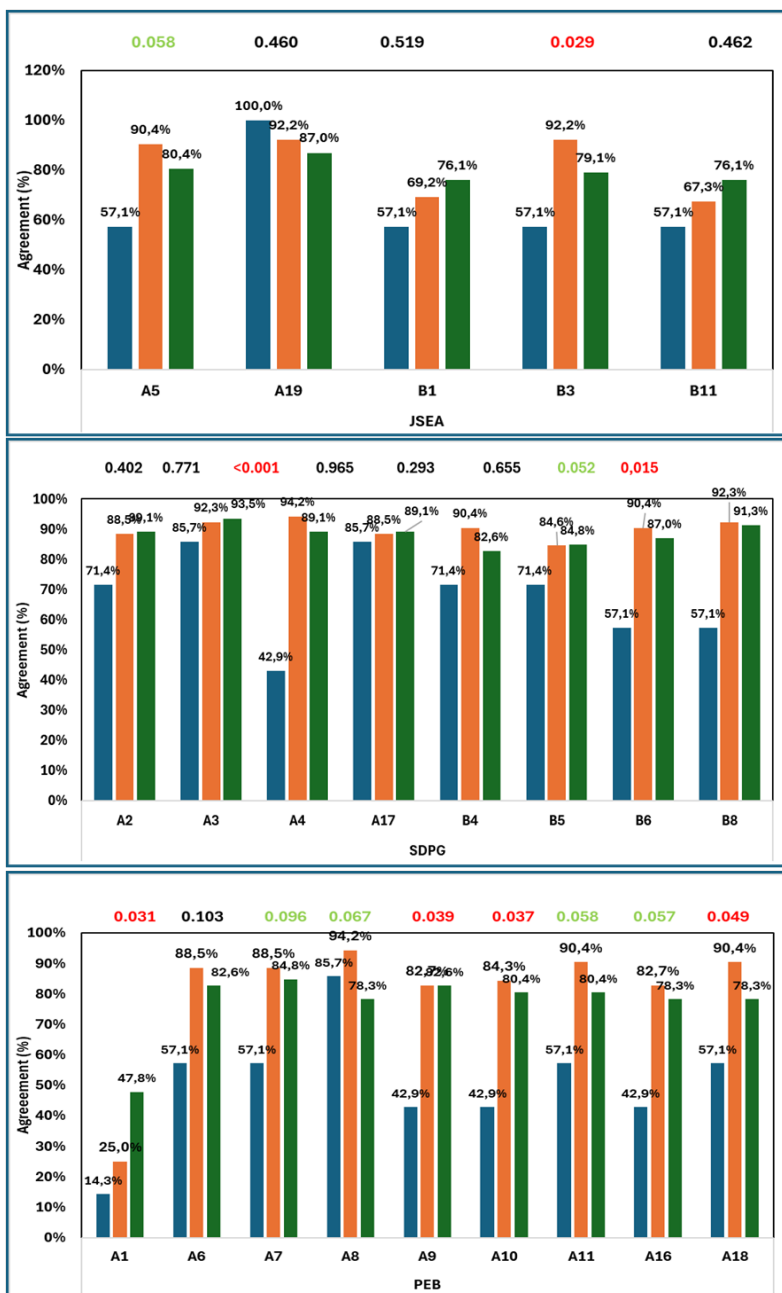
JSEA: Job Search and Employment Assistance, SDPG: Skills Development and Professional Growth, PEB: Psychological and Emotional Benefits, BP: Voluntary Participation, ESSP: Evaluation of Structures and Services Provided

Educational level showed significant difference in %percentages in B3 item (Did the platform, after matching you with a mentor/employer, help you look for a job or a better job?) (p=0.029) in JSEA category). Two items A3 (How satisfied are you with the guidance/training provided by your Mentor/employer?) and item B5 (Did you organize a better CV with the help of your Mentor?) showed significant differences with p<0,001 and p=0.015 in SDPG category.

