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Adventure-based Family Intervention in Strengthening Family Resilience During Pandemic and Post-pandemic Periods

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Abstract

Purpose: This study examined the effectiveness of adventure-based family intervention (ABFI) groups in strengthening family resilience, improving family relationships, and enhancing individual well-being among Chinese families during the COVID-19 pandemic and post-pandemic periods. **Method:** A three-arm quasi-experimental design was employed, comprising 1) the ABFI group with an overnight camp (ABFI-CAMP), 2) the ABFI group with parent and child parallel group sessions and a day camp (ABFI-PARALLEL), and 3) a control group that did not participate in any ABFI programmes. **Results:** Participants exhibited increased family resilience, marital satisfaction, life satisfaction, and personal resilience, alongside a reduction in parent-child conflict, hopelessness, and mental health symptoms compared to the control group. The ABFI-CAMP group demonstrated better outcomes compared to the ABFI-PARALLEL group. **Discussion:** ABFI groups are effective in strengthening family resilience, improving family relationships, and enhancing individual well-being among families during times of adversity, offering important insights for social work practice.

Keywords: family resilience, Chinese families, mental health, adventure-based counselling, pandemic

The confluence of health, economic, social, and educational disruptions caused by the COVID-19 pandemic has created great challenges to the families (Feinberg et al., 2022; Zhou et al., 2020). The social distancing measures, school suspension and remote learning, work-at-home arrangement etc. blurred the work-family boundary, disturbed normal family functioning, and brought families into chaos (Browne et al., 2021; Lebow, 2020; Vyas & Butakhieo, 2021). Particularly, Hong Kong has experienced a prolonged Dynamic Zero-COVID Policy as a main strategy to reduce infection and death cases, characterized by mandatory testing, contact tracing, quarantine measures, and border closure (Lau et al., 2022). Individuals got physically and psychologically drained and demonstrated high stress, burnout, anxiety, depression, and post-traumatic symptoms during the period (Chan, 2022; Wong et al., 2022; Zhuang et al., 2021). Families also experienced more conflicts and problems, illustrated by the accelerating trends of child abuse and domestic violence (Wu & Xu, 2020; Zhuang et al., 2021).

Even though the pandemic has become stable since 2023, recovery is a lengthy process filled with challenges. Children and adolescents demonstrated emotional and behavioural difficulties due to learning loss during the pandemic period, adjustment to normal school life, and poor reintegration with peers (Almeida et al., 2022; Miao et al., 2023). Parents also experienced stress and burnout to manage the challenges ahead (Griffith, 2022). The negative impacts arising from the pandemic and post-pandemic periods are penetrating individuals and families (Cao et al., 2022; Odetayo et al., 2025).

The Family Resilience Framework

The Family Adjustment and Adaption Response Model (Patterson, 2002) describes how families respond to external threats. When a stressful life event occurs, the demands and hassles may create stress to families (i.e., the adjustment phase), pushing the families to reorganize their roles and functions, and mobilize more resources to cope with the changes

(i.e., the adaptation phase). Family meanings (measured in terms of appraisals of family situations and family identity) and capabilities (measured in terms of coping mechanisms and resources) are key protective factors for families to have positive adaptations.

Family resilience refers to family's positive adaptation to overcome adverse conditions (Patterson, 2002; Walsh, 2015). Walsh (2015) further developed the family resilience framework that proposes three important family processes for families to have positive adaptation during adversities. They are family beliefs systems (measured by positive meaning-making about adversity, hope and positive outlook, and family transcendence and spirituality), family organizational patterns (measured by family flexibility, cohesion and kin, and social and economic resources), and family communication (measured by clear information about adversity, open emotional expression and collaborative problem-solving).

Contrary to the family pathology approach that emphasizes family deficiencies, problems, and inadequacies in addressing demands during adversities, the family resilience perspective upholds a strengths-based paradigm that embraces family assets and capacity to combat external threats and meet developmental demands over time (McCubbin et al., 1996; Patterson, 2002). This perspective is proactive as it fosters family growth by enhancing family capital to overcome adversities and future challenges as they arise (Baumann et al., 2010; Shek et al., 2023). The significance of family resilience in strengthening individual well-being and normal family functioning during the pandemic is widely acknowledged (Prime et al., 2020).

Adventure-based Family Intervention

Adventure-based counselling is a useful therapeutic tool that integrates experiential learning, outdoor activities, groupwork practice, and counselling techniques to facilitate positive development of individuals (Fletcher & Hinkle, 2002; Priest & Gass, 2005; Schoel et al., 1988). The process utilizes adventures to create fun, therapeutic experiences, and learning

opportunities for participants (Schoel & Maizell, 2002). It has been applied in fields of clinical psychology, social work, counselling, and education (Neill, 2003). Besides, adventure-based training has been widely used in leadership training and team building (Priest & Gass, 2005; Tyne et al., 2024), in which team members would collaborate and solve the problems together to accomplish the assigned tasks. However, intervention strategies integrating adventure-based counselling and family intervention are very limited in the scientific literature (Glass & Dotson-Blake, 2010; Swank & Daire, 2010). Among a few studies, Glass and Dotson-Blake (2010) emphasized the importance of removing the family from a rigid family hierarchy and conventional family interactive patterns and placing them into a social environment that highlights the principles of valuing each other, mutual support and collaborative problem-solving, and examining systemic family processes through the accomplishment of assigned activities. Boyd-Franklin and Bry (2000) also underscored the importance of receiving support among family members and seeking help outside the family, which fosters a sense of resiliency for families (Walsh, 2015).

Adventure-based counselling can be used to strengthen family resilience. By completing challenging tasks, family members are encouraged to develop common goals and a positive outlook, fostering the belief that they can accomplish these tasks. Additionally, they can build mutual trust, foster effective communication, and solve problems collaboratively by devising strategic plans and executing them flexibly. Furthermore, family members learn to be attentive to each other's emotions, particularly when encountering obstacles and setbacks during the process. From the activities, family members can analyse their strategies and communication patterns in managing the tasks and reflect on family processes that may be like or different from their daily lives. Families may gain insights from these experiences and reflections, applying this newfound knowledge to their future daily

practices. In this manner, family resilience can be enhanced through the experience of managing challenging tasks in participating in adventure-based activities.

As evidence-based family resilience intervention groups employing adventure-based counselling strategy are almost non-existent in social science literature, and few studies have examined the effectiveness of different subtypes of adventure-based intervention programmes, we thus developed an intervention protocol with reference to the existing adventure-based counselling groups for individuals (e.g., Schoel & Maizell, 2002), multiple family group therapy (e.g., Swank & Daire, 2010; Thorngren & Kleist, 2002), the family resilience framework (Walsh, 2015) and some family enhancement programmes in Hong Kong (e.g., Shen et al., 2017). A team of three social workers from two non-government organizations (NGOs) and a university was responsible for co-creating and developing the protocol, with two of them were proficient in adventure-based counselling programmes, and the other one was experienced in delivering family resilience programmes. Two types of adventure-based family intervention groups, family resilience using overnight camp (ABFI-CAMP) and family resilience using parallel sessions (ABFI-PARALLEL), were developed. Each group session lasted approximately one and a half hours, and all family members were invited to attend. The ABFI-CAMP involved an overnight camp at a campsite where the whole family needed to work together to overcome the challenges simulated by various adventure activities. The ABFI-PARALLEL used parallel group sessions to let family members understand different family roles and their interactions within the family; a day camp was organized to let family members interact and solve problems collaboratively. The ABFI-PARALLEL group served as an alternative for the ABFI-CAMP group when outdoor activities were not feasible during the pandemic, as well as for organisations with constraints to organise overnight camps for families. As some outdoor activities (e.g., wild cooking, low-

event adventure etc.) were implemented in the campsite or wilderness contexts, the intervention can be replicated in different places providing similar facilities.

