

## RESEARCH ARTICLE

# Empowering the helping hands: A positive psychological intervention for enhancing work engagement and reducing stress among preschool social workers in Hong Kong

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## Abstract

This study explores the efficacy of the Early Advancement in Social-Emotional Health and Positivity (EASP) programme, designed to enhance personal resources, namely self-compassion and positivity among preschool social workers, to reduce stress and bolster work engagement. A total of 84 preschool social workers ( $M_{age} = 32.47$  years,  $SD = 6.86$ , range = 22–55; female = 90.48%) participated in a 5-week randomized control trial. Participants were randomly allocated to either the intervention group ( $n = 38$ ), which received four online workshops and an online activity, or the wait-list control group ( $n = 46$ ), which received the intervention post-data collection. Self-compassion, positivity, work engagement, and work stress were measured before and after the intervention. Results from a path analytic model indicated excellent fit with the data,  $\chi^2 = 2.08$ ,  $df = 3$ , Comparative Fit Index = 1.00, Tucker-Lewis Index = 1.00, Root Mean Square Error of Approximation = 0.00 (90% CI = 0.00–0.16), SRMR = 0.03. The intervention demonstrated direct effects on changes in self-compassion ( $\beta = 0.21$ ,  $p = 0.04$ ) and positivity ( $\beta = 0.28$ ,  $p = 0.03$ ), with indirect effects on work engagement ( $\beta = 0.13$ ,  $p = 0.02$ ), while no significant impact was observed on work stress ( $\beta = -0.09$ ,  $p = 0.06$ ). These findings underscore the efficacy of positive psychological interventions in fostering work engagement among social workers. Incorporating the EASP programme into ongoing professional development activities is recommended to enhance the job engagement and psychological well-being of social workers in early childhood education and care sectors.

## KEYWORDS

kindergarten, randomized control trial, self-compassion, stress, well-being, work engagement

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## 1 | INTRODUCTION

In Hong Kong, China, preschool social workers shoulder a multitude of responsibilities, ranging from early identification of children and families in need to delivering tailored casework support and referral services (Ho & Chan, 2022). Their work duties also extend to teaching children to comprehend and regulate emotions, nurturing their social skills, fostering these young individuals' healthy development, and providing counselling services (Maple et al., 2019). Moreover, they offer emotional support and positive parenting skills to cultivate positive parent-child relationships, impart holistic well-being to their children, and bolster family harmony. These dedicated professionals also serve as liaisons between pre-primary institutions and community resources, facilitating access to vital services for children and their families (Ho & Chan, 2022). However, the demanding nature of their job, compounded by factors such as secondary traumatic stress, places preschool social workers at a heightened risk of experiencing burnout, stress, and depression (Maddock, 2024; Tesi et al., 2019). The strenuous working environment and job demands significantly contribute to the high turnover rates among social workers, disrupting continuity of care and potentially jeopardising the well-being of children (Maddock, 2024). Yet, there has been very little investigation and evidence regarding interventions designed to promote social workers' well-being and reduce stress. Hence, the present study aimed to examine the effectiveness of the Early Advancement in Social-Emotional Health and Positivity (EASP) programme—a positive psychological intervention to enhance the well-being and motivational aspects of social service professional competence among preschool social workers in Hong Kong.

### 1.1 | EASP program

The EASP programme, a positive psychological intervention, has been tailored to promote well-being across various demographics in early childhood education settings, including pre-service preschool teachers (Datu et al., 2023; Lee, Datu, et al., 2023), in-service preschool teachers (Datu et al., 2022; Lee, Fung, et al., 2024), international preschool teachers (Lee, Fung, et al., 2023), and parents of young children (Lee, Datu, et al., 2024). Its overarching aim is to enhance children's development by supporting the well-being of their caregivers. Central to the programme is a series of four online workshops delivering diverse positive psychological skills, such as self-compassion (Neff, 2023), positive reappraisal (Riepenhausen et al., 2022), and growth mindset (Yeager et al., 2019). Empirical evidence supports the effectiveness of the EASP programme in fostering well-being and enhancing positive psychological skills (Datu et al., 2023; Lee et al., 2024a, 2024b). For example, the EASP intervention programme was effective in promoting the parents' positive psychological skills and subjective and psychological well-being (Lee, Datu, et al., 2024). Similarly, in Lee, Fung, et al. (2024)'s study, in-service preschool teachers exhibited significant improvements in

well-being and professional competence following the EASP intervention compared to their counterparts in the control group. The present study extends the application of the EASP intervention programme to preschool social workers in Hong Kong. To cater to the needs of social workers' work engagement, psychological well-being and work-related stress, the current EASP intervention was developed based on the renowned Job Demands-Resources (JD-R) theory (Bakker et al., 2023).

