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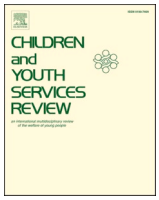

The mediating effect of psychological strengths and resilience on enhancing youth employability through social entrepreneurship education and training

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ABSTRACT

Accounting for 37.6 % of the total unemployed population, youth unemployment is critical in Hong Kong. With the agenda set by the government, entrepreneurship is suggested as an effective means to enhance their employability. Under this context, this study examines the impact of social entrepreneurship training on youth's employability and their psychological growth. The subjects were underprivileged youth referred through social workers from Band 3 secondary schools who participated in the three-stage training program including baseline assessment (T_0) and post-training questionnaires (T_1). Among the 100 participants, 77 pairs of responses from T_0 and T_1 were matched and included in the data analysis. The results show that this program is effective and can enhance underprivileged youth's psychological growth in terms of their self-esteem, career-linked self-efficacy, flourishing, sense of self-worth and resilience, entrepreneurship skills and intention, and overall self-perceived employability. Young participants' entrepreneurship skills and intention positively predict their self-perceived employability. This relationship is mediated by their psychological strengths and resilience. Therefore, early introduction of curriculum-based youth entrepreneurship training is recommended in secondary schools to enhance their psychological growth and increase their competitiveness at the workplace in future.

1. Introduction

Global youth unemployment is a crisis that requires immediate action. According to the International Labour Organization (Kuhn et al., 2018), young people under the age of 25 account for over 34 % of the total unemployed population worldwide and approximately 14.6 % of the global labor force. In line with these global trends, Hong Kong also faces youth unemployment challenges. Hong Kong's latest report from the Census and Statistics Department (2019) showed that unemployment was highest in the 15–19 and 20–29 age groups, at 10.2 % and 5.5 %, respectively. These two groups represented over 42,000 unemployed people, accounting for approximately 37.6 % of the total unemployed population in Hong Kong in 2018.

To address this challenge, a concerted effort is being made in the globe to promote entrepreneurship as a means of enhancing young people's technical and vocational skills and improving their employment prospects. According to the United Nations Economic and Social Council (2016), assisting young people in identifying innovative and inclusive employment solutions is key to combatting new challenges such as the increasing complexity of the labor market and declining employment stability. To help develop policies to action these strategies, the United Nations has defined key targets for the remainder of this decade, with the ultimate goal of increasing the number of people with relevant employment and entrepreneurial skills by 2030. The United Nations recognizes that support from local governments is crucial in this effort, and a policy guide on youth entrepreneurship was issued by the United Nations Conference on Trade and Development (2015) with six major recommendations. "Enhancing entrepreneurship education and skills development" and "facilitating technology exchange and innovation" are two of these recommendations. As an area dealing with youth unemployment, Hong Kong should join in these global efforts by working to develop youth entrepreneurship in the innovation and technology industry.

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1.1. Entrepreneurship and social entrepreneurship

The term "entrepreneurship" was coined in 1775 to describe people who have the skills to take risks in an innovative way and who use their business perspectives to create and start businesses that satisfy unmet societal needs (Cantillon, 2010). While there is no set definition for this term, "entrepreneurship" currently refers to a process wherein people seize existing opportunities and resources to make an impact on the economy through innovation (Drucker, 1994; Martin & Osberg, 2007). Traditionally, the core goal of entrepreneurial activities is to generate profit and build the personal wealth of entrepreneurs (Tam et al., 2021). In the 21st century, traditional job-for-life career paths and opportunities are on the decline globally. Entrepreneurship has gained prominence, encouraging a growing number of young people to start their own businesses with innovation to improve their livelihoods and achieve economic independence. Youth entrepreneurship also creates jobs and integrates these young entrepreneurs into changing labor markets (Schoof, 2006).

According to Chigunta (2002), entrepreneurship is a positive and promising way to create employment opportunities for young people; guide marginalized young people back to the economic market; help young people develop a sense of meaning and belonging through the entrepreneurial process; address the sociopsychological problems and delinquency that may arise from unemployment; help youth develop life skills and cultivate experiences that may positively contribute to other life events and challenges; develop young people's innovative capabilities and levels of resilience; revitalize communities' economies through the goods and services provided by young entrepreneurs; and, eventually, help young people escape poverty and access upward social mobility. Young people are passionate, energetic, and are strong problem solvers, so engaging them in entrepreneurship may be a powerful way to unleash their potential and contribute to the economic and social progress of their communities.

Social entrepreneurship is a unique type of entrepreneurial approach and has gained global attention for its focus and issues beyond generating economic wealth and attaining market position (Oghojafor et al., 2011). Social entrepreneurship integrates the economic and social values of a business through entrepreneurial skills and activities to address a variety of social problems through innovative and sustainable solutions (Ebrashi, 2013; Peric & Delic, 2014; Portales, 2017). As with traditional entrepreneurship, social entrepreneurship uses business principles and entrepreneurial knowledge and skills to ensure the efficiency, effectiveness, and accountability of a business and manage it as it achieves its goals through innovation and risk-taking (Schoof, 2006). However, unlike traditional entrepreneurship, economic value creation in the form of wealth generation is a way to ensure the sustainability of the social goals of a business. The social value of addressing social problems is the primary goal of social entrepreneurship (Mair and Martí, 2006). Social entrepreneurship therefore both pursues a social mission and works toward economic success and sustainability (Hossain et al., 2017; Portales, 2019).

Social entrepreneurship is a revolutionary way of doing business. Instead of striving only for wealth and profit, social entrepreneurship is an innovative way to address social problems (Schwartz & Malach-Pines, 2009). Social entrepreneurship has gained increasing recognition as a business model worldwide, particularly among young people who have a greater appetite to address social issues and accept challenges than older generations (Schoof, 2006; Shrestha & Appanah, 2005). Social entrepreneurship therefore, is not merely a way for survival or solution for youth unemployment, provides a method to address the economic and employment needs of young people and promote their development as passionate and resilient social entrepreneurs who are dedicated to addressing social problems in innovative and sustainable ways (De Simone & Tora, 2016). Entrepreneurship education can play an important role in equipping young people with entrepreneurial qualities and raising their awareness of entrepreneurship as a viable career path (Peric & Delic, 2014).

