
Possible Selves in Emerging Adulthood: A Comparison of Two Group Interventions

Identités possibles chez des adultes émergents : comparaison de deux interventions de groupe

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ABSTRACT

The present study provides a pilot examination of two types of possible selves group interventions. The study evaluates emerging adults' satisfaction with and outcome following participation in groups that were oriented on interpersonal-experiential and didactic-task interventions and that focused on possible selves. Analyses used data from 85 emerging adults who were randomly assigned to one of these intervention types and who completed pre- and post-intervention assessments. Overall, participants indicated a high level of satisfaction with both types of group intervention. Results indicate that significant improvement in personal growth initiative was achieved across both interventions, but only the interpersonal-experiential intervention was associated with an increase in participants' efficacy to pursue relational possible selves. Change in hope across both interventions was not statistically significant, and participants did not improve in their efficacy to pursue vocational possible selves. Follow-up analysis found that group engagement was associated with improvement in participants' efficacy to pursue relational possible selves through interpersonal-experiential intervention. While both interventions appear to be beneficial, interpersonal-experiential groups may be particularly useful in fostering emerging adults' sense of future relational selves.

RÉSUMÉ

La présente étude propose un examen pilote de deux types d'interventions de groupe sur les identités possibles. On y évalue la satisfaction d'adultes émergents au sujet de leur participation à des groupes portant sur les identités possibles, l'un interpersonnel-expérientiel et l'autre didactique centré sur des tâches, ainsi qu'en ce qui concerne les résultats ainsi obtenus. L'analyse porta sur des données recueillies auprès de 85 adultes émergents répartis au hasard entre les deux types d'intervention de groupe et qui ont

rempli des évaluations avant et après l'intervention. Dans l'ensemble, les participants ont indiqué un taux de satisfaction élevé à l'égard des deux types d'intervention de groupe. Les résultats révèlent que les deux types d'intervention ont donné lieu à une amélioration significative de l'initiative d'épanouissement personnel; toutefois, seule l'intervention de type interpersonnelle-expérientielle fut associée à une plus grande efficacité des participants dans la poursuite d'identités relationnelles possibles. Ni l'une ni l'autre des interventions n'a révélé de changement statistiquement significatif en ce qui concerne l'espoir, et les participants n'ont pas amélioré leur efficacité à poursuivre de possibles identités professionnelles. L'analyse de suivi a permis d'établir que l'engagement de groupe était associé à l'amélioration de l'efficacité des participants à poursuivre des identités relationnelles possibles au moyen de l'intervention interpersonnelle-expérientielle. Bien que les deux types d'intervention semblent bénéfiques, les groupes d'intervention interpersonnelle-expérientielle pourraient s'avérer particulièrement utiles lorsqu'il s'agit de susciter chez les adultes émergents un sentiment d'identités relationnelles possibles à venir.

A sense of one's future self is an important aspect of identity that contributes to both personal meaning and motivation (Markus & Nurius, 1986; Oyserman & James, 2011). This is particularly salient during emerging adulthood—the developmental period between late adolescence and adulthood—because an envisioned future self allows individuals to make sense of their current context, to develop motivation for personal aspirations, and to take steps toward achieving their future goals (Dunkel, 2000; Oyserman et al., 2004; Oyserman & Destin, 2010). Thus, possible selves provide a pathway for addressing an essential task of emerging adulthood: identity integration and synthesis (Erikson, 1950, 1968; Schwartz et al., 2005). Identity integration and synthesis during emerging adulthood are important because they are associated with long-term health and social benefits such as the promotion of mental health and well-being (Montgomery et al., 2008; Pulkkinen & Rönkä, 1994) and of positive interpersonal functioning (Morgan & Korobov, 2012). One way in which emerging adults' sense of personal possibility may be strengthened is through brief group-based interventions that focus on enhancing possible selves.

Possible Selves

Possible selves are an individual's internalized ideas about “what they might become, what they would like to become, and what they are afraid of becoming” in the near or distant future (Markus & Nurius, 1986, p. 954). They serve several functions, such as exerting motivational influence on behaviour (Oyserman & Destin, 2010) and serving as schemas that inform and guide judgments about behaviour (Frazier et al., 2000). Possible selves are affectively valenced. Each person has positive images of the selves they desire to become and negative

images of the selves they want to avoid becoming (Oyserman & James, 2011). A person's possible selves can be shaped by the socio-cultural context in which they live. They are influenced by what is valued in society at a given point in time (Hamman et al., 2010).

Moreover, possible selves reflect how people think about their potential and their future, functioning as cognitive links between past and future expectancies; indeed, building bridges between past and future selves can function as a strong incentive for action and change. Possible selves have been shown to motivate people to act. People develop strategies to achieve their preferred selves and to avoid becoming their feared selves (Oyserman & Destin, 2010). Future-oriented representations of the self mobilize emerging adults' motivation to take action toward their desired goals. These representations are especially important during the emerging adult years as young people transition away from adolescence to navigate the multitude of future possibilities and enduring commitments of adulthood (Arnett, 1998; Schwartz et al., 2005).

Indeed, possible selves can be developed in various life domains such as relationships and careers (Markus & Nurius, 1986). Emerging adults identify and develop ideas about who they want to become in different life domains and take action toward pursuing these selves. Emerging adults' beliefs about their ability to attain such selves are therefore important to the goal-directed process. The term "possible selves efficacy" was coined for this study to capture emerging adults' confidence in their abilities to envision and actualize personal goals associated with key sources of possible selves like interpersonal relationships and vocation. Research has found that a robust capacity to envision and actualize possible selves can enhance psychosocial functioning (Dunkel et al., 2006), self-knowledge and motivation (Oyserman & James, 2011), and action toward goals (Hamman et al., 2010).