To safeguard the activities were suitable for family members at different ages, we invited a consultant who was an expert in delivering multiple family groups for families with greater psychosocial needs to give invaluable advice in formulating the protocol and provide subsequent training for social workers implementing the groups. Moreover, two pilot groups were conducted to examine the feasibility of each type of adventure-based family intervention group. Table 1 outlines the session protocol for both ABFI-CAMP and ABFI-PARALLEL groups.

The Present Study

The current study examined the effectiveness of adventure-based family intervention (ABFI) groups in strengthening family resilience, improving family relationship and enhancing individual wellbeing among Chinese families during the pandemic period and the aftermath.

There are three research questions:

RQ1: Would participants of intervention groups (ABFI-CAMP and ABFI-PARALLEL) show higher family resilience after completing the programmes than would those in the control group?

H1a: Participants of the ABFI-CAMP group would show higher family resilience after completing the programmes, than would those in the control group.

H1b: Participants of the ABFI-PARALLEL group would show higher family resilience after completing the programmes, than would those in the control group.

RQ2: Would participants of intervention groups (ABFI-CAMP and ABFI-PARALLEL) show more improvements in family relationships after completing the programmes than would those in the control group?

H2a – H2c: Participants of the ABFI-CAMP group would show greater marital satisfaction (H2a), better parent-child relationship (H2b), and less parent-child conflict (H2c) after completing the programmes, than would those in the control group.

H2d – H2f: Participants of the ABFI-PARALLEL group would show greater marital satisfaction (H2d), better parent-child relationship (H2e), and less parent-child conflict (H2f) after completing the programmes, than would those in the control group.

RQ 3: Would participants of intervention groups (ABFI-CAMP and ABFI-PARALLEL) show lower levels of mental health problems after completing the programmes than would those in the control group?

H3a – H3d: Participants of the ABFI-CAMP group would show lower levels of mental health problems (H3a) and hopelessness (H3b), and higher levels of life satisfaction (H3c) and personal resilience (H3d) after completing the programmes, than would those in the control group.

H3e – H3h: Participants of the ABFI-PARALLEL group would show lower levels of mental health problems (H3e) and hopelessness (H3f), and higher levels of life satisfaction (H3g) and personal resilience (H3h) after completing the programmes, than would those in the control group.

We would also compare the relative effectiveness of the ABFI-CAMP and ABFI-PARALLEL groups in strengthening family resilience, improving family relationships, and enhancing individual well-being. These analyses are exploratory in nature.

Method

Participants and Procedures

We adopted a quasi-experimental research design in evaluating the effectiveness of ABFI during the period between June 2022 and November 2023. Randomisation was not feasible due to the specific needs and availability of the participating families in the

intervention groups, particularly during the pandemic. We were aware of the potential limitations of quasi-experimental research design regarding selection bias and generalizability of research findings. As the intervention group and the control groups were not randomly selected, the demographic and psychosocial conditions between the groups might not be equivalent, making inferences of post-group differences difficult to attribute solely to the intervention (Thyer, 2010). To minimize the potential problems, our collaborating NGOs invited those participants with similar age range, family composition and income levels who had not participated in the ABFI groups to join the control groups. We conducted further analyses to ascertain whether there were differences in demographic and outcome variables between the intervention and control groups at baseline, and we controlled for any variables that exhibited differences.

This study encompassed 47 ABFI groups, with 20 belonging to the ABFI-CAMP category and 27 to the ABFI-PARALLEL category. The groups were conducted by four NGOs in Hong Kong, serving 328 families with 873 participants, of which 440 were parents, 85 were adolescents above 12 years old, and 346 were children below 12 years old. The inclusion criteria of the programmes included: 1) families with children aged over six years, 2) at least one parent and one child willing to participate in the adventure-based family intervention programme, and 3) participants without any physical limitations preventing them from joining outdoor programmes. The main caregiver of each participating family was invited to complete a pre-test questionnaire (T0) before the commencement of the group and a post-test questionnaire (T1) after completing all the group sessions. The questionnaire assesses two outcome aspects: (1) family relational attributes, including family resilience, marital satisfaction, parent-child relationship, and parent-child conflict; and (2) personal well-being, including mental health problems, sense of hopelessness, life satisfaction, and personal resilience. A total of 257 participants completed the pre-test questionnaire, and 244

completed the post-test questionnaire, with 226 matched questionnaires, of which 104 belonged to the ABFI-CAMP groups and 122 to the ABFI-PARALLEL groups.

The control group comprised 320 participants. The participating NGOs assisted in distributing questionnaires to parents who had not participated in any community-based family intervention groups or intensive counselling services within their catchment areas, via schools and social service centres. These control group participants and their family members had only joined usual activities, such as tutorials or interest classes for children and adolescents, and parent education talks. As a token of appreciation, each control group participant was given a \$100 (US\$12.5) supermarket coupon upon returning both the pre-test and post-test questionnaires. Written consent was obtained from participants, and ethical approval was sought from the Institutional Review Board of Author 1's university. Table 2 shows the basic demographic information of the two intervention groups and the control group. Figure 1 shows the flow of data collection and analysis.

Measures

Family relational attributes

Family resilience - *The Chinese Family Resilience Scale (CFRS)*. Based on the Walsh's Family Resilience Framework (Walsh, 2015), the CFRS was developed and validated by the Project Team using the data collected from a survey in a Chinese family sample (Leung et al., 2023). A 9-item short-form CFRS was used to assess three domains of family resilience – beliefs system, organizational patterns, and communication processes. Sample items are “family members can respond to emergencies flexibly” and “family members open up themselves and are willing to listen to each other.” All items were rated on a 6-point Likert scale, from “1 = strongly disagree” to “6 = strongly agree”. The higher the score, the better the family resilience. The Cronbach's alpha of the scale was 0.90 in the pre-test and 0.92 in the post-test, showing excellent reliability in this study.

Marital satisfaction - *The Chinese version of the Kansas Marital Satisfaction Scale (C-KMS)*. Shek and Tsang (1993) translated the Kansas Marital Satisfaction Scale (Schumm et al., 1986) into Chinese and the measurement showed good psychometric properties in a Chinese sample in Hong Kong. Participants' marital satisfaction was assessed using the C-KMS in the present study. The scale consists of 3 items. A sample item is "How satisfied are you with your husband/wife as a spouse?" All items were rated on a 7-point Likert scale, from "1 = very dissatisfied" to "7 = very satisfied". Higher scores indicate higher marital satisfaction. The Cronbach's alpha of the scale was 0.98 in both the pre-test and post-test, showing excellent reliability in this study.