1.2. Entrepreneurship and social entrepreneurship education

Entrepreneurship education and training (EET), although not well defined in the literature, usually encompasses two dimensions, training about entrepreneurship and training for entrepreneurship, depending on the goals of the training (Egerová et al., 2017; Farashah, 2013; Jensen, 2014; Rauch & Hulsink, 2015; Wu & Wu, 2017). The "about" dimension usually adopts a normative and theory-based approach aimed at enhancing participants' entrepreneurship knowledge (Egerová et al., 2017). The "for" dimension tends to focus on practical and experience-based education geared at equipping participants with essential entrepreneurial skills (Rauch & Hulsink, 2015). Participants in "for" training programs usually learn about business administration, finance, and management and work to develop the necessary knowledge, skills, competencies, attributes, values, and ethics to help them successfully manage their personal, community, business, and work opportunities. Entrepreneurship education therefore both fosters participants' entrepreneurial skills and self-employment opportunities and equips them with attitudes and skills (e.g., personal responsibility, creativity, and flexibility) to help them cope with various life and career difficulties (Schoof, 2006). Jensen (2014) also suggested a holistic person perspective as a method for understanding and assessing the impacts of EET in extended and multiple ways.

As social entrepreneurship is a type of entrepreneurship, they share similar principles concerning business management and commercial entrepreneurship (Mir Shahid and Alarifi, 2021). Social entrepreneurship education and training (SEET) therefore also benefits from the inclusion of conventional business and entrepreneurship education. To achieve the primary goal of social entrepreneurship in generating social values for social problems, SEET programs should work to strike an appropriate balance between educating participants on generating social impact and maintaining the financial viability of a business. SEET can go beyond training participants on conventional dimensions of entrepreneurship knowledge and skills and serve as a means of equipping participants with a social entrepreneurial mindset, working with them to develop their awareness, attitudes, intentions, non-profit motivations, career aspirations, and orientation to manage a business in a way that addresses social problems in society (Mir Shahid and Alarifi, 2021). SEET can engage participants in action-based participatory learning activities to help them develop a business idea that targets a social problem. To help implement participants' business ideas and action plans, SEET should also allow participants to work collaboratively with different stakeholders to examine the social impacts of their business plans. This action-based, learning-by-doing approach is an effective way to contribute to the personal (Brown et al., 2007) and professional development of participants (Hansen et al., 2007).

Social entrepreneurship has gained prominence in global social and economic sectors (Kruse, 2015). EET has also received increased interest from businesses, schools, practitioners, and policymakers. However, many countries still broadly lack or have insufficient available training and education opportunities for entrepreneurship and social entrepreneurship. Training in entrepreneurial knowledge, skills, attitudes, and behaviors is not often integrated into the curricula at various levels of education (i.e., primary, secondary, technical, vocational, and higher education). Most training is still too traditional to equip young people with the skills, attitudes, and knowledge needed to find and succeed in jobs, let alone start an innovative and independent entrepreneurial career. Even business programs at universities may not include sufficient entrepreneurial education. Students are generally educated to become managers of existing businesses, not entrepreneurs (Peric & Delic, 2014). As traditional job-for-life career paths and opportunities are decreasing on a global scale, however, social entrepreneurship education has increased (Padilla-Melendez et al., 2014). Despite this, there is still much to be accomplished to develop social entrepreneurship as a

method to create jobs for young people, spur their personal development, and initiate positive social change in society.

Although entrepreneurship is presented as an alternative and innovative way to address the challenge of youth unemployment, EET is still very rare in Hong Kong. Despite recent resource allocations to non-governmental organizations (NGO) to offer career guidance and life planning assistance for secondary students, entrepreneurship training is not common in mainstream education. Entrepreneurship training and education programs, such as social entrepreneurship business plan competitions, are generally held only at the university level. Empirical studies demonstrating the actual impacts of social entrepreneurship on young people are still limited. It is in this context that an NGO in Hong Kong (with funding support from a charitable trust) worked in collaboration with a French impact assessment fund dedicated to social entrepreneurship and a science and technology corporation to provide a "Social-Up Youth Entrepreneurship Program." The program was for disadvantaged and underachieving young people aged 14 to 29 who had low school satisfaction or had dropped out of school and difficulties with their life and career development. The program equipped disadvantaged young people with the entrepreneurial knowledge, ethics, and skills needed to own their own businesses, and cultivated their sense of social responsibility to respond to social problems through innovative business plans. This program included an empirical evaluation, including quantitative and qualitative elements, of the impact of social entrepreneurship on young people's career competencies and personal development.

2. Social-Up youth entrepreneurship program

The Social-Up Youth Entrepreneurship Program was designed and implemented by a France-based organization. Its mission was to combine a profitable business model with elements of social innovation to promote social entrepreneurship as a way to sustainably solve social issues. The program included 21 sessions of social entrepreneurship training with visits to social enterprises and technology startups, a 60-hour internship after the training, and a 6-month preincubation training period during which the participants actualized the business plans developed during the initial training. The training was held in four batches, each comprising 30 disadvantaged young people recruited from secondary schools through referrals from social workers or through the NGO's outreach social work services.

The first wave of training included 21 sessions that covered four key stages. The first stage helped young people to understand themselves, including their character strengths and personality, and to review and develop their career interests and plans. The second stage taught the participants entrepreneurship knowledge and skills, including economic and job market analysis, business creation and development strategies, business administration, finance and human resources management, business innovation, and risk-taking. The third stage brought in social entrepreneurs to share the concepts of their businesses and their experiences in using their businesses to solve various social problems. After agency visits to social and technology startups, the fourth stage grouped the participants in teams of 3 to develop a financially sustainable business plan that contributes to solving a social problem. A pitching session was arranged on the last day of the training. All teams' business plans were presented before a jury composed of members with social entrepreneurship knowledge and experience. In the end, three business plans developed by 10 participants were selected to advance to the 6-month preincubation training.

The second wave of the program was the 60-hour internship. Based on their career interests, job placements at social enterprises and technology startups were arranged for all young participants, regardless of whether their business plan had advanced from the pitching stage. As some of the participants were students, they were allowed to complete the internship in 2 months as per an agreement with their placement companies. Weekly meetings with social workers were arranged to ensure that the participants had positive learning experiences and reflected on their experiences. During the third wave, the 6-month preincubation training, the three selected teams received HK$30,000 (US$4,000) in seed funding to actualize their business plans. The French-based organization and the NGO also offered mentorship advice and support throughout this period. The business plans developed by the young participants did not have to be successful at the end of this period for them to complete the program.