### 1.2 | JD-R theory

The JD-R theory is a theoretical framework that helps understand the intricate dynamics between job characteristics, employee well-being, and work outcomes (Bakker et al., 2023). The JD-R theory has been applied in various occupational settings, illustrating its versatility and applicability across different work environments (Bakker & Demerouti, 2017; Bakker et al., 2023), including social workers (Tesi et al., 2019). Central to the JD-R theory is that all types of job characteristics can be classified into one of two categories: job demands and job resources, which instigate the two distinct yet interrelated processes, namely a health impairment process and a motivational process (Bakker & Demerouti, 2017). In particular, job demands, encompassing factors such as workload, work-family conflict, and job insecurity, emerge as pivotal predictors of outcomes such as exhaustion, psychosomatic health complaints, and repetitive strain injury. Conversely, job resources, including elements like role clarity, social support, performance feedback, and autonomy, emerge as critical predictors of work enjoyment, motivation, and work engagement, which, in turn, predict organizational commitment (Bakker & Demerouti, 2017). Moreover, the JD-R theory explains how job demands, resources, and their interplay influence stress-related presenteeism and subsequent psychological well-being. Notably, it highlights the role of job resources in buffering the negative effects of job demands on workers' well-being (Bakker et al., 2023). These effects have significant implications, particularly in high-demand work environments, where resources play a pivotal role in bolstering employee motivation and sustaining well-being (Bakker et al., 2023). Another fundamental tenet of the JD-R theory posits that personal resources, such as mindfulness (Grover et al., 2017), self-compassion (Lee, Lee, et al., 2022), Lee, Sun, & Chung, 2022 character strength use (Bakker & van Wingerden, 2021), and positivity (Knight et al., 2019) can exert a similar influence to job resources in explaining stress and work engagement (Xanthopoulou et al., 2007). This proposition is grounded in the idea that positive personal resources can significantly impact an individual's perceptions of the work environment and their resilience to handle workplace adversity (Xanthopoulou et al., 2007). Drawing upon this proposition from the JD-R theory (Bakker & Demerouti, 2017; Xanthopoulou et al., 2007) and empirical evidence (Bakker & van Wingerden, 2021; Grover et al., 2017; Knight et al., 2019; Lee, Lee, et al., 2022), the present study endeavours to cultivate social workers' personal resources, including self-compassion and

positivity, to enhance their work engagement and alleviate work-related stress.

### 1.3 | Personal resources

The two personal resources, self-compassion, and positivity were specifically targeted due to their robust predictive power for enhancing work engagement and mitigating work-related stress within the framework of the JD-R theory (Knight et al., 2019; Lee, et al., 2022; Zessin et al., 2015). Self-compassion, defined as the practice of treating oneself with kindness, understanding, and empathy, particularly during moments of difficulty, failure, or suffering (Neff, 2023), comprises three interconnected elements: self-kindness versus self-judgement, sense of common humanity versus isolation, and mindfulness versus over-identification. A meta-analysis on self-compassion demonstrated clear evidence of its causal relation to individuals' well-being (Zessin et al., 2015). In alignment with the JD-R theory, Lee, et al. (2022) also found that self-compassion mediated the effects of academic demands on engagement among university students. Similarly, Kotera et al. (2020) found that self-compassion showed the strongest association with mental health compared to other positive psychological constructs (e.g., motivation) among UK social work students. Positivity refers to positive emotions and mindsets (Watson et al., 1988). Its enhancement can be facilitated through the adoption of positive psychological skills such as positive reappraisal (Riepenhausen et al., 2022), growth mindset (Yeager et al., 2019), and character strength use (e.g., gratitude and hope; Bakker & van Wingerden, 2021). Positivity has been positively associated with higher work engagement and lower work-related stress (Tenney et al., 2016), in line with the broaden-and-build theory (Fredrickson, 2001; Lee, Sun, & Chung, 2022; Wolfer et al., 2022). According to this theory, positive emotions foster a broadened scope of attention, cognition, and action, allowing individuals to fully invest in their work roles and expand their repertoire of potential behaviours and strategies (Fredrickson, 2001; Knight et al., 2019). Recent research (Wolfer et al., 2022) also emphasises that positivity among social workers enhances their capacity to build intellectual, social, and physical resources, promoting resilience and effective coping in the workplace.

### 1.4 | The present study

The aim of the present study is to assess the efficacy of a positive psychological intervention in enhancing personal resources, namely self-compassion and positivity among preschool social workers, with the subsequent goals of boosting work engagement and reducing work-related stress. Drawing upon insights from the positive psychological intervention literature (Bolier et al., 2013; Hendriks et al., 2020; Koydemir et al., 2021) and previous EASP interventions (Datu et al., 2023; Lee et al., 2024a, 2024b), we hypothesised that the

intervention would yield positive and significant effects on the changes of self-compassion and positivity among the participants in intervention group. Secondly, grounded on the support of JD-R theory (Bakker et al., 2014, 2023; Knight et al., 2019), we anticipated that the changes in self-compassion and positivity could positively influence work engagement, while concurrently reducing work-related stress.