Educational level do not affect VP ($p>0.05$) and only one item A15 (How much do you believe the training/guidance program helped you to have a better professional career?) ($p=0.006$).

Finally, the most significant differences were found in PEB category. Item A1 (Are you feeling disappointed at this time?), item A9 (Do you believe that after the program you will handle personal and work-related problems better?), item A10 (Did the program help you maintain self-confidence when you are stressed?) and item A18 (To what extent do you believe that the counseling process from your Mentor/employer contributed to your good psychological state?) showed $p<0.05$.

Additionally, in JSEA, B5 ($p=0.052$) and A7 ($p=0.096$) showed tendencies to significant effects, while in SDPG, A8 ($p=0.067$) and A11 ($p=0.058$) showed the same tendency for significant. Most of the tendencies were found in PEB category were A5 ($p=0.058$), A16 ($p=0.057$), A8 ($p=0.067$), and A11 ($p=0.058$) were included.



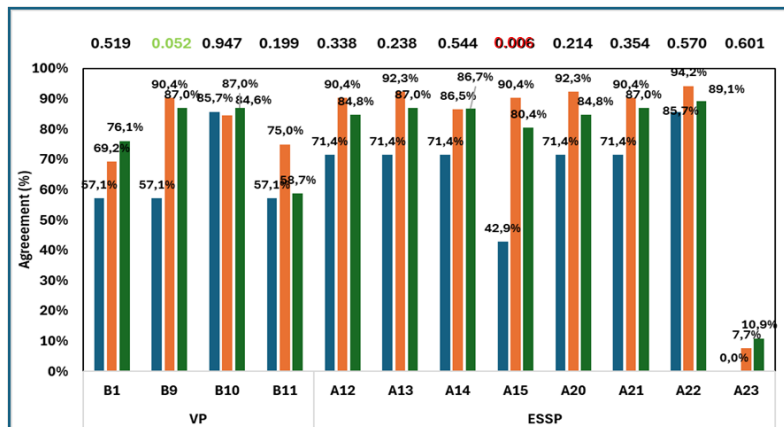


Figure 2. Effects of educational level in each item of the exit questionnaire (JSEA, SDPG, PEB, VP, ESSP). JSEA: Job Search and Employment Assistance, SDPG: Skills Development and Professional Growth, PEB: Psychological and Emotional Benefits, BP: Voluntary Participation, ESSP: Evaluation of Structures and Services Provided

Red values refers to significant values ($p < 0.05$), while green values refers to p-values between $0.05 < p < 0.100$.

Discussion

The results of this study suggest that e-mentoring is a potent intervention for mitigating the effects of social exclusion among vulnerable populations in Crete. Analysis revealed a "positive attitude" toward various aspect of e-mentoring procedure. Those aspects were related not only on the experience gained from the interface, but it also supports various psychological aspects. In more details, there were impacts on well-being, self-efficacy and employability skills. Only one of the questionnaire items was affected from gender related with the professional development. Educational level showed better acceptance mainly in Lyceum graduate and more specific in items related on psychological and emotional aspects.

The effects on VPG groups from mentoring or e-mentoring have been supported in previous published work by the authors. They support that over half of participants in an e-mentoring initiative reported improved emotional security and optimism about employment prospects, highlighting the dual benefit of mental well-being and career empowerment (Spyridaki, 2022; Spyridaki et al., 2025). Other studies focused on self and functional efficacy, support that mentees release from prison were empowered to navigate their personal needs like housing, healthcare (Elisha, 2025). In other groups, like the long term unemployment groups, e-mentoring could disrupt the emotional cycle of failure, E-mentoring can builds the mentee's global self-worth and transform the mentee's mindset from passive resignation to active "career self-management" (Carvalho et al., 2025)