Parent-child relationship - *The Chinese Parent-child Relational Quality Scale (PCR)*. The 3-item PCR (Shek, 2006) was used to assess parent-child relational qualities in the present study. A sample item reads "I actively share my experience with my child". Participants were requested to rate the PCR on a 6-point Likert scale (1 = Strongly disagree, 6 = Strongly agree). Higher scores of the PCR represent higher levels of the parent-child relationship. The Cronbach's alpha of the scale was 0.81 in the pre-test and 0.79 in the post-test, showing satisfactory reliability in this study.

Parent-child conflict - *Parent-Adolescent Conflict Scale (PAC)*. The 3-item short form of the Chinese-translated version (Shek, 2002) of the Conflict Behavior Questionnaire (Robin & Foster, 1989) was used to evaluate participants' conflictual situations with their children. PAC showed good psychometric properties in a Chinese sample (Shek, 2002). A sample item is "My child and I always criticize or pick on each other". The respondents were asked to rate PAC on a 6-point Likert scale (1 = strongly disagree, 6 = strongly agree). Higher mean scores indicate higher levels of parent-child conflicts. The Cronbach's alpha of the scale was 0.92 in both the pre-test and post-test, showing excellent reliability in this study.

Personal attributes

Mental health symptoms - *Depression Anxiety Stress Scale (DASS₂₁)*. DASS₂₁ is a short version of Lovibond and Lovibond's (1995) Depression Anxiety Stress Scale that consists of three dimensions, namely depression, anxiety, and stress. Moussa et al. (2001) translated the measurement into Chinese and showed good psychometric properties. Each dimension consists of 7 items. The presence of the symptom indicated in each item over the past week was rated on a 4-point Likert scale, ranging from "0 = did not apply at all over the last week" to "3 = applied very much or most of the time". The higher the score, the more severe the symptoms. The Cronbach's alpha of the scale was 0.95 in both the pre-test and post-test, showing excellent reliability in this study.

Hopelessness - *Hopelessness Scale*. The Hopelessness Scale was devised by Beck et al. (1974) to measure one's sense of hope, and the Chinese version was translated by Shek (1993). All items were rated on a 6-point Likert scale, from "1 = strongly disagree" to "6 = strongly agree". A higher score indicates a lower sense of hope. The Cronbach's alpha of the scale was 0.88 in the pre-test and 0.90 in the post-test, showing good reliability in this study.

Life satisfaction - *Satisfaction with Life Scale (SWLS)*. Participants' life satisfaction was measured by the 5-item Chinese version of Satisfaction with Life Scale (SWLS) translated by Shek (1992). The SWLS was initially developed by Diener et al. (1985), assessing one's global judgment of the quality of life. A sample item reads "I am satisfied with my life". All 5 items were assessed on a 6-point Likert scale (1 = strongly disagree, 6 = strongly agree). The higher the score, the higher the level of life satisfaction. The Cronbach's alpha of the scale was 0.89 in the pre-test and 0.91 in the post-test, showing good reliability in this study.

Personal resilience - *Resilience subscale of The Chinese Positive Youth Development Scale (CPYDS)*. The CPYDS was developed by Shek et al. (2007) as a global measure of positive development among Chinese people. The resilience subscale has three items. A sample item reads "My belief is that even though tomorrow will become worse, I will still

live in a good manner”. All items were rated on a 6-point Likert scale, from “1 = strongly disagree” to “6 = strongly agree”. A higher score indicates a higher level of personal resilience. The Cronbach’s alpha of the scale was 0.84 in the pre-test and 0.87 in the post-test, showing good reliability in this study.

Analysis

Preliminarily, we conducted Chi-square test and one-way ANOVA to examine if there were baseline differences in demographic characteristics (i.e., age, sex, family intactness, education level, and family income) and all outcome measures (i.e., family resilience, marital satisfaction, parent-child relationship, parent-child conflict, mental health problems [DASS], sense of hopelessness, life satisfaction, and personal resilience) in pre-test among three groups (i.e., ABFI-CAMP, ABFI-PARALLEL, and the control group). In case there were significant differences in the scores among three groups, the variables were controlled as covariates in the analysis.

Then, we performed repeated measures ANCOVA to compare the pre-test and post-test scores of each outcome measure among the three groups to evaluate the effectiveness of adventure-based family intervention groups. Repeated measures ANCOVA is considered germane in several ways: first, it is suitable for dealing with multiple measurements of the same group of subjects at different time points or under different conditions, effectively controlling for individual differences and thus improving statistical significance (Shin, 2009). Second, it can reduce inter-individual variability and is particularly suitable for analysing time-series data (To et al., 2024; Urken & LeCroy, 2021). In contrast, ANCOVA may rely on the assumption that there is a linear relationship between covariates and dependent variables, which does not always hold in practice (Girden, 1992; Cohen & Tisch, 2021). In addition, repeated measures ANCOVA makes fewer assumptions about the data, particularly regarding

sample independence (Girden, 1992), and can make effective use of all data from the same group of subjects, improving statistical efficacy.

Pairwise comparisons with Bonferroni adjustment were conducted to assess whether there were significant differences among groups. Post-hoc comparison tests using the Tukey HSD method were further adopted to evaluate the differences among the three groups. Partial eta squared (η^2) represents the effect size with $\eta^2 = 0.01$ indicating small effect, 0.06 indicating medium effect, and 0.14 indicating large effect (Stevens, 2002).

Results

Preliminary Analysis

Results of ANCOVA showed that significant differences among groups were found in respondents' educational level, family resilience, and parent-child conflict in the pre-test, with participants in the control group showing lower educational levels, higher family resilience, and less parent-child conflict in the pre-test. Thus, these three variables were controlled for in the estimation of program effect. Table 2 lists the baseline comparison of outcome measures among the three groups. Table 3 shows the mean scores of all outcome measures at pre-test and post-test in the three groups.

Repeated-measures ANCOVA Tests

Results of repeated measures ANCOVA tests demonstrated that there were significant effects of Time X Group interactions in both the family attributes (family resilience, marital satisfaction, and parent-child conflict) and personal well-being (mental health problems, hopelessness, life satisfaction, and personal resilience). For outcome measures showing significant interaction effects, post-hoc comparison tests using the Tukey HSD method were further adopted to evaluate the differences among the three groups. Table 4 presents the related post-hoc analyses.