## 2 | METHOD

### 2.1 | Participants

Ethical approval was obtained from the Human Research Ethics Committee in the last author's institution [approval number = 2019-2020-0407]. Registered social workers working in local preschool settings in Hong Kong are eligible to join the present research. Recruitments were conducted via social media advertisements, such as Facebook and Instagram. A prior power analysis based on the repeated measures multivariate analysis of variance (MANOVA) was conducted using G\*Power (Faul et al., 2007). With a desired power level of 80%, an alpha level of 0.05, and a medium-to-large effect size of 0.33 (Lee, Datu, et al., 2024), the analysis indicated that a minimum sample size of 75 participants was required. Accounting for an attrition rate of 10%, it was determined that a minimum of 82 participants needed to be recruited for the study. Finally, 84 preschool social workers ( $M_{age} = 32.47$  years,  $SD = 6.86$ , range = 22–55; female = 90.48%) signed the informed consent form and agreed to participate in the present study. On average, the participants had 24 ( $SD = 29.31$ ) months of social worker experience. The majority of the participants have bachelor's ( $n = 37$ ; 44.05%) and master's ( $n = 37$ ; 44.05%) degrees.

### 2.2 | Procedure

The present research was a 5-week randomized controlled trial with two waves of data collection, baseline and post-test. All participants were invited to complete the baseline questionnaire prior to randomisation and one week before the start of the intervention. A research assistant conducted the randomisation via computer ballot, allocating participants into an intervention group ( $n = 38$ ) and a waitlist control group ( $n = 46$ ). The intervention group then received four online workshops over six weeks. During the fourth week, participants in the intervention group were encouraged to engage in an online activity to consolidate their knowledge and skills in positive psychology. The intervention group was invited to complete the post-test questionnaire after the fourth online workshop. The waitlist control group would only receive the four online workshops after completing the data collection. Participants who provided complete data and attended all workshops received a supermarket coupon worth HKD 100 (approximately USD 13) and a certificate of

attendance as compensation for their participation in the study. To improve participants' engagement in the intervention, a research assistant maintained close contact with the participants. Reminders about the workshops were sent out one day before each session. Additionally, participants received reminders about the online activities and questionnaire completion. Figure 1 presents the intervention flow.

## 2.3 | Measures

### 2.3.1 | Self-compassion

We adopted the 12-item self-compassion scale short form (SCS-SF; Raes et al., 2011) to measure the participants' self-compassion. The scale consisted of six subscales, including self-kindness (2 items; e.g., 'I try to be understanding and patient towards those aspects of my personality I don't like'), self-judgement (2 items; e.g., 'I'm disapproving and judgemental about my own flaws and inadequacies'), common humanity (2 items; e.g., 'I try to see my failings as part of the human condition'), isolation (2 items; e.g., 'When I fail at something that's important to me, I tend to feel alone in my failure'), mindfulness (2 items; e.g., 'When something upsets me I try to keep my emotions in balance') and over-identification (2 items; e.g., 'When I'm feeling down I tend to obsess and fixate on everything that's wrong').

Participants rated the items using a five-point Likert scale (1 = *Almost never*; 5 = *Almost always*). Items were reverse scored in self-judgement, isolation, and over-identification. It was recommended to calculate the total mean score of the subscales to represent participants' self-compassion (Neff et al., 2019). The SCS-SF has been adopted in local research and demonstrated adequate reliability (i.e.,  $\alpha = 0.85$ ; Chan et al., 2022). In the present study, the Cronbach's alpha coefficients of SCS-SF at baseline and post-test were 0.69 and 0.83, respectively. The ICC of the scales between the two time points was 0.67.

### 2.3.2 | Positivity

The 10-item positive affect subscales from the Positive and Negative Affect Schedule (Watson et al., 1988) were adopted to assess participants' positivity. Participants were requested to rate the degree to which they experienced specific positive feelings (e.g., 'Attentive' or 'Active') during the previous week using a five-point scale (1 = *Not at all*; 5 = *Extremely*). The scale demonstrated satisfactory reliability in previous research conducted in Hong Kong (i.e.,  $\alpha = 0.86$ ; Lee, Datu, et al., 2024). In the present study, the internal consistencies of the scale at baseline ( $\alpha = 0.87$ ) and post-test ( $\alpha = 0.90$ ) were satisfactory. The scale showed fair test-retest reliability (ICC = 0.49).