Regarding self-efficacy and functional efficiency, mentoring platforms act as "social scaffolding" that transforms latent potential into actionable agency. For single parents and those facing systemic barriers, the "efficiency" of these programs lies in their ability to streamline complex social and bureaucratic navigation. Elisha (2025) describes the mentor's role as a "one-stop shop" that empowers mentees to navigate healthcare, housing, and employment systems with greater speed and less friction than they could achieve in isolation. This directly correlates with increased self-efficacy; as mentees successfully navigate these hurdles with guidance, their belief in their own capability to affect change grows. Furthermore, Spyridaki et al. (2025) found that this boosted self-efficacy is a strong predictor of employability, as it encourages "active" coping strategies—such as persistent job seeking and upskilling—rather than the "passive" avoidance often seen in long-term unemployment. By

converting the "masked vulnerability" of these groups into recognized resilience, mentoring programs effectively bridge the gap between psychological readiness and concrete economic participation (Meldrum & Lyons, 2026).

A notable limitation identified in the conclusion is the "lack of data on the final outcome" regarding actual job placement. While the study measures *perceptions* of employability and skill acquisition, it does not track the long-term employment status of the VPG persons who looked for a job. Future longitudinal studies are required to map the transition from "improved employability" to "sustained employment."

As a conclusion, the implementation of the mentoring platform by the Hellenic Mediterranean University has demonstrated that digital interventions can successfully reach and positively impact vulnerable population groups. The study concludes that the overall consideration of VPG persons yielded a positive outcome showing levels >70% of the participants. Platform intervention showed an improving emotional status and well-being, an enhanced self-efficacy and upgrading technical skills.

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Appendix A

Table 1A. Items of exit questionnaire per category (Part A and Part B)

ID	Question Item / Statement
A1	Are you feeling disappointed at this time?
A2	To what extent do you believe that the career counseling process of the program helped you discover/improve your skills?
A3	How satisfied are you with the guidance/training provided by your Mentor/employer?
A4	How much did the career guidance program help you plan your professional development?
A5	Do you believe that the career guidance from your Mentor/employer will help you find a job or a better job in the field you were trained in?
A6	Did the career guidance help you achieve a better emotional state?
A7	Did the career guidance help you think more positively about things in the work environment?
A8	Do you believe that the career counseling from the program led you to greater appreciation of yourself and your abilities?
A9	Do you believe that after the program you will handle personal and work-related problems better?
A10	Did the program help you maintain self-confidence when you are stressed?
A11	Do you believe that your participation in the training and guidance program (through the platform) strengthened your self-esteem?
A12	Did the platform help you acquire knowledge and information in the employment sector you were trained in?
A13	How satisfied are you with the professional training you received?
A14	How satisfied are you with the content of the online meetings with your Mentor?
A15	How much do you believe the training/guidance program helped you to have a better professional career?

- A16** Do you believe that the program through the platform helped you better address issues of social exclusion?
- A17** Do you believe that the use of new technologies was beneficial for your professional development?
- A18** To what extent do you believe that the counseling process from your Mentor/employer contributed to your good psychological state?
- A19** How much do you believe that using the new CV will help you find a job or a better job more easily?
- A20** How satisfied do you feel with the material provided by your Mentor/employer?
- A21** How satisfied do you feel with the operation and organization of the platform?
- A22** How important were the knowledge/information you acquired from the Mentor/employer of the program for the employment sector you attended?
- A23** Did you encounter difficulties using the platform?

ID	Question Item / Statement
B1	Do you believe that the program using the platform helped you discover new ways to search for a job or a better job?
B2	Did the program help you better cope with the fear of failure?
B3	Did the platform, after matching you with a mentor/employer, help you look for a job or a better job?
B4	Do you believe the platform helped you become more familiar with new technologies?
B5	Did you organize a better CV with the help of your Mentor?
B6	Do you believe that by using the platform and its programs you gained training/education to develop your skills?
B7	Do you believe that the training/education from the Mentor and the platform's programs made you feel more confident about yourself and your abilities?
B8	Do you believe that your participation in the programs through the platform helped you better develop your skills?
B9	Would you participate again in a similar program using a platform? (remote)
B10	Would you participate in a similar career guidance program if it were in person? (physical presence with the Mentor)
B11	Did you find a job or a better job with the help of the platform?