3. Impact assessment of SEET

There are various ways to evaluate and assess the impact of EET/SEET, depending on the goals of each training program (Fayolle and Gailly, 2015). An impact assessment of EET typically includes the measurement of several key dimensions. The first key dimension includes the mind-setting factors of awareness, attitude, and intention to engage in entrepreneurship (Kirby and Ibrahim, 2011). For SEET in particular, it is important to measure participants' awareness and attitudes toward using a business to create social value and address social problems. Among the mind-setting factors, entrepreneurial intention is one of the most extensively researched components of EET. Under the assumption that starting one's own business is a planned behavior that requires prior intention, the measurement of entrepreneurial intentions allows to understand the impact of entrepreneurship programs on participants' cognitive levels (Pérez-López et al., 2016). Previous studies have therefore used entrepreneurial intention (EI) as a credible measure of EET effectiveness (Farashah, 2013; Hamzah et al., 2016; Rauch & Hulsink, 2015; Rideout & Gray, 2013; Zhang et al., 2014).

The second key dimension is the output dimension, which includes measuring the impact of the training on the participants' entrepreneurial behavior and venture creation. Entrepreneurial behavior is seen as a straightforward measurement of EET outcomes. As one of the goals of EET is to prepare the participants to take part in entrepreneurial careers, evaluation of their entrepreneurial behavior directly measures the impact of EET at the behavioral level. However, the effect of the training on entrepreneurial behavior or venture creation may only become apparent several years after the training (Hytti et al., 2010; Rauch and Hulsink, 2015). As a result, only a few studies can be replicated due to sample size problems, as only a small proportion of individuals start their own business after participating in an EET program. The generalizability of studies on entrepreneurial behavior is therefore limited (Fretschner & Weber, 2013).

The third dimension is entrepreneurial skills. Beyond typical entrepreneurial business skills, such as business planning or execution, entrepreneurial skills include education and managerial skills, social competence, problem-solving skills, and interpersonal skills. Recent studies have supported the impact of EET on enhancing participants' entrepreneurial skills (Elmuti et al., 2012; Premand et al., 2016). The fourth dimension was proposed by Jensen (2014), who introduced a holistic person perspective to examine the value of EET in a broader, whole-person interaction perspective. This dimension emphasizes that people learn through participation in social practices (action-based learning). Throughout these practices, which take place in social and cultural spheres, people's thoughts and actions interact with those of others. The impact of EET/SEET can therefore be assessed across time and space in a situated manner. Participants' knowledge and experiences, identities, and networks should be broadly and holistically assessed during the practice and interaction process. Reviews of these measurements have suggested that measuring the impact of EET/SEET programs at the cognitive level can facilitate meaningful discussions, as they do not necessarily lead to behavioral changes. Therefore, this study used measures of entrepreneurial intention (EI) and entrepreneurial skills (ES) to quantify the effectiveness of EET/SEET programs.

3.1. Impact assessment of this study

As social entrepreneurship is regarded as a viable measure to address

youth unemployment, it is important to assess the impact of EET/SEET programs on enhancing young participants' employability. Previous studies conducted across a few countries have demonstrated the effectiveness of SEET programs in improving young students' competitiveness in the job market. Rahim and Lajin's (2015) study in Malaysia showed that, by providing field experiences to young graduates through a SEET program, the graduates became more competitive in the job market, as the training improved their key transferable skills such as communication, problem-solving, and experience in tackling real-world issues. Similarly, Huq and Gilbert (2013) found that Australian students developed higher-order skills, such as team building, communication, and interpersonal skills, which are essential in the globally competitive business environment, after attending a social entrepreneurship course. The empirical studies on the effectiveness of EET/SEET programs in enhancing youth employability across the globe are still at the germination stage of accumulation. The results of this study will therefore add to this growing body of knowledge while contributing to local development.

This study proposes that the SEET program examined is a positive and promising way to enhance underprivileged young people's quality of life by improving both their entrepreneurial skills and intentions and increasing their psychological strengths, which are important attributes to help individuals persevere in difficult circumstances without losing confidence in the workplace. According to Judge and Bono (2001), self-esteem, generalized self-efficacy, locus of control, and emotional stability are positively correlated with one's job satisfaction and performance. More recent studies have also suggested that emotional intelligence is a significant predictor of job performance (Joseph et al., 2015). People with strong psychological traits are more likely to have high job performance and work experience satisfaction, making them strong and highly employable candidates for jobs.

To quantify psychological strengths, this study adopted four significant indicators commonly used in previous studies to comprehensively assess the participants: self-esteem, self-efficacy, flourishing, and resilience. Self-esteem can be broadly defined as a subjective belief related to personal worth (Erozkan et al., 2016; Hendricks et al., 2001). Self-esteem plays a vital role in an individual's mental health and predicts their quality of life and mental well-being (Mechanic et al., 1994). Individuals with a high level of self-esteem are likely to be happier, have more productive lives, and have a lower tendency to experience depression than those with lower levels of self-esteem (Baumeister et al., 2003; Erozkan et al., 2016). Self-efficacy is an individual's self-belief in their ability to perform certain tasks (Bandura, 1986). Recent studies, particularly those targeting young people, have shown that many EET programs have a positive impact on participants' self-efficacy (Gielnik et al., 2017; Huber et al., 2014; Maritz, 2017; Sánchez, 2013). Experiencing challenges may affect an individual's thoughts, feelings, and behaviors. People with high self-efficacy tend to prefer more challenging tasks, while those with low self-efficacy may suffer negative mental states, such as depression and anxiety (Rodebaugh, 2006; Urdan & Pajares, 2006). As the concept of self-efficacy is usually task-specific, this study measured career-related self-efficacy.

Flourishing refers to a positive state of mental health and is commonly used in the assessment of an individual's mental well-being. According to Keyes (2002), flourishing and mental illness are two different spectrums to assess a person's mental well-being. Mentally healthy individuals do not show symptoms of mental illness and also lead flourishing lives, as evidenced by their physical well-being, subjective happiness, and life satisfaction (Keyes, 2010). In relation to job performance, flourishing has been found to be a critical factor in predicting productivity. For instance, flourishing individuals show greater productivity and tend to report fewer missed days of work and work cutbacks than nonflourishing individuals (Keyes, 2007). Finally, resilience refers to an individual's ability to cope with stress and withstand depression and anxiety (Connor & Davidson, 2003). Individuals with high resilience can bounce back from stressful situations faster and more effectively than those with low resilience. It is important for individuals to develop resilience to effectively manage their job performance and job-related stress. These four mental qualities are essential for achieving emotional stability and maintaining a high overall level of job performance across different job conditions and work environments.