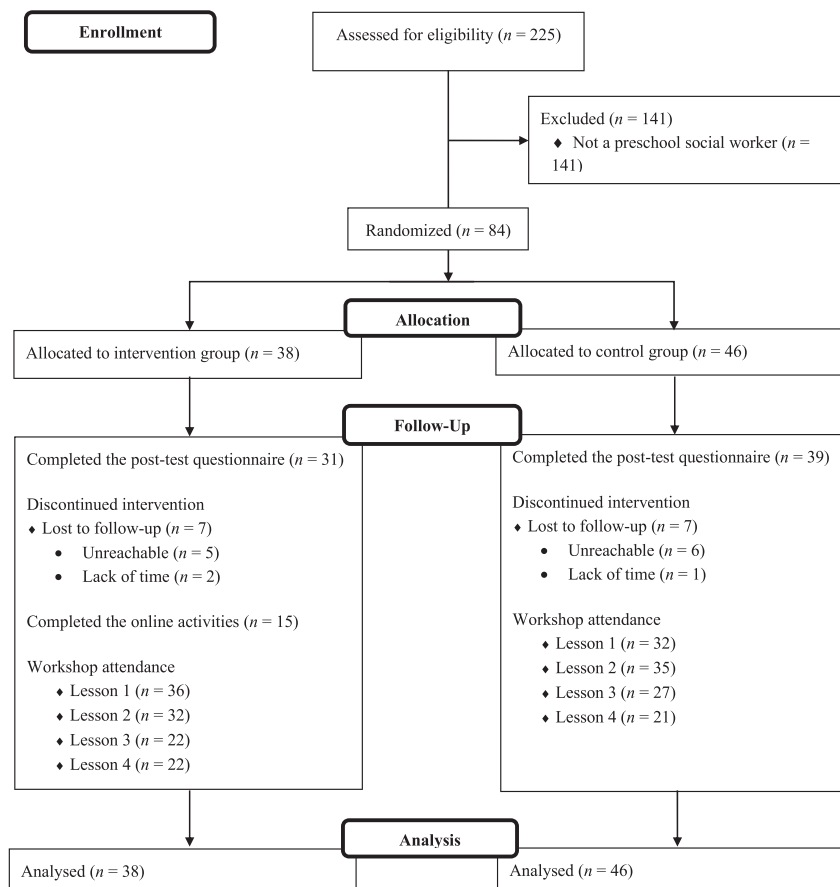


FIGURE 1 Consort flow diagram.

### 2.3.3 | Work engagement

Participants' work engagement was measured using the 9-item Utrecht Work Engagement Scale (Schaufeli et al., 2006). The scale comprises three subscales, specifically vigour (3 items; e.g., 'At my work, I feel bursting with energy'), dedication (3 items; e.g., 'My job inspires me') and absorption (3 items; e.g., 'I am immersed in my work'). Items were rated on a seven-point scale ranging from 1 (*Never*) to 7 (*Always*). The Chinese version of the scale showed satisfactory reliability (i.e.,  $\alpha = 0.87$ ) in previous studies (Lee, Fung, et al., 2022). In this study, the subscales showed acceptable reliability at baseline ( $\alpha = 0.89$ ) and post-test ( $\alpha = 0.90$ ). The ICC of the scale between the two points was 0.58.

### 2.3.4 | Work stress

We measured participants' work stress using the adapted version of the 16-item Teacher Stress Inventory (Jin et al., 2008). The inventory consisted of three subscales, including work-related stressors (6 items; e.g., 'I have too much work to do'), professional investment (4 items; e.g., 'I lack opportunities for professional improvement'), and discipline and motivation (6 items; e.g., 'I feel frustrated when my authority is rejected by pupils/administration'). Participants rated the items using a five-point Likert scale (1 = *Not stressful*; 5 = *Highly stressful*). In the present study, the Cronbach's alpha coefficients of the scale at baseline and post-test were 0.84 and 0.88, respectively. The ICC of the scales between the two time points was 0.55.

## 2.4 | Intervention materials

The intervention comprised two key components: four 2.5-h online workshops and a mid-week online activity. The workshops served as the cornerstone of the intervention, while the mid-week activity was designed to reinforce concepts and prepare participants for subsequent lessons. Developed by the research team, the intervention materials were grounded in positive psychological theories such as self-compassion, positive reappraisal, and hope theory, as well as insights from previous EASP intervention programs (Datu et al., 2022, 2023; Lee et al., 2024a, 2024b).

The delivery of the four online workshops was overseen by an educational psychologist with prior experience in implementing the EASP program (Datu et al., 2022; Lee et al., 2023c, 2024a), Lee, Fung, et al., 2024 aimed at enhancing participants' personal resources, particularly in self-compassion and positivity. The workshops were conducted in a single-group format. Specifically, Lesson 1 and four introduced and elaborated on the conceptualisation of self-compassion, encompassing its three core components: self-kindness, common humanity, and mindfulness (Neff, 2023). Subsequently, Lesson 2 and 3 focused on fostering positivity through various positive psychological theories and skills, including growth mindset (Yeager et al., 2019), positive reappraisal (Riepenhausen

et al., 2022), gratitude (Forster et al., 2022) and hope theory (Snyder, 1994). The structure of each workshop was predominantly centred around psychoeducation, which constituted approximately 70% of the session time. This portion included the introduction of theories (e.g., mindfulness-to-meaning theory) and models (e.g., a theoretical model of self-compassion). The remaining 30% of the time was dedicated to interactive activities, such as practicing mindfulness, engaging in self-reflection on hypothetical scenarios, and other experiential exercises.