Possible Selves Group Interventions for Emerging Adults

Group interventions are believed to be particularly relevant for enhancing emerging adults' possible selves. Emerging adulthood is a period characterized by heightened levels of interpersonal activity involving crucial developmental tasks needed to establish intimate friendships and dating relationships (Arnett, 2000; Douglass, 2007). Further, relational experiences are considered key contexts for identity development, especially during the emerging adult years (Morgan & Korobov, 2012). As young people interact with one another, they are simultaneously gaining identity-relevant information in the form of social feedback (Adams & Marshall, 1996; Morgan & Korobov, 2012). Refining an individual's sense of self can influence the development of possible selves, which in turn can motivate a person to strive toward future goals. Group interventions are believed to utilize emerging adults' heightened patterns of interpersonal activity and orientation

toward social relationships, thus offering the unique opportunity to engage members in the interactive processes of the group to enhance possible selves.

Beyond providing opportunities for relationships and interaction, group interventions afford other experiences that can have a positive impact on emerging adults. Non-specific factors that cut across all or most interventions can facilitate participant change in group settings (Crouch et al., 1994; Yalom, 1995). These factors are known as group processes and refer to the elements of group interventions that facilitate participant improvement and occur as a result of the interactions of group facilitators and group members (Bloch & Crouch, 1985). Group scholars have long hypothesized that group process variables contribute to change and to members' behaviour, regardless of the type of group intervention or the members' specific problems (DeLucia-Waack & Bridbord, 2004). Furthermore, common factors theory suggests that different types of groups share common factors such as the therapeutic alliance and goal consensus, which accounts for much of the effectiveness of an intervention (Nahum et al., 2019).

An engaged group climate is a group process theorized to help emerging adults explore and enhance their possible selves. Group climate refers to the general atmosphere in the group, which can be affected by how members behave and how they interact (McClendon & Burlingame, 2010). MacKenzie (1983) conceptualized engagement as an important aspect of group climate that reflects an atmosphere of interaction and therapeutic work within a group, including members' efforts to interact with, understand, and address group members' concerns. In contrast to a group climate characterized by members' avoidance or conflict with one another, a climate of engagement is associated with group members' productive work toward their goals (Kealy et al., 2018). Theories of developmental stages in group psychotherapy suggest that group engagement is most relevant during the early stages of group development or in interventions that are relatively brief in nature (MacKenzie, 1997).

MacKenzie (1983) suggested that group engagement is positively related to the outcome of interventions. Group engagement reflects self-disclosure, a sense of membership and connectedness within a group, and group members' attempts to understand the meaning of their behaviours (Ogrodniczuk & Piper, 2003). Other aspects of engagement such as challenge and tactful confrontation promote social learning and the exchange of feedback among members. The realization of the universality of group members' problems and the generation of acceptance and hope have also been linked with an engaged group climate (MacKenzie, 1983). As such, emerging adults' identity work is more likely to occur within an engaged interpersonal milieu.

Accordingly, group interventions have been developed to enhance emerging adults' possible selves (Giannone et al., 2020). Enhancing possible selves is defined in this paper as positive shifts in people's motivation, future expectancy, or initiative for behaviour that advances possible selves goals. Emerging adults can engage

in an adaptive exploration of possible selves to facilitate such enhancement, which refers to group experiences such as interpersonal learning and group cohesion that allow members to consider better the selves they wish to become in the future. This includes both positive possible selves that emerging adults wish to actualize and negative possible selves that they wish to avoid.

There are several types of identity-focused group interventions oriented toward enhancing possible selves (Giannone et al., 2020). One type of intervention can be characterized as the didactic approach, which focuses on teaching about possible selves (e.g., Markstrom-Adams et al., 1993). Another type of intervention takes a task-oriented approach, emphasizing the completion of future-oriented tasks such as imagining or writing about one's self in the future (e.g., Renner et al., 2014). Both the didactic and task-oriented approaches position the group facilitator in an instructor-type role toward emerging adults. A third type of intervention reflects an interpersonal-experiential approach, emphasizing exploratory and interactive discussion about possible selves and reflection about one's life and future (e.g., Amodeo et al., 2017). The group facilitator in this latter approach adopts an exploratory, process-focused approach whereby participants' contributions and interactions are prioritized. While each type of intervention has been found effective when studied independently or when compared with a control group, they have seldom been compared to one another (Giannone et al., 2021). The present investigation seeks to address this gap in the literature by comparing the relative efficacy of possible selves interventions. Doing so can help clinicians make empirically informed decisions among such group interventions to best support the emerging adults with whom they work.

The Present Study

The present study was developed to compare brief, possible selves group interventions among emerging adults. This study was characterized as a pilot project aimed at evaluating emerging adults' satisfaction with and experience of change due to group intervention focused on possible selves. Such pilot work is an important precursor to larger research trials and broader clinical implementation. One intervention examined in the present study was based on an interpersonal-experiential group model (see MacKenzie, 1996; Yalom, 1995; Yalom & Leszcz, 2008), whereby group facilitators foster interactive and engaging conversations about possible selves among small groups of emerging adults. The other intervention combined aspects of the didactic and task-oriented interventions identified in Giannone et al. (2020) and referred to as "didactic-task," wherein emerging adults learned about vocational exploration and action planning through didactic presentations and independent tasks. Thus, this intervention combined teaching and task completion into a comprehensive approach anchored by group facilitators' instruction. The interpersonal-experiential intervention was designed to

provide opportunities for interaction and exchange regarding possible selves and associated feelings and life circumstances, whereas the didactic-task intervention was designed to facilitate skills building and knowledge acquisition about vocational possible selves topics.