In constructing a theoretical framework for this study, resilience, which has been observed as a key factor influencing an individual's entrepreneurial behavior (Ayala & Manzano, 2014) and intention (Bullough & Renko, 2013), was used as an independent mediator in the relationship between psychological strengths and employability. Higher levels of self-worth and perceived ability to cope with adversity also influence individuals' career choices and intentions to start a business. "Psychological strengths" therefore also served as a mediator. Psychological strengths were measured through three elements: self-esteem, self-efficacy, and flourishing. The strong association among these three psychological strengths and resilience has been well documented in previous studies (Benight & Cieslak, 2011; Hamill, 2003; Karatas & Cakar, 2011; Schwarzer & Warner, 2013; Tuck & Anderson, 2014; Veselska et al., 2009). These three elements are therefore considered strong indicators of psychological strengths. Self-efficacy and resilience are also considered positive psychological capital that has a substantial impact on one's job performance and satisfaction (Abbas et al., 2014; Kwok et al., 2015; Rowold, 2007). In examining the relationships among the aforementioned variables, psychological strengths and resilience are expected to play a double mediating role in explaining the positive impact of social entrepreneurship programs on youth employability. This study proposed four hypotheses to assess the association between the measured variables (see Fig. 1):

H_1: Entrepreneurial intention and skills (EI&S) predict employability skills.
H_2: Psychological strengths mediate the effect of EI&S on employability skills.
H_3: Resilience mediates the effect of EI&S on employability skills.
H_4: Psychological strengths and resilience form a serial mediation model on the effect of EI&S on employability skills.

Starting a business or using a business to address social problems in society is a type of planned behavior. According to the theory of planned behavior developed by Ajzen (1991), people's motivation (i.e., their intention to perform a targeted behavior) and self-perceived ability (i.e., their perceived behavioral control in terms of time, money, skills, or cooperation with others to perform the behavior) work together to influence their behavioral achievement. This means that to assess the impact of an EET/SEET program on enhancing underprivileged young people's behavioral achievement in starting a business, it is important to measure the positive changes in their entrepreneurial intention and perceived behavioral control concerning their entrepreneurial skills. The higher their entrepreneurial motivation and perceived entrepreneurial competence, the greater their chances of starting a business. EI&S was therefore a key measure of this study.

When entrepreneurship and social entrepreneurship are treated as innovative and viable activities that contribute to economic development and youth unemployment, they ensure both self-employment and wage employment (Mittal & Raghuvaran, 2021). It is reasonable to assume that if an EET/SEET program can positively enhance young people's EI&S, their employability skills and ability to gain employment or establish their own enterprises are also improved. As the post-training effect on entrepreneurial behavior or venture creation may take years to be observed, this study hypothesizes that young people's EI&S predicts their employability to gain employment in general. In the existing literature, Tentama and Yusantri (2020) was the rare study which provided quantitative data demonstrating that entrepreneurial intention contributed 11.5 % to young students' employability. This relationship is therefore worth examining.

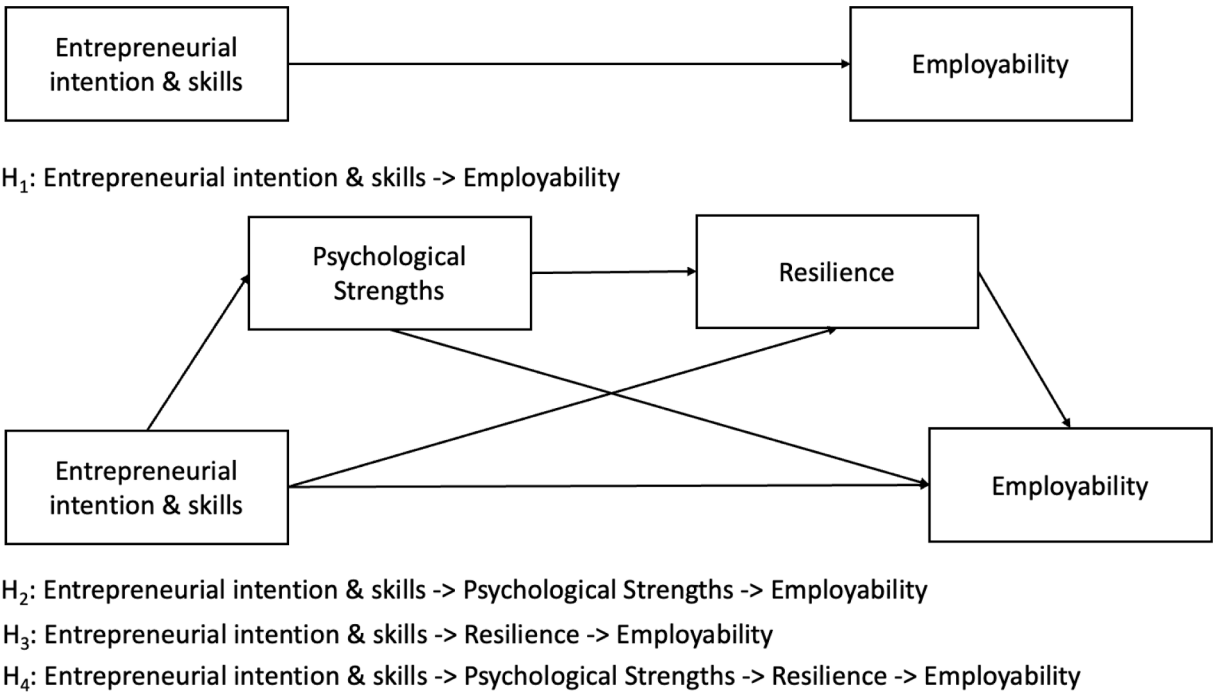

Fig. 1. Hypotheses illustrated by path diagrams.