On the other hand, the mid-week online activity comprised seven multiple-choice questions, three open-ended short questions, and a gratitude diary, all aligned with the workshop content. For instance, sample questions included 'Which of the following is an example of practicing self-compassion?' and 'How might you incorporate self-compassion into your daily routine? Please provide one to two examples to illustrate'. The gratitude diary served to encourage participants to engage in regular gratitude practices. Further details regarding the intervention materials are provided in Table 1.

We have adopted four strategies to measure intervention fidelity. Firstly, the research team, comprising experts from early childhood education, positive psychology, positive education, and the workshop coordinator, reviewed all intervention materials to ensure alignment with our theories and objectives. Second, one member of the research team attended all online workshops to provide technical support and ensure adherence to the intervention plan. Thirdly, two independent research assistants were invited to review the four online workshops and complete a 51-item fidelity checklist. This checklist included items such as 'The purpose of the activities related to self-compassion is clear' and 'The workshop coordinator explained positive reappraisal clearly', which were rated on a five-point scale (1 = *Strongly disagree*; 5 = *Strongly agree*). On average, the checklist scored 4.11 ( $SD = 0.69$ ) out of 5, indicating clear delivery of intervention materials. Lastly, participants were invited to complete a 13-item satisfaction survey after the intervention programme. Participants rated the items (e.g., 'The workshop is beneficial for my professional development' and 'In general, I am satisfied with the workshop arrangement') on a four-point Likert scale (1 = *Strongly disagree*; 4 = *Strongly agree*). The survey results indicated that participants, on average, rated their satisfaction with the intervention as 3.17 ( $SD = 0.44$ ) out of 4, suggesting overall contentment with the programme.

## 2.5 | Data analysis

Statistical Analyses were performed using SPSS version 26.0 (IBM Corp, 2019) and Mplus version 7.4 (Muthén & Muthén, 2017). Preliminary analyses involved calculating means, standard deviations, bivariate correlations, skewness, kurtosis, and reliability coefficients. Subsequently, primary analyses were conducted using structural equation modelling to examine the intervention effects. Drop-out analysis, which examined if there were any significant differences in demographic information (i.e., gender, age, and social work experience) and study variables (i.e., self-compassion, positivity, work

TABLE 1 Intervention materials.

Components	Online workshops	Online activities
Self-compassion	Lesson 1- Introduction of self-compassion (1. Mindfulness, 2. Self-kindness, and 3. connectedness) Lesson 1- Explain the benefits of practicing self-compassion Lesson 1- Activities (1. Practicing mindfulness, 2. Engaging in self-reflection on the importance of various aspects of life, 3. Practicing self-kindness and acknowledging imperfections in life, and 4. Developing self-compassion routine) Lesson 4- Introduction of the mindfulness-to-meaning theory and broaden-and-build theory of positive emotions Lesson 4- Activities (1. Developing self-compassion routine, 2. Practicing self-appreciation, and 3. Self-reflecting on hypothetical scenarios)	MC- self-compassion SC- self-compassion
Positivity	Lesson 2- Introduction of growth mindset Lesson 2- Activities (1. Identifying growth and fixed mindset, 2. Self-reflecting on hypothetical scenarios, and 3. Practicing growth mindset) Lesson 2- Introduction of sustainable happiness model <sup>a</sup> Lesson 2- Introduction of three types of happiness: Pleasant life, engaged life and meaningful life Lesson 2- Introduction of relaxation breathing techniques Lesson 3- Introduction of positive reappraisal Lesson 3- Activities (1. Self-reflecting on hypothetical scenarios, 2. Completing a questionnaire about coping strategies, and 3. Practicing gratitude). Lesson 3- Introduction of hope theory and gratitude Lesson 3- Explain the importance of being grateful Lesson 3- Introduction of gratitude diary	MC- growth mindset MC- hope theory MC- gratitude MC- relaxation breathing techniques MC- positive reappraisal SC- Identification of personal core value Gratitude diary

Abbreviations: MCQ, multiple choice question; SQ, short question.

<sup>a</sup>(Sheldon & Lyubomirsky, 2021).

engagement, and work stress) between the participants who completed ( $n = 68$ ) and those without completing ( $n = 14$ ) the post-test survey, were conducted using independent sample *t*-tests.

To examine the direct and indirect effects of the intervention, we employed path analysis to test the proposed model, controlling for participants' gender, which has been consistently reported to influence JD-R model variables (Ghislieri et al., 2017; Huang et al., 2019; Xie et al., 2021). The intervention conditions were represented by a dummy-coded variable (0 = control, 1 = intervention), which predicted the change scores of self-compassion and positivity directly and work engagement and work stress indirectly. Standardized residual change scores were computed by regressing the post-test scores on the baseline scores for each variable (Castro-Schilo & Grimm, 2018; Lee et al., 2021, 2024b). This method of calculating standardized residual change scores has demonstrated increased statistical power compared to simple difference scores in randomized studies (Castro-Schilo & Grimm, 2018). In the present study, we evaluated the model fit using established fit indices and adhered to their recommended cut-off criteria as proposed by Hu and Bentler (1999). The fit indices employed were the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). For the models to be deemed as demonstrating acceptable goodness-of-fit with the data, we considered CFI and TLI values approaching or surpassing 0.90, while RMSEA and SRMR values were expected to be below 0.08 (Hu & Bentler, 1999).