The study was designed to evaluate potential changes in several constructs related to possible selves. First, self-efficacy, or emerging adults' confidence in their abilities to envision and actualize personal goals, was hypothesized to increase due to participation in the interventions. Self-efficacy is thought to be particularly relevant in two life domains associated with emerging adulthood: interpersonal relationships and vocation/career. Second, it was hypothesized that the interventions could have a positive impact on emerging adults' hope for the future. Finally, emerging adults' sense of personal initiative to pursue goals was also hypothesized to potentially improve upon completion of the interventions.

The present study provided a preliminary comparison of different types of possible selves group interventions among emerging adults to evaluate participant satisfaction, change in several constructs related to possible selves, and experience of engagement in group work between the interventions. The primary objective of this study was to compare the efficacy of types of possible selves interventions on outcomes pertaining to possible selves, including self-efficacy concerning relational and vocational possible selves, hope, and personal growth initiative. Given the relational nature of the interpersonal-experiential intervention, we hypothesized that participants in the interpersonal-experiential intervention would experience a greater degree of change in their efficacy to pursue relational possible selves. In contrast, due to the instruction and activities pertaining to a vocation in the didactic-task intervention, we hypothesized that participants in the didactic-task intervention would experience a greater degree of change in their efficacy to pursue vocational possible selves. Next, we explored whether participants would experience improvement in hope and personal growth initiative following group intervention and whether a change in these domains would differ between types of intervention. The secondary objective of this study was to examine participants' experience of group engagement during the two types of intervention, specifically whether group engagement would function as a mechanism in accounting for significant outcomes between the intervention types.

Methods

Recruitment

The current study included emerging adults who were recruited through posters and online postings at the university (e.g., student union building) and within the local community (e.g., coffee shops). Advertisements described the study broadly while minimizing differentiation between the two intervention conditions. Prospective participants were invited to contact the research team

for a pre-screening telephone interview to establish the eligibility criteria: To be included in the study, participants had to be between 18 and 25 years of age and have verbal and written proficiency in English. Since the purpose of these groups was to strengthen or enhance aspects of possible selves rather than to ameliorate psychopathology, participants were recruited from the general community and not from clinical populations. Severely distressed prospective participants were excluded: participants were screened and excluded from the study if potential risk issues such as active suicidal ideation were present or if participants would have difficulty in effectively participating in the group due to severe mental health concerns such as active psychosis or mania. Initial screening questions were employed during the intake process, which occurred by telephone with a member of the research staff, with further assessment taking place upon participant responses that indicated potential exclusionary criteria. Participants who indicated significant distress and impairment that would interfere with group participation or significant risk concerns were excluded from the study and instead provided a referral to mental health assessment and treatment resources.

Participants and Procedures

Eligible participants were scheduled for an in-person meeting to complete the informed consent process. Participants received modest honoraria for providing pre- and post-intervention assessment data. A total sample of 58 participants per group was sought, based on an a priori power calculation (power = .9 to detect a medium-moderate effect size of $f = .3$ for a repeated-measures ANOVA). A total of 120 emerging adults began participation in the study and were randomly assigned to one of the two intervention types using a randomization tool called GraphPad. Emerging adults were considered to have completed the study if they completed the pre-intervention and post-intervention measures and attended three or more of the four intervention sessions. Although 86 participants completed the study (interpersonal-experiential group = 47; didactic-task group = 39), one completer did not provide post-intervention assessment data, leaving a final sample for post-intervention analyses of 85. Seven interpersonal-experiential groups and six didactic-task groups were conducted. The number of participants ranged from four to 11 participants per group, with an average of eight participants per group. Of the 120 participants who registered for the study, 27.5% ($n = 33$) withdrew prior to completion, including 9.2% ($n = 11$) who withdrew following the pre-intervention assessment and before attending a group and 10.8% ($n = 13$) who withdrew after attending only one session.

Demographic characteristics of study completers are presented in Table 1. An examination of potential differences between completers and non-completers, using *t*-tests and chi-square tests, revealed no significant differences with respect to age, gender, sexual orientation, ethnic minority status, employment,

post-secondary education, and relationship status. Similarly, no significant differences were observed on baseline scores of the study measures (described below).

Two experienced group facilitators (the first author and the second author) led each intervention condition. The group facilitators discussed the intervention protocol before and after each session to ensure fidelity across groups and to the distinct intervention types. Each group intervention consisted of four sessions, occurring weekly over 4 consecutive weeks, with a duration of 1.5 hours per session. Assessment batteries were administered at baseline and following the completion of the 4-week intervention. Measures of group engagement were administered after each group session. Participants in both interventions completed identical assessment packages.