4. Methodology

This empirical study was a built-in element of the entrepreneurship program described above. The data collection methods included quantitative questionnaires and qualitative individual and focus group interviews during different waves of the intervention. The purpose of the study was to examine the impact of the social entrepreneurship training provided on young people's career competencies and psychosocial development. At the time of writing, all four batches of participants had completed the 21-session social entrepreneurship training workshop, but only the first batch of participants had completed all three waves of training. Therefore, this paper presents the quantitative results from the baseline assessment (T_0) and post-training questionnaires (T_1) to evaluate the first wave of the 21-session entrepreneurship training. The questionnaires were reviewed and endorsed by the ethics committee of the university.

4.1. Participants

As empowering underprivileged youth was one of the objectives of this SEET program, most of the participants were recruited through social worker referrals from Band 3 secondary schools (secondary schools in Hong Kong are classified based on a three-band merit system, with Band 3 being the lowest among them). The remaining participants were recruited through outreach social workers. Most of the program participants were men (87 %). With low school motivation and satisfaction, the dropout rate from the training program was high at 23 %. This high dropout rate may influence the validity of the results, as completers may have had different inherent characteristics from those who dropped out. Among the 100 participants, only 77 pairs of responses from T_0 and T_1 were matched and included in the data analysis. Most of the participants included in the analysis were between 14 and 21 years old (88.3 %). They were either students (79.2 %) or unemployed (9.1 %) and had completed secondary school education (90.9 %; see Table 1).

Table 1
Demographic information of the participants.

Demographic Characteristic	Pre-TestT0 (n = 100)		Post TestT1 (n = 91)		T0 – T1 (matched)(n = 77)	
	Freq.	%	Freq.	%	Freq.	%
Gender						
Male	85	85.0 %	76	83.5 %	67	87.0 %
Female	15	15.0 %	14	15.4 %	10	13.0 %
Missing cases	0	0.0 %	1	1.1 %	0	0.0 %
Educational Level						
Primary or below	0	0.0 %	0	0.0 %	0	0.0 %
Secondary 1–3	19	19.0 %	14	15.4 %	15	19.5 %
Secondary 4–5	52	52.0 %	49	53.8 %	40	51.9 %
Secondary 6–7	21	21.0 %	15	16.5 %	15	19.5 %
Diploma or above	8	8.0 %	12	13.2 %	7	9.1 %
Missing cases	0	0.0 %	1	1.1 %	0	0.0 %
Age						
13 or below	1	1.0 %	2	2.2 %	1	1.3 %
14–17	59	59.0 %	52	57.1 %	47	61.0 %
18–21	30	30.0 %	24	26.4 %	21	27.3 %
22 or above	10	10.0 %	13	14.3 %	8	10.4 %
Current status						
Student	80	80.0 %	77	84.6 %	61	79.2 %
Employee	6	6.0 %	2	2.2 %	2	2.6 %
Vocational trainee	2	2.0 %	2	2.2 %	2	2.6 %
Unemployed	7	7.0 %	6	6.6 %	7	9.1 %
Missing cases	5	5.0 %	4	4.4 %	5	6.5 %
Monthly Family Income						
Social Security	7	7.0 %	5	5.5 %	4	5.2 %
US1282 and below	7	7.0 %	8	8.8 %	5	6.5 %
US1283 – US2564	22	22.0 %	19	20.9 %	16	20.8 %
US2565 – US6410	39	39.0 %	38	41.8 %	31	40.3 %
US6411 and above	8	8.0 %	6	6.6 %	6	7.8 %
Missing cases	17	17.0 %	15	16.5 %	15	19.5 %

4.2. Measures

To ensure the validity and reliability of the results, this study employed measures from the literature and computed Cronbach's alpha. All Cronbach's alpha values for the measures ranged from 0.74 to 0.97,

indicating that there was internal consistency across all measures. To help the participants understand the questionnaire, all of the items were translated into Chinese, their native language. A 6-point Likert scale was adopted to measure their level of agreement with each item, with a higher score indicating a higher level of agreement. The measures included in the study were as follows.

4.3. EI&S

This variable was used to measure the participants' intention to become entrepreneurs or to be self-employed. Krueger et al. (2000) found that an individual's entrepreneurial intention is the best predictor of their subsequent entrepreneurial behavior. An individual's entrepreneurial self-efficacy may influence their entrepreneurial intention and subsequent actions to start a business. Therefore, based on Co and Cooper (2014), this study employed a 20-item scale to measure the participants' entrepreneurial intention, entrepreneurial self-efficacy, and entrepreneurial skills. The participants were asked to rate their competence and capacity in response to statements such as "I will look for an opportunity to start my own business." Cronbach's alpha values for this scale at T_0 and T_1 were 0.95 and 0.96, respectively.

4.4. Employability skills

The 25-item scale developed by Naveed et al. (2014) was used to measure the participants' abilities and attributes that may contribute to their employment after the program. This scale included measures in six areas, including employment-related knowledge and skills, such as thinking, interpersonal, practical, communication, and management skills. The reliability results were 0.93 at T_0 and 0.97 at T_1.

4.5. Psychological strengths

This scale measured three elements: self-esteem, career-related self-efficacy, and flourishing. First, the self-esteem scale developed by Rosenberg (1986) was used to measure the participants' self-esteem. The scale consisted of 10 items with statements such as "I think I have many strengths" and "I always think that I am useless." The reliability results for this scale were 0.87 at T_0 and 0.84 at T_1. Career-related self-efficacy was measured using an eight-item scale extracted from the career oriented attitudes and employability of technology graduates framework developed by Jain and Jain (2013). The participants were asked to rate items that gauged their career-related attitudes, such as "I am capable of formulating my own action plans without the need to consult others." The reliability results for this scale were 0.84 at T_0 and 0.74 at T_1. The participants' flourishing was measured using the eight-item flourishing scale of Diener et al. (2010), which included items such as "I have a goal-driven and meaningful life." The reliability results were 0.86 at T_0 and 0.94 at T_1. Overall, the scale for psychological strengths had high reliability over the test waves, at 0.92 at T_0 and T_1.

4.6. Resilience

This study adopted the resilience scale developed by Wagnild and Young (1993) to measure the participants' ability to bounce back after facing adversity and experiencing stressful encounters. This 25-item scale included statements such as "I usually find the solution to problems" and "I can rely on myself instead of others." The reliability results for this scale at T_0 and T_1 were 0.91 and 0.94, respectively.