A repeated measures ANCOVA with a 2 x 3 design (Time: pretest vs. posttest; Group: ABFI-CAMP vs. ABFI-PARALLEL vs. control) was performed to evaluate the effectiveness of adventure-based family groups on family resilience among participants. Results revealed a significant interaction effect between Time and Group [$F(2, 530) = 26.51, p < .001, \eta p^2 = 0.09$] (Table 3), suggesting that the change in family resilience between pre-test and post-test varied significantly across the three groups. The effect size was between medium and large (Stevens, 2002). Post-hoc comparison using the Tukey HSD test indicated that the mean score in family resilience for the ABFI-CAMP and ABFI-PARALLEL groups were significantly higher than that of the control group, with mean difference of 0.62 ($p = .002$) and 0.29 ($p < .001$) (Table 4). While participants of the control group showed a slight decrease in family resilience score between pre-test and post-test ($\beta = -0.019, p = .657$), participants of the ABFI-CAMP and ABFI-PARALLEL groups demonstrated significant increases in family resilience after joining the programs, with $\beta = 0.654$ ($p < .001$) and 0.262 ($p < .001$), respectively. H1a and H1b were supported (see Figure 2). Furthermore, there was a significant difference in mean scores of family resilience between the ABFI-CAMP and ABFI-PARALLEL groups (mean difference = 0.33; $p = .002$) (Table 4).

Similar results were also observed for marital satisfaction. There was significant interaction effect between Group x Time on marital satisfaction [$F(2, 509) = 8.417, p < .001, \eta p^2 = 0.03$] among the three groups (Table 3). The effect size was between small and medium (Stevens, 2002). Both ABFI-CAMP and ABFI-PARALLEL groups demonstrated significantly higher scores in marital satisfaction at the post-test when compared to the control group, with mean differences of 0.39 ($p < .001$) and 0.21 ($p = .046$), respectively (Table 4). While participants of control group showed a slight decrease in marital satisfaction between pre-test and post-test ($\beta = -0.513, p = .682$), participants of ABFI-CAMP and ABFI-PARALLEL groups showed an increase in marital satisfaction after joining the programs,

with $\beta = 0.335$ ($p = .012$) and 0.206 ($p = .180$), respectively. H2a and H2d were supported (see Figure 3). However, there was no significant difference in changes of marital satisfaction between ABFI-CAMP and ABFI-PARALLEL groups (mean difference = 0.18 ; $p > .05$) (Table 4).

Regarding parent-child relationship, the interaction effects between Group X Time was non-significant, with $F(2, 524) = 0.253$ ($p = .776$) (Table 3), indicating that parent-child relationship did not differ among ABFI-CAMP, ABFI-PARALLEL and control groups. For parent-child conflict, the interaction effects between Group X Time was significant, with $F(2, 524) = 5.47$ ($p = .004$) and ηp^2 was 0.02 (Table 3). Both ABFI-CAMP and ABFI-PARALLEL groups showed significantly lower scores in parent-child conflict at the post-test compared to the control group, with mean differences of -0.26 ($p = .023$) and -0.24 ($p = .033$), respectively (Table 4). While participants of ABFI-CAMP and ABFI-PARALLEL showed significant decrease in parent-child conflict after joining the programs, with $\beta = -0.261$ ($p = .009$) and -0.311 ($p = .008$), respectively, participants of control group did not show any changes in parent-child conflict between pre-test and post-test ($\beta = -0.169$, $p = .865$). H2c and H2f were supported (see Figure 4). At last, the changes of parent-child conflict between ABFI-CAMP and ABFI-PARALLEL groups were not significant (mean difference = -0.02 ; $p = .982$) (Table 4).

Personal Well-being

The results of repeated measures ANCOVA revealed a significant interaction effect between Group x Time on individual mental health problems, with $F(2, 526) = 4.39$ ($p = .013$) and $\eta p^2 = 0.02$. The post-hoc comparison of one-way ANOVA results (Tables 4) using the Tukey HSD test indicated that the decrease in mental health problems in ABFI-CAMP and ABFI-PARALLEL groups were significantly greater than that in the control group, with mean difference = -0.15 ($p = .003$) and -0.10 ($p = .042$) respectively (Table 4).

While participants in all three groups showed significant decreases in mental health problems, the degree of reduction was larger in both intervention groups compared to the control group. The decreases in mental health problems between pre-test and post-test for participants in the ABFI-CAMP, ABFI-PARALLEL, and control groups were $\beta = -0.240$ ($p < .001$), -0.185 ($p < .001$), and -0.061 ($p = .039$), respectively. H3a and H3e were supported (see Figure 5). However, the decrease in mental health problems between ABFI-CAMP and ABFI-PARALLEL groups did not show any significant difference (mean difference = -0.05 , $p = .640$).

Regarding hopelessness, there was significant interaction effect between Group x Time, with $F(2, 529) = 6.78$ ($p = .001$) and $\eta p^2 = 0.03$ (Table 3). Post-hoc comparison analyses using the Tukey HSD test indicated that the decrease in hopelessness in the ABFI-CAMP group was significantly greater than that in the control group, with mean difference = -0.40 ($p < .001$) (Table 4). However, the decrease in hopelessness between the ABFI-PARALLEL groups and control groups was not significantly different, with mean difference = -0.13 ($p = .321$) (Table 4). While participants of the ABFI-CAMP and ABFI-PARALLEL groups showed significant decreases in hopelessness after joining the programme, with $\beta = -0.492$ ($p = .011$) and -0.229 ($p = .041$), respectively, the decrease in hopelessness was slight in the control group ($\beta = -0.05$, $p = .221$). H3b and H3f were supported (see Figure 6). Meanwhile, the decrease in hopelessness between the ABFI-CAMP and ABFI-PARALLEL groups was significantly different, with mean difference = -0.27 ($p = .039$) (Table 4).

For life satisfaction, there was significant interaction effect between Group X Time, with $F(1, 529) = 6.89$ ($p = .002$) and $\eta p^2 = 0.03$ (Table 3). Post-hoc comparison analyses indicated that the increase in life satisfaction in the ABFI-CAMP and ABFI-PARALLEL groups were significantly greater than that in the control group, with mean difference = 0.38 ($p < .001$) and 0.21 ($p = .034$), respectively (Table 4). While participants of the ABFI-CAMP and

ABFI-PARALLEL groups showed a significant increase in life satisfaction after joining the programmes with $\beta = 0.550$ ($p < .001$) and 0.317 ($p < .001$), respectively, the increase in life satisfaction was non-significant in the control group ($\beta = 0.089$, $p = .084$). H3c and H3g were supported (see Figure 7). Meanwhile, the increase in life satisfaction between the ABFI-CAMP and ABFI-PARALLEL groups was not significant (mean difference = 0.17 ; $p = .275$) (Table 4).

Lastly, there was a significant interaction effect between Group x Time on personal resilience [$F(2, 529) = 4.90$, $p = .008$, $\eta p^2 = 0.02$] (Table 3). Post-hoc comparison analyses indicated that the increase in personal resilience in the ABFI-CAMP groups was significantly greater than that in the control group, with mean difference = 0.31 ($p = .003$) (Table 4). However, the increase in personal resilience between the ABFI-PARALLEL and control groups was not significantly different, with mean difference = 0.14 ($p = .278$) (Table 4). While participants of the ABFI-CAMP and ABFI-PARALLEL groups showed significant increases in personal resilience after joining the programmes with $\beta = 0.287$ ($p < .001$) and 0.182 ($p = .014$), respectively, there was no change in personal resilience in the control group ($\beta = 0.029$, $p = .505$). H3d and H3h were supported (see Figure 8). Meanwhile, the increase in personal resilience between the ABFI-CAMP and ABFI-PARALLEL groups was not significantly different, with mean difference = 0.17 ($p = .275$) (Table 4).