Measures

Possible-Selves Efficacy Scale (PSES)

Participants' self-efficacy to develop and actualize relational and vocational self-goals was measured by a series of items based on Bandura's (1982) self-efficacy work. Since current assessments of possible selves are largely descriptive (Oyserman, 2004) and do not assess self-efficacy for developing and actualizing future-self goals, we created a short quantitative measure for the present study. These items were developed to assess the degree to which the respondent felt confident in developing and achieving future-self goals in several areas salient to emerging adulthood: education, career, intimate relationships, and social/peer relationships. Two items, one reflecting the development of goals and the other reflecting the achievement of goals, were created for each domain and scored on a scale of 1 (*cannot do at all*) to 100 (*highly certain can do*). Before analysis, we conducted a principal component analysis with varimax rotation to evaluate the factor structure of this scale. As shown in Table 2, a two-factor structure was found. Four items loaded on a factor we labelled "relational possible selves" (total variance explained = 50.1%) and four items loaded on a factor we labelled "vocational possible selves" (total variance explained = 14.5%). Relational possible selves refer to self-efficacy in developing and achieving future-self goals in interpersonal and social relationships. Vocational possible selves refer to self-efficacy in developing and achieving future-self goals regarding one's career and education. Factor loadings and sample items for each subscale are presented in Table 2. Despite relatively equal factor loadings, Item 8 on the relational possible selves subscale was included to capture participants' sense of efficacy related to achieving social relationship goals. Cronbach's alpha was .82 for relational possible selves and .78 for vocational possible selves. A mean score for each subscale was calculated, with higher scores indicating greater efficacy for relational or vocational possible selves. The scores ranged from 1 to 100 on each subscale. The PSES was administered to participants during the pre- and post-intervention assessments.

Table 1
Demographic Data Across Intervention Conditions

Variable	Identity Matters (<i>n</i> = 47)		Planning Ahead (<i>n</i> = 38)	
	M	SD	M	SD
Age	20.49	1.83	21.13	2.04
	<i>n</i>	%	<i>n</i>	%
Gender				
Female	34	72.3	29	76.3
Male	11	23.4	9	23.7
Gender Nonconforming	2	4.3	0	0.0
Sexual Orientation				
Heterosexual	36	76.6	30	78.9
Bisexual	6	12.8	3	7.9
Gay or Lesbian	1	2.1	3	7.9
Other	4	8.5	2	5.3
Ethnic Origin				
Asian	22	46.8	18	47.4
Caucasian	16	34.0	10	26.3
Hispanic/Latinx	0	0.0	3	7.9
African	1	2.1	0	0.0
Indigenous	0	0.0	0	0.0
Mixed	3	6.4	3	7.9
Other	5	10.6	4	10.5
Relationship Status				
Single, Not Interested in Dating	10	21.3	9	23.7
Single, Interested in Dating	11	23.4	14	36.8
Dating Casually	5	10.6	4	10.5
In a Committed Relationship	21	44.7	11	28.9
Married	0	0.0	0	0.0
Employment Status				
Employed Full Time	2	4.2	2	5.3
Employed Part Time	20	42.6	22	57.9
Not Employed	25	53.2	13	34.2
Disabled, Not Able to Work	0	0.0	1	2.6
Post-Secondary Enrolment				
Current Post-Secondary Student	37	78.7	34	89.5
Non-Student	10	21.3	4	10.5

Table 2
Summary of Factor Loadings for Possible Selves Efficacy Scale

Item	Factor Loadings	
	Vocational Possible Selves	Relational Possible Selves
Develop a sense of what you want for your education (if applicable).	.80	.08
Achieve your desired educational goals.	.75	.18
Develop a sense of what you want for your career.	.77	.30
Achieve your desired career goals.	.75	.40
Develop a sense of what you want in an intimate relationship.	.15	.82
Achieve your desired intimate relationship goals.	.11	.88
Develop a sense of what you want in your social relationships.	.35	.67
Achieve your desired social relationships.	.47	.65
Eigenvalues	3.92	1.26
% of Variance	49.05	15.80

Note. Factor loadings over .40 appear in bold ($n = 85$).

Herth Hope Index (HHI)

The HHI was used to measure participants' general hope about the future (Herth, 1992). It is a 12-item self-report measure to which respondents indicated 0 (*strongly disagree*) to 4 (*strongly agree*). A sample HHI item is "I have a positive outlook toward life." The responses were keyed in positive and negative directions. Negatively worded items were reverse coded before scoring. The HHI provides a total score, with higher scores indicating greater overall hope. Scores ranged from 0 to 48. Concurrent criterion-related validity was supported by demonstrating moderate to high correlations between the Existential Well-Being Scale ($r = .84$) and the Nowotny Hope Scale ($r = .81$; Herth, 1992) with samples of emerging adults. Cronbach's alpha in the present study was .81, indicating good reliability. The HHI was administered to study participants during the pre- and post-intervention assessments.

Personal Growth Initiative Scale-II (PGIS-II)

The PGIS-II was used to measure individuals' motivation for pursuing personal development goals (Robitschek et al., 2012). It is a 16-item self-report measure to which respondents rated items using a scale of 0 (*disagree strongly*) to 5 (*agree strongly*). A sample PGIS-II item is "I can tell when I am ready to make specific changes in myself." The responses were all keyed in a positive direction.

Confirmatory factor analysis supports the use of the total score to reflect overall personal growth initiative (Weigold et al., 2014). A total mean score was calculated by summing the scores and dividing by two, with higher overall scores indicating greater personal growth initiative. The scores ranged from 0 to 80. This instrument has previously demonstrated satisfactory psychometric properties with emerging adults (Robitschek, 1998). The PGIS-II's results have shown convergent, discriminant, and cultural evidence of validity. For example, PGIS-II scores were all positively and significantly correlated with measures of conceptually related constructs, including assertiveness, instrumentality, and expressiveness, as well as the original measure of personal growth initiative (Weigold et al., 2014). Cronbach's alpha in the present study was .92, indicating excellent reliability. The PGIS-II was administered to participants during the pre- and post-intervention assessments.