4.7. Data analysis

The data were analyzed using IBM SPSS Statistics version 26.0. First, Cronbach's alpha coefficients for each scale were computed to examine the reliability of the coefficients. A correlation matrix of all measured variables, including the control variables such as gender, age, and education level, was also used. Second, paired sample *t*-tests were used to compare the mean scores of each variable at T_0 and T_1 to examine the impact of the training. Finally, regression and mediation analyses on the measured variables were carried out to test the study hypotheses. To control for the impact of the workshop, the posttest data from the paired samples were used in the analysis. To assess the mediation model despite the limited sample size in this study, bootstrapping was used and computed by running PROCESS in SPSS.

5. Results

First, the zero-order correlation matrix showed that all dependent and independent variables were strongly correlated (see Table 2). All four variables were significantly correlated with their measurement at different time intervals (EI&S: $r = 0.42$, $p < .001$; psychological strengths: $r = 0.63$, $p < .001$; resilience: $r = 0.48$, $p < .001$; employability: $r = 0.51$, $p < .001$), indicating that within-subject consistency was high among the measures. For measurements taken across different time intervals, all bivariate correlations were statistically significant, except for the correlation between EI&S at T_0 and psychological strengths at T_1, which had marginal significance ($r = 0.22$, $p = .059$). The correlation results suggest that all of the measured variables were strongly correlated in the pretest and posttest.

To evaluate the effectiveness of the social entrepreneurship program, *t*-tests were performed to compare the participants' performance before and after the training (see Table 3). The results suggest that the program significantly enhanced the participants' performance across all of the measured variables, including EI&S, employability, psychological strengths, and resilience. EI&S saw the most significant enhancement ($t = -4.56$, $p < .001$), followed by resilience ($t = -3.41$, $p < .01$). These findings indicate that the SEET program was effective in increasing the professional and personal skills of disadvantaged young people.

In addition to assessing the impact of the social entrepreneurship program on its participants, this study investigated the association between the measured variables through a series of regression and mediation analyses. Using gender, age, and education level as control variables, a stepwise linear regression analysis was carried out to investigate the strength of each variable in predicting employability (see Table 4). The results showed that all of the independent variables were significant predictors of employability. There was an 83 % variation in employability that could be explained by the variables, indicating that higher levels of self-worth, life satisfaction, and sense of control when facing adversity positively predicted the participants' employability. This finding supports the assertion that EET/SEET programs should also include training to improve psychosocial strengths and personal development, in addition to providing entrepreneurial knowledge and skills training.

To test the four proposed hypotheses, structural equation modeling with a serial mediation model was performed to investigate the regression power between the variables (see Table 5). First, the total effect model demonstrated that EI&S had a significant effect on employability ($\beta = 0.75$, $t = 9.25$, $p < .001$). This indicates that the participants' cognitive understanding and knowledge of business planning and management could predict and enhance their perceived employability. The results therefore supported H_1 that EI&S is a significant predictor of employability (see Fig. 2).

After adding psychological strengths and resilience to the model, the results showed that the direct effect of EI&S on employability remained significant ($\beta = 0.39$, $t = 5.61$, $p < .001$). All of the regression paths of the double mediation model were significant (see Fig. 3).

The results of the mediation analysis showed that the indirect effect of EI&S on employability via psychological strengths was not significant, $b = 0.07$, 95 % CI [–0.02, 0.17]. However, the indirect effect of EI&S on employability via resilience was significant, $b = 0.09$, 95 % CI [0.02, 0.20]. Therefore, the results supported H_3 that resilience is a significant mediator of the effect of EI&S on employability, but not H_2

Table 2
correlation matrix between all measured variables.

Measures	1	2	3	4	5	6	7	8	9	10	11
1. Entrepreneurial intention & skills (T_0)	1										
2. Entrepreneurial intention & skills (T_1)	0.42***	1									
3. Psychological strengths (T_0)	0.50**	0.35**	1								
4. Psychological strengths (T_1)	0.22	0.61***	0.63***	1							
5. Resilience (T_0)	0.48***	0.32**	0.76***	0.49***	1						
6. Resilience (T_1)	0.23*	0.66***	0.41***	0.73***	0.48***	1					
7. Employability (T_0)	0.70***	0.46***	0.67***	0.37**	0.76***	0.41***	1				
8. Employability ((T_1)	0.31**	0.83***	0.46***	0.74***	0.44***	0.82***	0.51***	1			
9. Gender (0 = male)	0.97	-0.05	-0.06	0.01	-0.05	0.05	0.02	0.00	1		
10. Age	0.03	0.07	-0.01	-0.06	0.07	0.08	0.06	0.09	-0.14	1	
11. Education level	0.10	-0.20	0.04	-0.08	-0.01	-0.13	-0.07	-0.18	-0.08	0.03	1

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 3
T-test results of all measured variables (n = 77).

	Baseline (T_0)		Post-training (T_1)		
	M	SD	M	SD	t
1. Entrepreneurial intention & skills	3.88	0.81	4.34	0.82	−4.56***
2. Employability	4.26	0.59	4.42	0.64	−2.25*
3. Psychological strengths	4.10	0.64	4.27	0.58	−2.88**
4. Resilience	4.28	0.59	4.51	0.60	−3.41**

Note: *p <.05, **p <.01, ***p <.001.

that psychological strengths are a significant mediator of this relationship. This further indicated that resilience had a significant effect on perceived employability.

The last mediation analysis showed that the serial mediation effect of psychological strengths and resilience on the regression of EI&S on employability was significant, b = 0.10, 95 % CI [0.04, 0.20]. This supported H_4 that psychological strengths and resilience form a serial mediation model on the effect of EI&S on employability skills.

Finally, Cohen's *d* of each regression was computed, as the small sample size could be a limitation of the study (see Table 6). The results showed that most regressions had a large effect size ($d \geq 0.8$). Only the regression of psychological strengths on employability had a small effect size ($d = 0.37$), and the regression of EI&S on resilience had a medium effect size ($d = 0.56$).

6. Discussion and conclusion

This study assessed the impact of a social entrepreneurship program in Hong Kong on the employability of its young participants and

Table 4
Linear regression models predicting employability.