In our original proposal, we proposed using MANOVA to analyse the intervention effects; therefore, our sample size calculation was

based on MANOVA. Yet, in the later stage, path analysis is deemed more appropriate to test the direct and indirect effects to represent the JD-R model. Regarding missing data management, 7 participants from both intervention and control groups, were lost to follow-up and did not fill out the post-test survey, yielding a retention rate of 83%. A Little's missing completely at random test (MCAR; Little & Rubin, 2019) was conducted. The results (i.e.,  $\chi^2 = 54.47$ ,  $df = 44$ ,  $p = 0.13$ ) suggested that no clear pattern was found in the missing data among the observed variables. The present study followed an intention-to-treat approach, ensuring that all participants' data were included in the analysis. To handle the missing data, we employed the full information maximum likelihood method (FIML), which computes a case-wise likelihood function using only those variables that are observed (Muthén & Muthén, 2017). Research (Van Ginkel et al., 2020) recommended the use of FIML for handling datasets with missing responses. The data and analytic code for this study are available at the Open Science Framework (<https://shorturl.at/m9c0Y>).

### 3 | RESULTS

#### 3.1 | Preliminary analysis

Descriptive statistics, including means, standard deviations, bivariate correlations, skewness, kurtosis, and reliability coefficients, of the study variables are presented in Table 2. Table 3 revealed no significant differences in the baseline variables between the

intervention group and control group,  $t(1, 82) = -1.94$  to  $1.21$ ,  $ps = 0.06$  to  $0.44$ . The independent  $t$ -tests conducted for the dropout analysis revealed no statistically significant differences in demographic and study variables at baseline between participants who completed the post-test survey and those who did not,  $t(1, 82) = -1.47$  to  $-0.01$ ,  $ps = 0.15$  to  $0.99$ . In the post-test measurement, the intervention group had significantly higher scores for self-compassion, positivity, and work engagement, as compared to the control group (see Table 4).

### 3.2 | Intervention effects

The path model showed excellent fit to the data,  $\chi^2 = 2.08$ ,  $df = 3$ ,  $CFI = 1.00$ ,  $TLI = 1.00$ ,  $RMSEA = 0.00$  (90% CI =  $0.00$ – $0.16$ ),

$SRMR = 0.03$ . The intervention yielded significant effects on the change scores of self-compassion ( $\beta = 0.21$ ,  $p = 0.04$ ) and positivity ( $\beta = 0.28$ ,  $p = 0.03$ ). Additionally, the change score of positivity was associated with the changes in work engagement ( $\beta = 0.45$ ,  $p < 0.001$ ), whereas changes in self-compassion did not significantly predict changes in work engagement ( $\beta = 0.04$ ,  $p = 0.81$ ). The change score of self-compassion exhibited a significant association with the changes in work stress ( $\beta = -0.36$ ,  $p = 0.03$ ), while changes in positivity showed no significant association with changes in work stress ( $\beta = -0.07$ ,  $p = 0.66$ ). In terms of indirect effects, the intervention demonstrated positive and significant indirect effects on the change scores of work engagement ( $\beta = 0.13$ ,  $p = 0.02$ ), but not on work stress ( $\beta = -0.09$ ,  $p = 0.06$ ). The proposed path model and the standardized parameter estimates are presented in Figure 2.

**TABLE 2** Descriptive statistics of the study variables at baseline and post-test ( $N = 84$ ).

Variables	1	2	3	4	5	6	7	8
Baseline								
1. Self-compassion	1							
2. Positivity	0.37**	1						
3. Work engagement	0.40**	0.52**	1					
4. Work stress	-0.48**	0.13	-0.45**	1				
Post-test								
5. Self-compassion	0.69**	0.21	0.33**	-0.50**	1			
6. Positivity	0.31**	0.49**	0.52**	-0.34**	0.46**	1		
7. Work engagement	0.39**	0.39**	0.58**	-0.25*	0.42**	0.68**	1	
8. Work stress	-0.38**	-0.15	-0.22	0.56**	-0.56**	-0.39**	-0.28*	1
Mean	3.13	3.02	4.12	3.25	3.22	3.01	4.13	3.25
SD	0.43	0.62	0.91	0.54	0.52	0.61	0.94	0.60
Alpha	0.69	0.87	0.89	0.84	0.83	0.90	0.90	0.88
Skewness	0.20	0.50	-0.06	-0.15	0.31	-0.42	-0.00	-0.19
Kurtosis	0.63	1.67	-0.25	0.47	1.26	1.35	0.70	-0.04