Group Climate Questionnaire—Engagement Scale (GCQ-ES)

The engagement scale of the Group Climate Questionnaire (MacKenzie, 1983) was used to measure participants' perceptions of "an atmosphere of interaction and therapeutic work within the group, including members' efforts to interact with one another and to understand and address their concerns" (Kealy et al., 2018, p. 27). The GCQ-ES is a 5-item self-report measure to which respondents indicated 0 (*not at all*) to 6 (*extremely*). A sample item from this subscale is "The members revealed sensitive personal information or feelings." A total mean score was calculated by summing the item scores and dividing by five, with higher scores indicating stronger group engagement. The scores ranged from 0 to 30. An average engagement score was calculated across all sessions and was used in this study to reflect participants' overall perceptions of group engagement. McClendon and Burlingame (2010) reported many studies supporting the validity of the GCQ-ES with emerging adults. Cronbach's alpha in the present study was .78, indicating acceptable reliability. The GCQ-ES was administered to participants following the completion of each group session.

Client Satisfaction Questionnaire (CSQ-8)

The Client Satisfaction Questionnaire (Attkisson & Zwick, 1982) was used to assess participants' satisfaction with each type of group intervention. The CSQ-8 is an 8-item self-report measure that is widely used in helping service and counselling settings to assess overall satisfaction with service. A sample item is "In an overall, general sense, how satisfied are you with the service you received?" Item-specific responses are scored from 1 to 4 and summed for an overall score (possible scores ranging from 8 to 32), with higher scores indicating overall greater satisfaction. Excellent internal consistency was observed, with an alpha coefficient of .90. Participants completed the CSQ-8 after their final group session.

Interventions

Group interventions were developed for this study, which reflected the two intervention approaches described above. *Identity Matters* (IM) reflected the interpersonal-experiential approach, and *Planning Ahead* (PA) reflected the didactic-task approach.

Identity Matters

IM consisted of four semi-structured sessions that included an interactive discussion about possible selves among participants, such as personal identity, possibilities for the future, and potential obstacles. The concept of possible selves was addressed in addition to other factors that help or hinder personal growth (e.g., relationships, recreation, and well-being). The foci of each session were participant generated. That is, we introduced the purpose of the group as an open discussion about identity and possible selves where contemplation, interaction, and feedback were encouraged. In doing so, the group facilitators followed guiding principles that were drawn from the previously reviewed interventions, with general principles about group intervention guided by MacKenzie's (1990) book about time-limited group psychotherapy.

Planning Ahead

PA consisted of four structured group sessions that were comprised of didactic seminars about career planning and personal development and of predetermined, independent learning tasks presented in the form of a workbook. All career exploration and planning sessions were adapted from the group processes described by Dagley and Calhoun (2014). The primary topic addressed in Session 1 introduced career development and vocational planning frameworks while educating participants about relevant personal domains such as interests, values, personal styles, skills, and needs. Session 2 involved identifying career options and associated resources in addition to teaching career exploration techniques. Session 3 overviewed decision-making styles and goal-setting strategies, offering opportunities for participants to work independently to set personal and professional goals. Session 4 examined action-planning methods and identified common barriers to the career development process.

Data Analysis Strategy

Statistical analyses were performed with Statistical Package for Social Sciences (SPSS) Version 25. Descriptive statistics were used to characterize the sample of participants. Preliminary t-tests and chi-square tests were performed to evaluate potential differences between assignment to the two intervention types on socio-demographic variables and baseline scores of primary study variables. Descriptive data regarding participant satisfaction was also examined, along with an independent samples t-test comparing overall satisfaction between types of intervention.

To compare the efficacy of the interventions, four separate repeated-measures between-groups ANOVAs were conducted on participants' efficacy to pursue relational and vocational possible selves, on hope, and on personal growth initiative, with time as the within-groups factor and intervention type as the between-groups factor in each analysis.¹ Given the potential for error owing to multiple significance tests, we considered $p \leq .01$ to represent statistical significance for these analyses.

Examination of group engagement consisted of an initial *t*-test between intervention type, followed by regression analyses where group engagement was tested as a mediating variable (*M*) between assignment to intervention type (*X*; coded as 0 = didactic-task and 1 = interpersonal-experiential) and the post-intervention score of the significant between-intervention outcome variable (*Y*), controlling for the pre-intervention score (covariate). This followed the procedure outlined by Hayes (2018) for mediation effects in experimental designs, using the PROCESS macro. Significance was tested using a bootstrapped 95% confidence interval around the indirect effect, sampled 10,000 times.

Results

Preliminary Analyses

A series of chi-square tests revealed no significant differences between participants based on random assignment to the two types of intervention with respect to categorical socio-demographic variables. Comparison of continuous variables—age and primary study variables at baseline—using independent samples *t*-tests also indicated no significant differences based on intervention assignment.

A total of 83 participants completed the CSQ-8, with all but one scoring above the CSQ-8 midpoint of 16. The average CSQ-8 score was $M = 26.29$, $SD = 3.82$, with two thirds of participants (66.3%) scoring in the upper quartile of possible CSQ-8 scores (> 24). Thus, a high degree of satisfaction was expressed among participants with regard to the interventions in the study. The level of satisfaction was moderately higher among participants in the Identity Matters intervention, $M = 27.21$, $SD = 3.56$, compared to those in the Planning Ahead intervention, $M = 25.08$, $SD = 3.86$, $t(81) = 2.61$, $p = .01$, $d = .57$.