	Employability							
	Model 1		Model 2		Model 3		Model 4	
	b (se)	B	b (se)	B	b (se)	B	b (se)	B
Gender (0 = male)	−0.04 (0.22)	−0.02	0.09 (0.15)	0.05	0.11 (0.12)	0.06	0.08 (0.10)	0.04
Age	0.03 (0.03)	0.11	0.02 (0.02)	0.07	0.02 (0.02)	0.07	0.02 (0.02)	0.08
Education level	−0.10 (0.07)	−0.17	−0.03 (0.05)	−0.05	−0.04 (0.04)	−0.06	−0.02	0.03
Entrepreneurial intention & skills			0.57 (0.06) ***	0.75	0.39 (0.06)***	0.52	0.30 (0.05)***	0.39
Psychological strengths					0.47 (0.08)***	0.44	0.19 (0.09)*	0.18
Resilience							0.48 (0.09)***	0.45
Constant	4.31 (0.64) ***		1.63 (0.52)**		0.13 (0.50)		−0.33 (0.41)	
R^2	0.03		0.58		0.71		0.80	
N	71		71		71		71	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, # $p \sim 0.05$.

Table 5
Path Coefficients and indirect effects for mediation models (n = 71).

	Path Coefficients ToEmployability	ToPsychological Strengths	ToResilience	Indirect Effects Estimate	95 % Confidence Interval
Controlled variables					
Gender	0.08 (0.10) [0.04]	−0.04 (0.18) [−0.02]	0.07 (0.14) [0.04]		
Age	0.02 (0.02) [0.07]	0.02 (0.06) [0.04]	0.03 (0.02) [0.13]		
Education level	−0.03 (0.03) [−0.05]	−0.04 (0.03) [−0.15]	−0.02 (0.05) [−0.04]		
Independent variables					
EI&S	0.30 (0.05) [0.39]***	0.38 (0.08) [0.53]	0.20 (0.07) [0.27]**		
PsyStr	0.19 (0.09) [0.18]*		0.58 (0.10) [0.58]***		
Resil	0.48 (0.09) [0.45]***				
Total				0.27 (0.06)	0.16, 0.40
EI&S -> PsyStr -> Emp				0.07 (0.05)	−0.02, 0.17
EI&S -> Resil -> Emp				0.09 (0.05)	0.02, 0.20
EI&S -> PsyStr -> Resil -> Emp				0.10 (0.04)	0.04, 0.20

Note: unstandardised coefficients are presented. Standard errors are presented in parentheses. Standardised Beta are shown in square brackets. EI&S: Entrepreneurial intention & skills, PsyStr: Psychological strengths, Resil: Resilience, Emp: Employability.

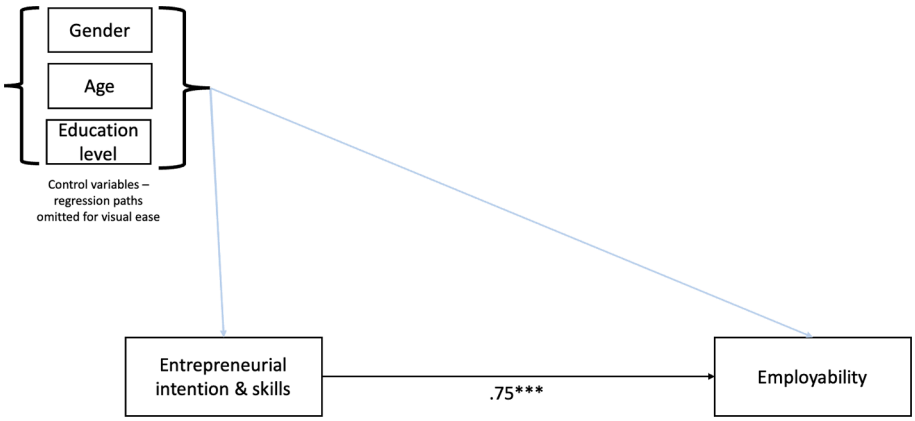

Fig. 2. Total effect model.

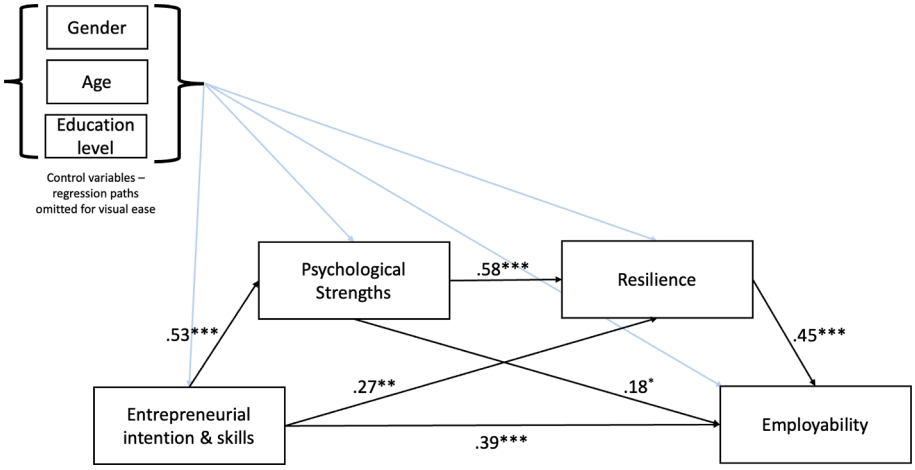

Fig. 3. Double mediation model with control variables. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 6
Cohen's d of regressions.

Regressions	Effect size (Cohen's D)
EI&S -> Emp	0.85
PsyStr -> Emp	0.37
Resil -> Emp	1.01
EI&S -> Resil	0.56
PsyStr -> Resil	1.43
EI&S -> PsyStr	1.26

Note: EI&S: Entrepreneurial intention & skills, PsyStr: Psychological strengths, Resil: Resilience, Emp: Employability.

explored the importance of their psychological growth in the process. The study used quantitative data to support the effectiveness of social entrepreneurship programs in promoting young people's EI&S, a finding that is consistent with previous studies (Elmuti et al., 2012; Farashah, 2013; Hamzah et al., 2016; Premand et al., 2016; Rauch & Hulsink, 2015; Rideout & Gray, 2013; Zhang et al., 2014). In addition, this study showed that social entrepreneurship programs can significantly improve participants' employability and facilitate psychological growth in self-esteem, career-related self-efficacy, flourishing, and resilience. The results indicate that entrepreneurship programs, especially those that highlight social values than economic impact, should be promoted to address the challenges of youth unemployment against the backdrop of the globalized labor market.