Discussion and Applications to Practice

The study aimed to examine the effectiveness of adventure-based family intervention programmes in strengthening family resilience, improving family relationships and enhancing individual's well-being of Hong Kong families. Overall, participants of the adventure-based family intervention programmes showed statistically significantly higher family resilience, greater marital satisfaction, more life satisfaction and personal resilience, less parent-child conflict, fewer mental health symptoms and lower levels of hopelessness when compared

with those who did not join the programmes. The adventure-based training intervention involved family members undertaking challenging tasks that were atypical of their everyday lives. They were required to develop common goals, perform complementary roles and functions, resolve problems collaboratively, and practise effective communication to manage the tasks. Following the activities, family members were asked to evaluate their strategies and role dynamics in managing the tasks and reflect on their interactions and role performance in real life. These activities helped family members understand the needs, strengths and contributions of other family members, which was critical for building family resilience. Moreover, members might experience failures, encounter hurdles, and face conflict during the adventure. The ways in which they coped with adversities and resolved conflicts were important for family members to discuss and reach a consensus. Thus, adventure-based family intervention was a useful tool for families to enhance their family resilience.

Due to the social distancing constraint imposed by the pandemic, which rendered some outdoor activities unavailable, we developed two types of adventure-based family intervention groups: 1) family resilience using overnight camp (ABFI-CAMP) and 2) family resilience using parallel sessions (ABFI-PARALLEL). The ABFI-CAMP group involved entire families participating in an overnight camp, whereas the ABFI-PARALLEL group utilised parallel group sessions (separate parent and child groups) and a day camp to enhance mutual understanding and support among family members. The results indicated that participants joining the ABFI-CAMP group reported higher family resilience and lower hopelessness compared to those of the ABFI-PARALLEL group. Moreover, the mean differences in outcomes between the ABFI-CAMP and ABFI-PARALLEL groups also suggested that the effects of the ABFI-CAMP group were superior to those of the ABFI-PARALLEL group. There are three possibilities of the findings. First, the overnight camp offered a greater variety of adventure-based activities (e.g., low-event challenges, outdoor

cooking, camping) that aligned with the intervention's purpose, whereas the parallel groups focused mainly on centre-based activities, which might have limited the variety and level of challenges. Second, families were more immersed in the overnight camp as they had more time to interact, reflect and improve their relationships. The natural environment, away from various fatigue-inducing stressors such as noise, overcrowding, and role overload in the city, provided a sense of healing for the families (Russell & Farnum, 2004). In contrast, parallel groups might have offered a freer environment for parents and children to share their family experiences, but direct communication between the dyad was restricted. Third, more fathers were involved in the overnight camp as it took place at weekends or holidays. Fathers were more enthusiastic about adventure-based activities and often assumed a leading role in these activities. The roles and functions in the activities might have differed from their real-life family experiences, where mothers typically assumed more roles in family management than fathers (Kluwer et al., 2000). Hence, this new experience might have provided insights for family members to modify their roles, decision-making processes, and communication patterns within the family, thereby enhancing their family resilience and strengthening their family relationships. In contrast, fathers were seldom involved in the parallel sessions. Consequently, the focus of improvement was more on the dyadic (mother-child) relationship rather than the family as a whole, which might have reduced the effectiveness of the ABFI-PARALLEL group in building family resilience.

In addition to the familial outcomes, the findings demonstrated that adventure-based family interventions also enhanced individual well-being. Specifically, the ABFI-CAMP group experienced a reduction in mental health symptoms and hopelessness, alongside an increase in life satisfaction and personal resilience, compared to the control group.

Adventure-based activities provided inspirational experiences for participants as they were required to step outside their comfort zones and explore new methods for problem-solving,

thereby enhancing their resilience and personal capacities (Koltz, 2021). The completion of challenging tasks was also a fulfilling process that brought hope, satisfaction, recognition, and a sense of achievement to participants (Chung et al., 2021). Furthermore, participants valued the time spent with their family members during outdoor activities, particularly given the stress and adjustments faced during the pandemic and post-pandemic periods. The bonding and support among family members in overcoming hurdles and challenges in experiential activities may have strengthened their individual well-being.

There are several theoretical and practical implications of the study. In addressing external threats and adversities, clinical practice often employs a problem-solving approach to mitigate family issues (Bernstein, 2007; Carr, 2009; Usher et al., 2020). Many family intervention programmes have adopted a family pathology perspective, emphasising family conflict, deficiencies, and problems (Feinberg et al., 2022; Prime et al., 2020). This perspective views families as problematic and lacking the ability to resolve their own issues. Such an approach not only stigmatises families seeking help but also diminishes their motivation and engagement in the helping process (Edwards et al., 2022; Edwards & Ugwudike, 2023), potentially disempowering them from resolving their problems. In contrast, adventure-based counselling programmes adopting a family resilience approach focus on family strengths and capacities to overcome adversities, which encourage family members to participate and collaborate in the activities. The present study demonstrates that adventure-based counselling is an effective means of enhancing family resilience, providing a valuable addition to the literature. Moreover, while numerous studies have confirmed that adventure-based counselling is effective in enhancing individual psychosocial development (Beames et al., 2019; Hopkins & Putnam, 2013) and fostering teamwork (Cooley et al., 2015; Newes & Bandoroff, 2004), few have examined its effectiveness in strengthening family resilience and promoting positive family experiences (Glass & Dotson-Blake, 2010; Swank &

Daire, 2010). The findings provide empirical support for the effectiveness of adventure-based counselling in strengthening family resilience, increasing marital satisfaction, and reducing parent-child conflict, making a significant contribution to the existing literature in family studies.

Practically, the findings offer valuable insights for family education and clinical practice, particularly within the social work context. The study examined the effectiveness of two types of group processes in adventure-based family counselling: 1) the provision of overnight camp activities and 2) the use of parallel groups, in enhancing family resilience and individual's well-being. The results indicated that both types of adventure-based family intervention groups were effective in strengthening family resilience, improving family relationship and enhancing individuals' well-being, compared to those who did not participate in the groups, suggesting that adventure-based counselling can integrate well with family resilience concepts and are suitable for families with children of different age ranges and those of different socio-economic backgrounds. However, adventure-based family counselling involving overnight camp activities was found to have a greater impact on enhancing family resilience and individuals' well-being than those using parallel groups. This may be due to the fact that direct communication and collaborative problem-solving among family members in activity context are crucial in building positive family relationships. Therefore, it is preferable to provide more opportunities for all family members to interact, negotiate, support, and collaborate, enabling them to develop effective communication and role flexibility within the family.