Effects of the Interventions

Table 3 presents the results of separate repeated-measures between-groups ANOVAs comparing pre- and post-intervention scores. Although a main effect (time effect) was not found on participants' efficacy to pursue relational possible

¹ Separate ANOVAs were conducted due to missing HHI data for one participant. We also ran a MANOVA, excluding this participant's data ($n = 84$), with findings similar to those of the separate ANOVA approach. Thus, we retained our initial approach in order to retain all participants in analyses.

Table 3
Summary of Repeated Measures Analyses of Variance Comparing Identity Matters and Planning Ahead Groups

	Identity Matters		Planning Ahead		<i>F</i>	η^2	<i>p</i>
	Pre <i>M</i> (<i>SD</i>)	Post <i>M</i> (<i>SD</i>)	Pre <i>M</i> (<i>SD</i>)	Post <i>M</i> (<i>SD</i>)			
Time Effects					<i>df</i>		
Relational Possible Selves	73.29 (14.75)	77.14 (14.27)	75.30 (18.05)	71.99 (16.16)	1, 83	.07	.79
Vocational Possible Selves	78.21 (13.00)	80.95 (10.78)	78.68 (14.12)	79.22 (13.76)	1, 83	2.12	.15
Hope	36.91 (4.53)	38.34 (4.97)	36.95 (5.20)	37.07 (5.18)	1, 82	4.33	.04
Personal Growth Initiative	3.43 (.69)	3.62 (.65)	3.58 (.70)	3.77 (.66)	1, 83	13.89	<.001
Time x Condition Effects					<i>df</i>	<i>F</i>	η^2
Relational Possible Selves					1, 83	12.37	.13
Vocational Possible Selves					1, 83	.94	.01
Hope					1, 82	3.09	.04
Personal Growth Initiative					1, 83	.02	.00

Note. Boldface indicates statistical significance at the .01 level.

selves, a significant interaction effect (time \times condition) was found in favour of the Identity Matters group intervention, indicating a moderate effect size. With regard to participants' efficacy to pursue vocational possible selves, no main or interaction effect was observed. Thus, neither intervention was associated with changes in participants' self-efficacy to envision or actualize future vocational goals.

As shown in Table 3, participants experienced an increase in hope following both interventions. However, at $p = .04$, this did not meet the criteria for statistical significance that we established to reduce family-wise error. No between-group difference was found regarding improvement in hope. A time effect was found for personal growth initiative, with a moderate effect size and no interaction between time and intervention. Thus, participants in both types of group experienced a moderate increase in personal growth initiative following the intervention.

Group Engagement

An independent samples t -test indicated that participants endorsed a higher overall level of group engagement in the Identity Matters group, $M = 4.36$, $SD = .59$, compared to the Planning Ahead group, $M = 3.02$, $SD = .85$, $t(83) = -8.59$, $p < .001$, $d = 1.83$. Since only one significant between-intervention outcome was observed—that of self-efficacy regarding future relational goals—a single mediation model was tested using group engagement as the mediator between intervention assignment and the post-intervention score for this variable while controlling for the pre-intervention score. As shown in Table 4, the 95% CI testing the mediation effect did not contain zero, indicating significant mediation by group engagement. Thus, the interpersonal-experiential group intervention yielded greater endorsement of group engagement, which in turn was linked with improvement in participants' sense of self-efficacy regarding future relational goals.

Discussion

The present study provided a preliminary comparison of two types of group interventions that target possible selves among emerging adults. Results indicated that overall, participants felt satisfied with both the didactic-task intervention and the interpersonal-experiential intervention, though satisfaction was slightly higher among participants in the latter type of group. Participants in both interventions experienced an improvement in personal growth initiative from before to after the intervention. Similar improvement was observed for participants' hope, although this did not meet our adjusted criteria for statistical significance. No change in participants' efficacy to pursue vocational possible selves was observed in either type of group intervention. However, a significant time \times intervention effect was found regarding participants' efficacy to pursue relational possible selves, in that participants in the interpersonal-experiential intervention experienced a moderate increase in this domain. Participants in such groups evinced a higher level of

Table 4

Results of Regression Analyses Examining the Mediating Effect of Group Engagement Between Type of Group Intervention and Improvement in Efficacy to Pursue Relational Possible Selves

	Coeff.	SE	<i>t</i>	<i>p</i>
Group Engagement				
Type of Intervention (coded 0/1)	1.35	.16	8.62	< .001
Relational Possible Selves, Prior to Intervention	.01	.01	.91	.37
Relational Possible Selves, Following Intervention				
Type of Intervention (coded 0/1)	2.58	2.52	1.02	.31
Group Engagement	3.04	1.28	2.37	.02
Relational Possible Selves, Prior to Intervention	.75	.06	13.36	< .001
	Coeff.	SE	bootstrapped 95% CI	
Indirect Effect of Type of Intervention				
Through Group Engagement	4.11	1.56	1.11	7.24

Note. Boldface indicates statistical significance. Coeff. = coefficient; CI = confidence interval.

group engagement, which was found to account for improved efficacy to pursue relational possible selves as a function of interpersonal-experiential participation. Thus, while both types of groups may enhance motivation to enact future-oriented personal changes, the interpersonal-experiential intervention may offer a modest advantage regarding relational possible selves. This advantage is likely due to participants' perceptions of a more engaged group climate oriented around interpersonal sharing and interaction. Participants in these groups had greater opportunity to discuss—and thereby reimagine—their personal relationships.