Entrepreneurship is growing in importance globally as a method of providing career skills training to the younger generation. In Hong Kong, more social and educational institutions have launched EET/SEET programs to train young people to become entrepreneurs. However, many programs are still provided only as extracurricular activities and do not receive adequate attention from students amid their regular school workloads. To realize the potential of EET/SEET to facilitate participants' psychological growth and employability, systematic and comprehensive programs should be incorporated into students' regular school curricula to promote youth employment and entrepreneurship. This will allow students to progressively acquire entrepreneurial skills and knowledge throughout their school years, contributing to their all-round personal and professional development and psychological growth. Although existing entrepreneurship programs are mainly offered as innovative vocational training to higher education students in Hong Kong, this study demonstrates the potential of introducing EET/SEET programs for students at an earlier stage, as the quantitative results showed that the participants at the secondary education level showed significant improvements in the variables measured after joining the program. School-based EET/SEET programs could be an effective way to introduce and sustain entrepreneurship among the younger generation and ensure that they are globally competitive in the labor market.

This study also assessed the relationship between entrepreneurship and psychological strengths. The quantitative data supported the positive relationship between EI&S and employability, confirming the findings of Huq and Gilbert (2013) and Rahim and Lajin (2015). The critical skills and experience gained through the program increased the participants' perceived competitiveness in the labor market. This study provides empirical evidence that psychological strengths are a significant mediator in the relationship between improved EI&S and increased

perceived employability. The participants gained entrepreneurial knowledge and skills from the program and were thus more likely to feel positive and confident about themselves, as indicated by their significant improvement in psychological strengths (i.e., self-esteem, career-related self-efficacy, and flourishing) after the program. Employers value these psychological strengths in job applicants because these strengths are significant predictors of job performance. Furthermore, this study showed the importance of resilience in influencing youth employability. By adding resilience as an independent mediator to the analysis, the results showed that resilience further explained the relationship between psychological strengths and employability. Individuals with positive emotional states, such as high self-esteem, high career-related self-efficacy, and a sense of flourishing, tend to better maintain their emotional stability when faced with challenges or failures. The ability to bounce back from failures makes individuals desirable employees and strong job candidates. These findings suggest that psychological development is crucial for young people's all-round personal and professional development and their competitiveness in the labor market.

Compared with the hypothesized double mediation model, the resulting model demonstrated that the indirect effect of EI&S on employability via psychological strengths was not statistically significant, while the indirect effect of serial mediation remained significant. These findings suggest that psychological strengths alone cannot explain the relationship between EI&S and employability. Instead, psychological strengths have stronger explanatory power when combined with resilience. As resilience is defined as one's ability to bounce back from failures and cope with negative emotions and situations, it is logical that young people with positive psychological strengths are more likely to develop stronger attitudes and abilities that allow them to overcome challenges and failures, leading to a higher level of resilience. Furthermore, as this SEET program incorporated social values into the training and placed more emphasis on spurring social change than other EET programs, the program worked to enhance the participants' psychological strengths, thus aiding in their development of resilience. As the indirect effect of EI&S on employability via psychological strengths was not statistically significant, it may imply that resilience plays a crucial role by facilitating the mediating effect of psychological strengths as a double mediation model. Therefore, improving psychological strengths and resilience among adolescents should be the focus when designing future social entrepreneurship programs to ensure the effective promotion of their employability and all-round development.

To further enhance the impact of EET/SEET programs on young people's psychological strengths and resilience, existing intervention approaches should be considered and incorporated into training. Positive psychology is an established approach with empirical evidence supporting its efficacy in promoting positive emotions, resilience, and positive character strengths in school and work (Meyers et al., 2013; Turner et al., 2002; Waters, 2011). Positive psychology can help participants build both positive emotions and their level of resilience. Moreover, this study underscores the importance of resilience and shows that specific training on resilience should be incorporated into future entrepreneurship programs. Resilience has been found to be an important factor in allowing individuals to deal with adversity and life challenges (Masten & Reed, 2002) and to be positively correlated with desirable employee behaviors, attitudes, and performance at work (Luthans et al., 2010). According to Robertson et al. (2015), work-based resilience training has been used since the 2000 s to maintain employees' well-being and performance. The cognitive-behavioral approach, which was commonly employed in the previous decade, could facilitate the integration of resilience training into entrepreneurship programs. Alternatively, mindfulness-based resilience training is an effective model supported by recent studies (Joyce et al., 2018; Lebares et al., 2018). Combining psychological training with entrepreneurship training would help participants achieve better all-round development while equipping them with the skills needed to participate in the global labor market.

In conclusion, this study is among the first to explore the potential of EET/SEET training to facilitate the psychological development of young participants. The study provides empirical evidence that the impact of entrepreneurship training programs extends beyond individuals' relationship-related qualities and affects their psychological development by promoting their self-esteem, career-related self-efficacy, flourishing, and resilience. Improvements in these factors were found to contribute to greater perceived employability among the participants. This study also illustrated the mediating effect of psychological strengths and resilience on the relationship between EI&S and employability. Acknowledging the importance of psychological strengths and resilience, this study suggests that future entrepreneurship programs should include relevant psychological training to further enhance the employability and all-round development of young participants.

6.1. Limitations

This study has several limitations that should be considered in future research. First, the data were collected from self-reported questionnaires completed by the program participants, resulting in potential biases and validity problems. A multiple informant method involving participants' parents and teachers could offer better results in future similar studies.

Second, the posttest results were obtained shortly after the entrepreneurship training program was conducted. Data analysis therefore only captured the immediate effect of the program. A longitudinal study of longer duration could be conducted to investigate the sustained effect of the measured variables, as future data gathered may facilitate a broader discussion of the impacts of the training.

Finally, the sample for this study may have created limitations. The participants' homogeneity (i.e., disadvantaged youth, mid-teen age, and majority male) restricted the scope of the study to some extent and should be further investigated in future research. Participants from diverse backgrounds were recruited to increase the representativeness of the results, but their credibility could be limited by the small sample size. Although this study reduced the impact of its limited sample size on the results through statistical methods, such as bootstrapping, future studies should consider examining a large-scale training program, which may be able to offer data with a larger sample size. In addition, studying a younger population could provide avenues for future research, as there are growing numbers of young and successful entrepreneurs worldwide. It would therefore also be useful to study the impact of entrepreneurship training across different age groups.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data that has been used is confidential.

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