The study has several limitations. Firstly, instead of collecting data from all participants, we gathered data from only one parent participant per family. Although child participants varied in age, making some measurements unsuitable for them, and some parent members did not participate in the entire group process, we acknowledge that data collected from a single

parent may not fully represent the views of other family members. Secondly, we collected data at two time points, namely pre-test and post-test, which did not allow for the assessment of the long-term effects of the programmes. Therefore, a follow-up study is necessary to examine the long-term effects of the adventure-based family intervention programmes in strengthening family resilience. A booster session can be arranged after three months, and a follow-up survey can be conducted in future from the intervention group and the control group to examine whether the changes can be sustained. Thirdly, we employed a quasi-experimental research design rather than randomised control trials, as it was challenging for families to rearrange their schedules during the pandemic. Nonetheless, we conducted analyses to determine whether the intervention groups and control group differed in demographic and outcome variables at baseline, and we controlled for those variables that were different. Lastly, the data was collected through self-administered questionnaires. Methodologically, it would be preferable to conduct qualitative studies (e.g., observational studies, focus groups) to explore the process of change within families.

Despite its limitations, the study is pioneering in assessing the effectiveness of adventure-based family intervention programmes in enhancing family resilience and improving individuals' wellbeing among Chinese families, particularly during the critical adversities of COVID-19 pandemic and its aftermath. Participants demonstrated increased family resilience, marital satisfaction, life satisfaction, and personal resilience, alongside a reduction in parent-child conflict, hopelessness, and mental health symptoms, compared to those who did not participate in the programmes. The findings suggest adventure-based family intervention programmes are effective in strengthening family resilience and individuals' wellbeing among Chinese families. As commented by Prime et al. (2023), "in the wake of the COVID-19 pandemic, children and families continue to experience relational, social, and economic stressors, with mental health needs that far surpass available services.

Family-centred and accessible mental health care services that aim to strengthen family resilience are needed for individuals, families, and societies to heal from the pandemic and prepare for future global challenges” (p. 200), this study serves as a modest response to their comment.

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Table 1. *Session Protocol of Adventure-based Family Intervention*

Adventure-based family intervention with camp (ABFI-CAMP)				Adventure-based family intervention with parallel group sessions (ABFI-PARALLEL)			
Session No. and Format	Target	Elements of family resilience	Content	Session No. and Format	Target	Elements of family resilience	Content
Session 1	Whole family	<ul style="list-style-type: none"> • Connectedness • Collaborative problem-solving 	Pre-camp briefing Game 1 – Survival in the desert <ul style="list-style-type: none"> • Enhance the experience of collaborative problem-solving 	Session 1 (Parent group)	Parents	<ul style="list-style-type: none"> • Open emotional sharing • Clarity 	Theme: “Emotion” and “Communication” Broad games <ul style="list-style-type: none"> • Understand the connections between “emotions” and “family communications”
Camp: Day 1: Morning session	Whole family	<ul style="list-style-type: none"> • Connectedness • Flexibility • Open emotional sharing • Clarity • Collaborative problem solving 	Game 1: Adventure Challenge <ul style="list-style-type: none"> • Enhance family communication Game 2: Orienteering <ul style="list-style-type: none"> • Enhance family problem-solving and decision-making through negotiations and collaborations 	Session 2 (Parent group)	Parents	<ul style="list-style-type: none"> • Connectedness • Flexibility • Open emotional sharing • Clarity • Collaborative problem solving • Social and economic resources 	Theme: My versus Our Expectations Game: Expectation balloons <ul style="list-style-type: none"> • Explore the family challenges and emotional sharing due to differences in expectations among family members Role play of other family roles <ul style="list-style-type: none"> • Realize the importance of verbal and non-verbal communications
Camp Day 1 – Afternoon Session	Whole family	<ul style="list-style-type: none"> • Connectedness • Clarity • Collaborative problem solving • Open emotional sharing • Flexibility • Social and economic resources 	Game 1 <ul style="list-style-type: none"> • Strengthen collaborations and communications among family members Dinner preparation and a feast together <ul style="list-style-type: none"> • Recognize the contributions and strengths of family members 	Session 1 (Child/ Adolescent group)	Children / Adolescents		
Camp Day 1 – Night Session	Whole family	<ul style="list-style-type: none"> • Connectedness • Open emotional sharing • Transcendence and spirituality 	Five Languages of Love <ul style="list-style-type: none"> • Search for one’s language of love and learn to express love to other family members Game: Finding one’s family <ul style="list-style-type: none"> • Establish family connections through non-verbal communications 	Session 3 (Parent group)	Parents	<ul style="list-style-type: none"> • Collaborative problem solving • Social and economic resources • Transcendence and spirituality • Flexibility 	Theme: From “Discipline” to “Negotiation” Game 1 – Survival in the desert <ul style="list-style-type: none"> • Enhance the experience of collaborative problem-solving Game 2 – Auction for “Family Dreams”

			<ul style="list-style-type: none"> Show gratitude to other family members 				<ul style="list-style-type: none"> Set family goals by understanding family characteristics and social resources <p>Game 3 – Transportation of marbles</p> <ul style="list-style-type: none"> Enhance negotiations and problem-solving skills
Camp Day 2 – Morning Session	Whole family	<ul style="list-style-type: none"> Flexibility Collaborative problem solving Clarity Connectedness Social and economic resources 	<p>Game 1: Parent-child Adventure Challenge</p> <ul style="list-style-type: none"> Strengthen the family’s belief in facing adversity Enhance collaborative problem-solving 	Session 4 (Parent Group)	Parents	<ul style="list-style-type: none"> Flexibility Connectedness Clarity Collaborative problem solving 	<p>Theme: Five Languages of Love</p> <ul style="list-style-type: none"> Search for one’s language of love and learn to express love to other family members
Session 6	Whole family	<ul style="list-style-type: none"> Flexibility Collaborative problem solving Clarity Connectedness Social and economic resources 	<p>Game 1: Using Lego blocks to build an ideal home</p> <ul style="list-style-type: none"> Establish the family's future outlook 	Session 2 (Child/Adolescent Group)	Children / Adolescents		
			<p>Game 2: Making a souvenir</p> <ul style="list-style-type: none"> Express gratitude or give encouragement to other family members 	Session 5 (day camp/joint session)	Parents and children/Adolescents	<ul style="list-style-type: none"> Flexibility Connectedness Clarity Collaborative problem solving Open emotional sharing Social and economic resources Positive outlook Making meaning of adversity 	<p>Game 1: Reflections on family communication patterns</p> <ul style="list-style-type: none"> Enhance family communications Learn the importance of sending and receiving messages <p>Game 2: Building a bridge together</p> <ul style="list-style-type: none"> Gain the experience of collaborative problem-solving Get to know the family and community resources <p>Game 3: Making a Wishing Balloon</p>

							<ul style="list-style-type: none"> • Increase connectedness through admiring one another
				Session 6 (day camp/joint session)	Parents and children/ Adolescents	<ul style="list-style-type: none"> • Flexibility • Connectedness • Positive outlook • Making meaning of adversity 	<p>Game 1: Using Lego blocks to build an ideal home</p> <ul style="list-style-type: none"> • Establish the family's future outlook <p>Game 2: Making a souvenir</p> <ul style="list-style-type: none"> • Express gratitude or give encouragement to other family members