Two Helpful Interventions

Improvement in personal growth initiative—obtained following participation in both types of group intervention—is an important outcome in that it may reflect emerging adults' enhanced capacity to take action in following their possible selves goals (Frazier et al., 2000). For example, having increased initiative for personal growth may help to mobilize resources that advance one's goals. By

contrast, a reduced initiative may result in emerging adults struggling to cultivate the intentional behaviour or readiness needed to actualize their possible selves. The present findings suggest that both didactic-task and interpersonal-experiential interventions can stimulate future-oriented thinking toward the enactment of tasks relevant to personal goals. Both types of intervention provided opportunities for personal reflection about one's identity and goals, albeit in different life domains (i.e., the didactic-task intervention focused on vocation, whereas the interpersonal-experiential intervention had a broader focus). The opportunity to engage in such reflection in the context of a supportive group of peers may have emboldened participants in their motivation for personal development. Other non-specific aspects of group intervention may also account for participants' change in personal growth initiative.

Research evidence suggests that different types of group interventions are fairly equivalent to one another because of the common factors that are present in all approaches (Burlingame et al., 2013; Mahon & Leszcz, 2017). Common factors are phenomena that are shared across all interventions, including those that are relatively unique to group interventions such as social feedback, group cohesion, and interpersonal learning (Ogrodniczuk & Piper, 2003). Research suggests that common factors account for much of the positive benefits of psychotherapy, in contrast to specific factors that are unique to particular intervention approaches (e.g., homework in cognitive behavioural therapy; Wampold, 2015). The results from the present study are consistent with broader research that has found equivalence among bona fide interventions, regardless of their specific components (Elliott et al., 2011). Thus, the factors common to the approaches examined in this study may account for participants' improvement in personal growth initiative in both the interpersonal-experiential and didactic-task interventions.

Efficacy to Pursue Vocational Possible Selves

Decisions related to choosing and preparing for one's vocation are considered a critical component of emerging adulthood (Chávez, 2016). We hypothesized that the didactic-task intervention would be associated with positive changes in participants' self-efficacy to envision and actualize future vocational goals because of its focus on career exploration and planning. Contrary to our hypothesis, results indicated that neither intervention facilitated improvements in participants' efficacy to pursue vocational possible selves. One explanation for this null finding is that most emerging adults in the sample were enrolled in post-secondary education and may have engaged in vocational exploration, planning, and training already as a function of being a university student. For example, many universities require students to declare a major within the first two years of study, which may accelerate students' decision-making about an area of study or a career path. After declaring a major, university students may engage in vocation-specific training (e.g., dietetics, social work) that may consolidate vocational possible selves

further. Participants in both interventions had relatively high mean scores on self-efficacy for vocational possible selves at baseline, suggesting that they may have engaged in such work before the intervention. Hence, these interventions, especially the didactic-task one, may have a stronger effect on participants' efficacy to pursue vocational possible selves when implemented with individuals who have less vocational exploration and planning experience (e.g., individuals who are not post-secondary students) or with individuals who are experiencing a greater degree of career uncertainty toward, indecision about, or dissatisfaction with their current or prospective career choice.

Efficacy to Pursue Relational Possible Selves

One modest outcome difference emerged between the two group interventions studied. Consistent with our hypothesis, participants in the interpersonal-experiential intervention experienced increased confidence to envision and actualize future relational goals in comparison to participants in the didactic-task intervention. The higher level of group engagement perceived by participants in the interpersonal-experiential intervention was associated with this change. An engaged group climate reflects participants' efforts to understand their behaviour, to self-disclose personal information or feelings, and to challenge and confront each other to sort out difficult issues (Ogrodniczuk & Piper, 2003). Perceptions of group engagement may have facilitated interpersonal safety, inviting disclosure about close relationships and personal vulnerabilities and encouraging new ways of interacting. Positive group engagement ratings may also reflect a sense of feeling supported by group members to envision and actualize possible selves. However, it is important to note that the engagement-outcome relationship may ultimately reflect the nature of the intervention itself, in that the interpersonal-experiential intervention was designed to offer participants opportunities to talk about future relationships, among other possible selves topics, in an interactive and supportive group setting. Discussion about relationships in an engaged group may have prompted participants to reimagine the relationships they would like to have in the future. By contrast, the didactic-task intervention, focused as it was on vocational possible selves, limited participants' options for discussing—and thereby improving upon—relational experiences.

Practice Considerations

Although the findings of the present study require replication, they may be of interest to group facilitators who work with emerging adults in university/college settings like counselling centres or career development services. This work implies that both types of group interventions are acceptable to emerging adults and can contribute to aspects of well-being related to their possible selves. The decision to implement one intervention over the other may depend partially on the specific experiences required to address emerging adults' needs. For example, group

facilitators may elect for an interpersonal-experiential approach if emerging adults wish to expand their conception of future relationships. Further, selection may depend on the skill set and preferences of the group facilitator. That is, a didactic-task intervention may be preferable if a group facilitator is an effective teacher, prefers to take on an active role in the intervention, and can serve as a subject matter expert by transferring knowledge to participants. In contrast, an interpersonal-experiential intervention may be more beneficial when a group facilitator has process-oriented group skills, can stimulate interaction among group members, and prefers assisting group members in doing their work in the here and now rather than by providing psychoeducation. Finally, selection may be contingent on a group facilitator's perceptions of emerging adults' willingness or ability to engage with one another. On the one hand, participants who feel more comfortable interacting with one another and who can withstand the ambiguity of an exploratory process may be better suited for the interpersonal-experiential intervention. On the other hand, participants who are more introverted or who learn better through structured lectures and activities may be a better fit for the didactic-task intervention. Future research examining who can benefit the most from each intervention is needed.