**TABLE 3** Baseline characteristics.

	Intervention group ( $n = 38$ )	Control group ( $n = 46$ )	Difference	
			$t$	$p$
Gender			1.21	0.23
Male	2 (5.26%)	6 (13.04%)		
Female	36 (94.74%)	40 (86.96%)		
Age	33.61 (6.78)	31.70 (6.88)	-1.21	0.23
Social work experience	31.51 (35.51)	18.38 (20.38)	-1.94	0.06
Self-compassion	3.20 (0.42)	3.07 (0.43)	-1.41	0.16
Positivity	3.07 (0.56)	2.97 (0.66)	-0.77	0.44
Work engagement	4.24 (0.90)	4.02 (0.92)	-1.10	0.27
Work stress	3.17 (0.57)	3.32 (0.52)	1.26	0.21

Dimensions	Intervention group (n = 38)		Control group (n = 46)		Independent t-test $p_2$
	Baseline	Post-test	Baseline	Post-test	
Self-compassion	3.20 (0.42)	3.39 (0.50)	3.07 (0.43)	3.08 (0.51)	0.01
	$p_1 = 0.02$		$p_1 = 0.41$		
Positivity	3.07 (0.56)	3.22 (0.61)	2.97 (0.66)	2.85 (0.57)	0.02
	$p_1 = 0.14$		$p_1 = 0.53$		
Work engagement	4.24 (0.90)	4.39 (0.92)	4.02 (0.92)	3.91 (0.92)	0.03
	$p_1 = 0.45$		$p_1 = 0.98$		
Work stress	3.17 (0.57)	3.11 (0.61)	3.32 (0.52)	3.35 (0.57)	0.10
	$p_1 = 0.72$		$p_1 = 0.33$		

Note:  $P_1$  = Baseline versus post-test  $p$  value;  $p_2$  = Post-test intervention versus post-test control  $p$  value.

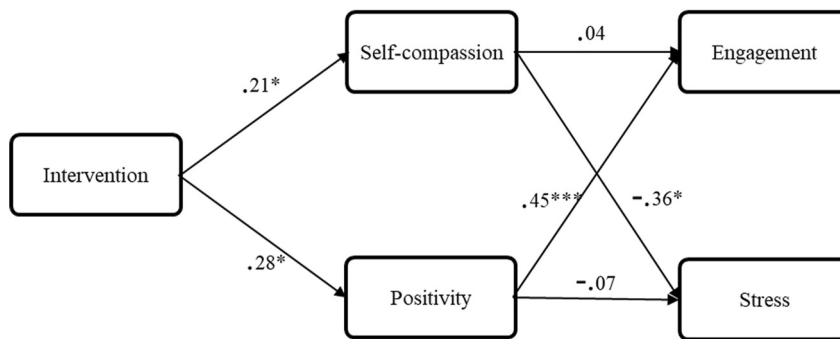


FIGURE 2 Proposed path model controlling for gender. All the paths were standardized parameter estimates ( $\beta$ ). \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

## 4 | DISCUSSION

The present study was a randomized control trial investigating the impacts of a 5-week EASP positive psychological intervention on personal resources, work engagement, and work-related stress in a sample of Hong Kong preschool social workers. The results revealed the intervention's effects on improving personal resources, self-compassion, and positivity. Importantly, the findings further demonstrated positivity as the potential mechanism underlying the intervention effect on promoting participants' work engagement. Drawing on the JD-R theory (Bakker et al., 2014, 2023), this study contributed to the literature by demonstrating the mediating role of positivity in the intervention effect (Björk et al., 2021; Knight et al., 2019) and by extending the findings to include work-related outcomes in a non-teaching professional (Datu et al., 2022, 2023; Lee et al., 2023a, 2023b, 2024b).

### 4.1 | Direct intervention effects on self-compassion and positivity

As expected, social workers in the intervention group exhibited improved positivity and self-compassion. Aligning with recent

evidence (Datu et al., 2022; Lee, Fung, et al., 2024), the EASP positive psychological intervention is particularly effective in improving positivity. Datu et al. (2023) further demonstrated the positive retention effect on positivity over one month. Future work may examine the effects of retention by tracking participants' outcomes over a longer period of time with multiple follow-up measurements. On top of positivity, the present study considered self-compassion as another important personal resource. The contents covered in the EASP intervention, specifying the importance of self-kindness (e.g., being kind towards oneself in the face of failure) and mindfulness (e.g., awareness without self-criticism), significantly improved these social workers' self-compassion. Given that self-compassion protects one from self-judgement and rumination, self-compassion may maintain one's self-esteem, leading to a positive emotional state (Neff, 2023). Future research may explore the relationship between self-compassion and self-esteem and how these factors collectively predict positive emotions (i.e., positivity) using a multi-wave longitudinal design. The present findings underscored the intervention effects on positivity and self-compassion, and the following section discusses whether and how these two personal resources mediated the intervention effects on work engagement and work-related stress.