Table 2. Demographic Information of Participants in Experimental and Control Groups

Variable	ABFI - CAMP (n = 104)	ABFI - PARALLEL (n = 122)	Control Group (n = 320)	<i>F</i>	<i>p</i>
Age [Mean (SD)]	42.35 (5.79)	41.49 (5.70)	41.88 (5.91)	0.600	.549
Gender				2.730	.066
Male	14 (13.5%)	7 (5.7%)	43 (13.4%)		
Female	90 (86.5%)	115 (94.3%)	277 (86.6%)		
Educational Level				5.623	.004
Illiterate or Primary School	0 (0.0%)	(3.3%)	(5.6%)		
Junior Secondary School	(15.4%)	(18.2%)	(23.8%)		
Senior Secondary School	(35.6%)	(34.7%)	(36.3%)		
Diploma, College	(23.1%)	(21.5%)	(14.7%)		
University or above	(26.0%)	(22.3%)	(19.7%)		
Family Composition				1.006	.366
Intact family	(89.4%)	(87.7%)	(84.4%)		
Non-intact family	(10.6%)	(12.3%)	(15.6%)		
Monthly Family Income				1.181	.308
Below HK\$10,000	(9.8%)	(11.8%)	(9.8%)		
HK\$10,001 - \$20,000	(20.6%)	(19.3%)	(27.8%)		
HK\$20,001 - \$30,000	(25.5%)	(24.4%)	(24.6%)		
HK\$30,001 - \$40,000	(15.7%)	(15.1%)	(13.6%)		
HK\$40,001 - \$50,000	(7.8%)	(9.2%)	(8.8%)		
HK\$50,001 - \$60,000	(8.8%)	(7.6%)	(5.7%)		
Above HK\$60,001	(11.8%)	(12.6%)	(9.8%)		
Family resilience [Mean (SD)]	4.09	4.12	4.31	4.578	.011
Marital satisfaction [Mean (SD)]	4.46	4.54	4.50	0.092	.912
Parent-child relationship [Mean (SD)]	4.42	4.24	4.41	1.638	.195
Parent-child conflict [Mean (SD)]	3.20	3.57	2.91	14.658	<.001
Mental health problems [Mean (SD)]	0.73	0.88	0.80	2.050	.130
Hopelessness [Mean (SD)]	2.50	2.58	2.57	0.229	.795
Life satisfaction [Mean (SD)]	3.63	3.45	3.48	1.108	.331
Personal resilience [Mean (SD)]	4.45	4.46	4.52	0.390	.677

Table 3. Respondents' Pre- Post- Tests Performance and Interaction Effects in All Outcome Measures

Outcome Measures	Range	Group	Pre-test		Post-test		Mean Difference (Post – Pre)	Repeated measure ANCOVA	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		<i>F</i>	Partial η^2 [95% CI]
Family Resilience	1-6	ABFI - CAMP	4.08	0.84	4.68	0.77	0.60 [^]	26.508***	0.091 [0.074, 0.108]
		ABFI - PARALLEL	4.13	0.74	4.41	0.79	0.28 [^]		
		Control	4.31	0.79	4.29	0.83	-0.02		
Marital Satisfaction	1-7	ABFI - CAMP	4.49	1.33	4.84	1.39	0.35 [^]	8.417***	0.032 [0.021, 0.043]
		ABFI - PARALLEL	4.60	1.42	4.79	1.31	0.18 [^]		
		Control	4.51	1.47	4.48	1.50	-0.04		
Parent-child Relationship	1-6	ABFI - CAMP	4.42	0.82	4.54	0.92	0.12	0.253	0.001 [0.00, 0.003]
		ABFI - PARALLEL	4.25	0.98	4.36	0.83	0.12		
		Control	4.40	0.89	4.44	0.82	0.04		
Parent-child Conflict	1-6	ABFI - CAMP	3.20	1.12	2.93	1.16	-0.28 [^]	5.465**	0.020 [0.012, 0.029]
		ABFI - PARALLEL	3.55	1.22	3.28	1.06	-0.27 [^]		
		Control	2.91	1.14	2.90	1.07	-0.01		
Mental Health Problems	1-6	ABFI - CAMP	0.73	0.48	0.52	0.42	-0.22 [^]	4.390*	0.016 [0.008, 0.024]
		ABFI - PARALLEL	0.87	0.60	0.70	0.55	-0.17 [^]		
		Control	0.80	0.58	0.74	0.57	-0.06 [^]		
Hopelessness	1-6	ABFI - CAMP	2.52	0.89	2.05	0.85	-0.46 [^]	6.781**	0.025 [0.016, 0.034]
		ABFI - PARALLEL	2.60	0.98	2.38	0.94	-0.22 [^]		
		Control	2.57	0.95	2.52	0.95	-0.06		
Life Satisfaction	1-6	ABFI - CAMP	3.62	1.02	4.10	0.89	0.48 [^]	6.894**	0.025 [0.016, 0.034]
		ABFI - PARALLEL	3.41	1.04	3.73	1.05	0.32 [^]		
		Control	3.48	0.96	3.57	1.00	0.09 [^]		
Personal Resilience	1-6	ABFI - CAMP	4.44	0.71	4.78	0.84	0.34 [^]	4.898**	0.018 [0.010, 0.026]
		ABFI - PARALLEL	4.45	0.86	4.63	0.85	0.19 [^]		
		Control	4.52	0.81	4.55	0.84	0.03		

* $p < .05$; ** $p < .01$; *** $p < .001$

Note: ABFI – CAMP =Adventure-based family intervention with overnight camp; ABFI – PARALLEL = Adventure-based family intervention with parallel group sessions