Moreover, facilitators should pay special attention to group members' perceptions of engagement to facilitate favourable outcomes. For example, encouraging expressions of warmth and acceptance among group members and linking group members' disclosures to one another can help facilitate increased group engagement (Levine & Moreland, 1990). Decreasing attention to individual members of the group by employing "group as a whole" interventions as well as setting norms and goals for the group have also been found to foster an engaged group climate (Kivlighan & Tarrant, 2001). Lastly, group facilitators may consider integrating aspects of these two intervention approaches to produce optimal levels of group engagement. For example, the interpersonal-experiential intervention may benefit from employing greater structure and teaching regarding particular possible selves topics, whereas the didactic-task approach may benefit from incorporating more opportunities for interactive group discussion. By combining elements of each intervention, counsellors may increase the likelihood of connecting with a wider range of individuals' preferences and characteristics within a group format. An integrated intervention may offer opportunities for participants who benefit from instructive and independent learning processes *and* for participants who benefit from exploratory and interpersonal processes instead of one or the other as reflected in the current design of the interventions. Future research is needed to explore such possibilities.

Limitations and Future Directions

The above findings should be considered in light of several limitations. First, while the brevity of the interventions may be considered a strength of the study,

these time-limited interventions may have precluded pertinent group development processes such as the progression through group stages (e.g., forming, norming, storming, performing, and adjourning; Tuckman, 1965). The “dose-response” relationship may also be relevant, wherein a “dose” is defined as an intervention session and a “response” is defined as a particular outcome event that has taken place (Hansen et al., 2002), such that the “amount” of the intervention in the current study may not have been sufficient to influence the strongest effect possible. It is noted that the same interventions with a longer duration or with additional sessions may have produced different trends, processes, or outcomes.

Second, while the randomization procedure was essential to the experimental research design, it may have precluded important participant selection procedures, negatively affecting group composition. There is robust evidence that cohesive groups require careful participant selection based on criteria that set the stage for a healing and engaged group climate (Bernard et al., 2008; Mahon & Leszcz, 2017). The absence of participant selection procedures may have resulted in less cohesive groups, thereby impacting study results. Moreover, differences in group size may also have affected group dynamics, thus making it difficult to make direct comparisons across groups. Future research should control for differences in group size and examine the potential effect on group dynamics. Indeed, the sample size in this pilot study was insufficient for multi-level analytic procedures to account for processes—such as member absences and between-member interactions—within each small group in the study. Analysis of group data should ideally address inherent dependency in such small groups (i.e., group members nested within small groups or nested within intervention types), rather than the simple comparisons employed in the present study.

Third, emerging adults who participated in the study may demonstrate a self-selection bias due to the non-random sampling procedures employed in the study design. It is possible that emerging adults participated in the study because they wanted to meet new people, because they valued the modest remuneration available to participants, or because they were inherently interested in enhancing their possible selves. Self-selection may have influenced the results of the study because participants may have been more motivated to complete the group program than the average emerging adult due to the reasons noted above. Relatedly, there was significant attrition in the study. Because 70% of the total participant attrition occurred before Session 2, it is possible that those who discontinued their participation did so because they had already received the majority of their remuneration (i.e., further remuneration would be paid after the post-intervention assessment). Alternatively, it is possible that attrition occurred because of the moderate time commitment needed to complete the group program, because of scheduling conflicts, or because the group program fell short of their expectations. The impact of having participants discontinue their participation may have influenced the composition of participants who completed the study such that

they were increasingly motivated, incentivized by remuneration, or genuinely interested in enhancing their possible selves.

Fourth, it was notable that nearly half of the study participants self-identified their racial-ethnic background as Asian and nearly one third as Caucasian. Thus, the study results may most aptly apply to Asian and Caucasian clients in a Canadian context. As a result, caution is warranted when extrapolating the results to other persons or groups from diverse racial-ethnic backgrounds. Similar caution is warranted regarding gender composition, since 75% of participants self-identified as female.

Finally, the sample was relatively homogenous in terms of participants' educational and functional status. Most participants were well-adjusted university students; other emerging adult groups (e.g., community samples) in various levels of care (e.g., outpatient/inpatient facilities) were not adequately represented. While the current study did not target distressed emerging adults, doing so may be an important next step to advance research in the area. Future research with greater participant diversity may also facilitate a better understanding of the effects of these interventions on the broader population of emerging adults.

Conclusion

The results of this study indicate that emerging adults were satisfied with brief group interventions focused on possible selves and achieved improvement in personal growth initiative following participation in each type of group. A modest advantage was also observed for the interpersonal-experiential group in contributing to participants' efficacy to pursue relational possible selves. This difference may have been due largely to the nature of the intervention itself in facilitating interactive discussion about relational themes, though higher perceived group engagement was associated with improvement in this domain. Future research could investigate further the associations between intervention types, group processes, and outcomes salient to emerging adults' possible selves. Such work may contribute a better understanding of how group intervention approaches can be useful in helping emerging adults with issues related to this important aspect of personal identity.

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