## 4.2 | Indirect intervention effects on work engagement and work-related stress

Partially aligning with the hypotheses, the EASP intervention significantly improved participants' work engagement by increasing their positivity. This result concurred with the JD-R theory (Bakker et al., 2014), highlighting that the promotion of work engagement can be achieved by improving one's well-being indicators, such as positivity. Consistently, Meyers and van Woerkom (2017) reported that a strengths intervention indirectly improved adults' work engagement, mediated through positive emotions, despite the lack of a direct intervention effect. Positive emotions enable people to completely immerse in their work roles and widen their repertoire of work-related behaviours (Knight et al., 2019), contributing to work engagement. The present results echoed a recent call to examine further the mechanisms explaining how interventions could improve work engagement (Björk et al., 2021) by considering personal resources as mediators. Surprisingly, self-compassion was unrelated to work engagement in the present findings. Future studies may include other job or personal resources (e.g., autonomy, social support, self-efficacy) to explore their mediating effects (Knight et al., 2019).

Meyers and van Woerkom (2017) also reported an indirect effect of their strength-based intervention on lowering job burnout, which was also mediated through positive emotions. Given that work-related stress is the major factor linked with job burnout (Maslach & Leiter, 2016), the present study examines the causal links between positivity and work-related stress, with self-compassion considered. Conceptually, self-compassion allows individuals to reappraise stressful aspects in the work environment as challenges (Knight et al., 2019), potentially reducing work-related stress. Unexpectedly, the individual indirect intervention effect on work-related stress mediating through positivity or self-compassion were both nonsignificant. Several possible reasons may explain the inconsistent findings. First, the current sample size was smaller than Meyers and van Woerkom (2017)'s study, which may have lowered the path coefficients in the current path model and the resultant indirect effects. Second, work-related stress and job burnout are related but dissimilar concepts. Additional factors not included in the present study, such as resilience, can influence how work-related stress would manifest in job burnout. Nonetheless, the overall indirect effect including both personal resources (i.e., positivity and self-compassion) approached significance ( $p = 0.05$ ) and further intervention studies with an increased number of participants and a more comprehensive range of measurements (e.g., positivity, work-related stress, job burnout) should be conducted to validate the present findings.

## 4.3 | Limitations

There are at least six limitations to be considered. First, the intervention duration was brief (i.e., five weeks), which might be insufficient for changing participants' personal resources, work

engagement, and work-related stress. Future studies would benefit from implementing a longer intervention period and incorporating follow-up assessments to better evaluate the sustainability of the treatment effects over time. Second, only self-reported measurements were employed to measure the target outcomes, and the results may be biased due to common method variance (Cooper et al., 2020) and social desirability (Brenner & DeLamater, 2016). Further studies may include multi-informants' ratings (e.g., peer ratings on work engagement) or alternative objective assessment (e.g., biophysiological approach; Kreibig & Gross, 2017) to validate the present results. Third, while our sample size was determined by power analysis, expanding the study to include a larger and more diverse population could enhance the generalisability and public health relevance of the findings (Ho et al., 2024; Prochaska et al., 2020). A larger sample size would also allow future researchers to explore the interplay of potential confounding variables (e.g., social work experience) on JD-R model variables. Fourth, this intervention study was not preregistered to provide, which may impact the transparency and credibility of the research. Future studies are encouraged to be preregistered intervention design to enhance research rigour, minimise bias, and support the replication of findings. Fifth, this study did not investigate how participant attendance in the intervention sessions and the online activity may have influenced the outcomes. Future research should consider incorporating attendance data to evaluate its impact on the effectiveness of the intervention. Tracking attendance as a measure of intervention engagement could offer valuable insights into the relationship between intervention participation and the observed intervention effects. Finally, this study only included two personal resources (i.e., positivity and self-compassion) to explore their mediating roles in the intervention effects on work engagement and work-related stress. Future research should consider incorporating additional resources such as autonomy, social support, and self-efficacy to further investigate the mechanisms underlying these intervention effects.

## 4.4 | Conclusion and implications

The present study demonstrated the effectiveness of the EASP positive psychological intervention on Hong Kong preschool social workers' positivity, self-compassion, work engagement and work-related stress. Theoretically, the findings extended previous work (Björk et al., 2021; Knight et al., 2019) to tease out potential protective and risk factors and building resilience, such as positivity, as the underlying mechanism explaining the intervention effect on increasing work engagement. Practically, as the benefits of positive psychological intervention in promoting social workers' work engagement and managing stress positively, the EASP programme is encouraged to integrate into continuous professional development and workplace activities to strengthen social service and educational professionals' job engagement and psychological well-being in social service and early childhood education and care sectors. The effectiveness of the EASP programme could be extended to other

industries (e.g., health, welfare, commercial, and airline sectors), which may be worth examining across different working environments in Asian and Western societies.

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## CONFLICT OF INTEREST STATEMENT

The authors declare that they have no conflict of interest.

## DATA AVAILABILITY STATEMENT

All data are available upon reasonable request.

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