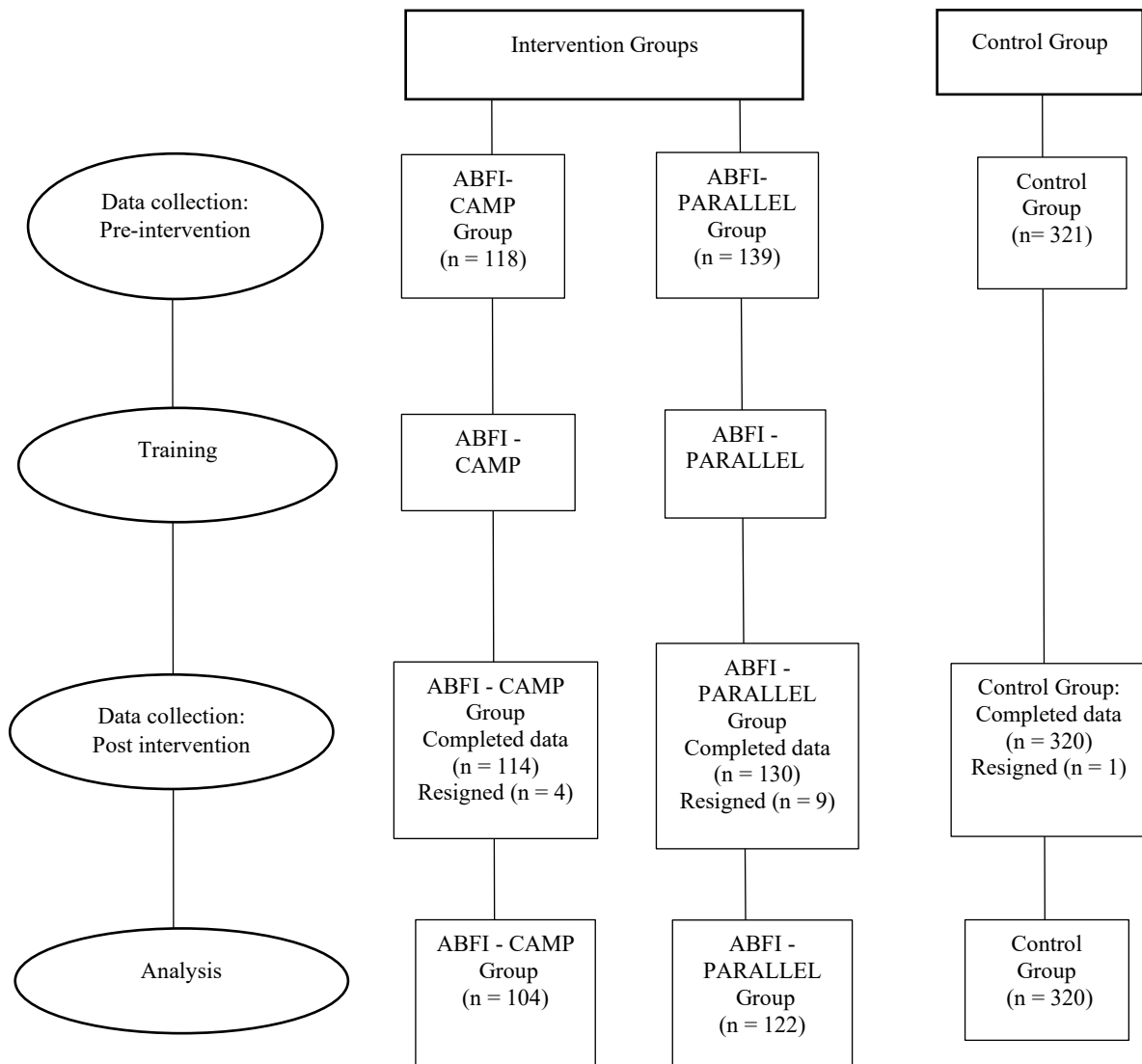
[^] Significant difference between pre-test and post-test at the .05 level

Table 4
Post-hoc Comparison of One-Way ANOVA across Three Groups

Outcome Measures	(I) Group	(J) Group	Difference of net scores (I-J)	<i>p</i>
Family Resilience	ABFI - CAMP	ABFI - PARALLEL	0.33	.002
		Control	0.62	<.001
	ABFI - PARALLEL	ABFI - CAMP	-0.33	.002
		Control	0.29	<.001
Marital Satisfaction	ABFI - CAMP	ABFI - PARALLEL	0.18	.212
		Control	0.39	<.001
	ABFI - PARALLEL	ABFI - CAMP	-0.18	.212
		Control	0.21	.046
Parent-child Conflict	ABFI - CAMP	ABFI - PARALLEL	-0.02	.982
		Control	-0.26	.023
	ABFI - PARALLEL	ABFI - CAMP	0.02	.982
		Control	-0.24	.033
Mental Health Problems	ABFI - CAMP	ABFI - PARALLEL	-0.05	.640
		Control	-0.15	.003
	ABFI - PARALLEL	ABFI - CAMP	0.05	.640
		Control	-0.10	.042
Hopelessness	ABFI - CAMP	ABFI - PARALLEL	-0.27	.039
		Control	-0.40	<.001
	ABFI - PARALLEL	ABFI - CAMP	0.27	.039
		Control	-0.13	.321
Life Satisfaction	ABFI - CAMP	ABFI - PARALLEL	0.17	.229
		Control	0.38	<.001
	ABFI - PARALLEL	ABFI - CAMP	-0.17	.229
		Control	0.21	.034
Personal Resilience	ABFI - CAMP	ABFI - PARALLEL	0.17	.275
		Control	0.31	.003
	ABFI - PARALLEL	ABFI - CAMP	-0.17	.275
		Control	0.14	.278

Note: ABFI - CAMP = Adventure-based Family Intervention with Overnight Camp; ABFI - PARALLEL = Adventure-based Family Intervention with parallel group sessions

Figure 1. *The Flow of Intervention Process and Evaluative Research*



Note: ABFI – CAMP = Adventure-based Family Intervention with Overnight Camp; ABFI – PARALLEL = Adventure-based Family Intervention with parallel group sessions

Figure 2. Means of Family Resilience of Intervention and Control Groups

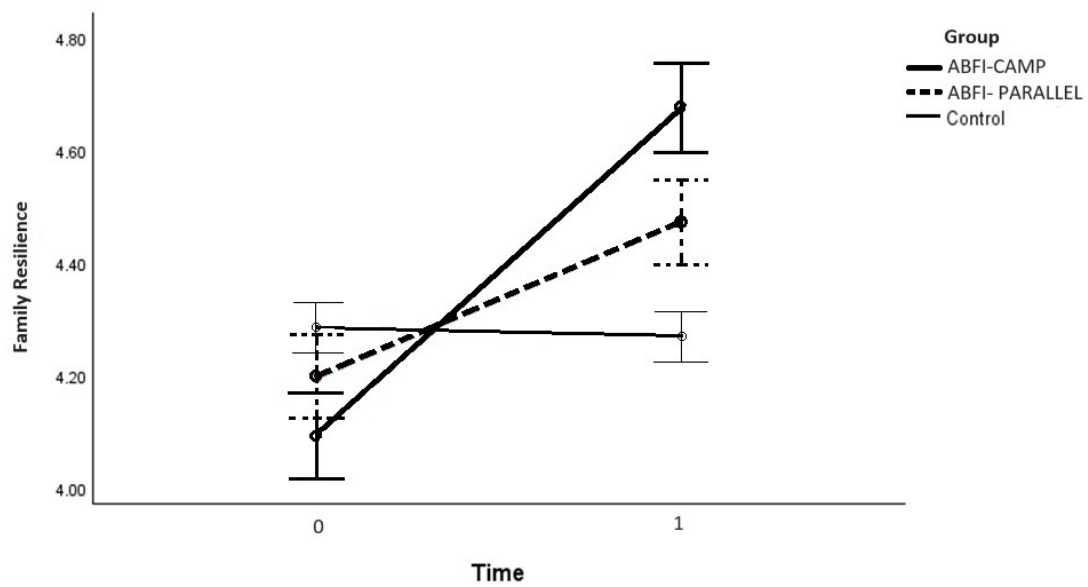


Figure 3. Means of Marital Satisfaction of Intervention and Control Groups

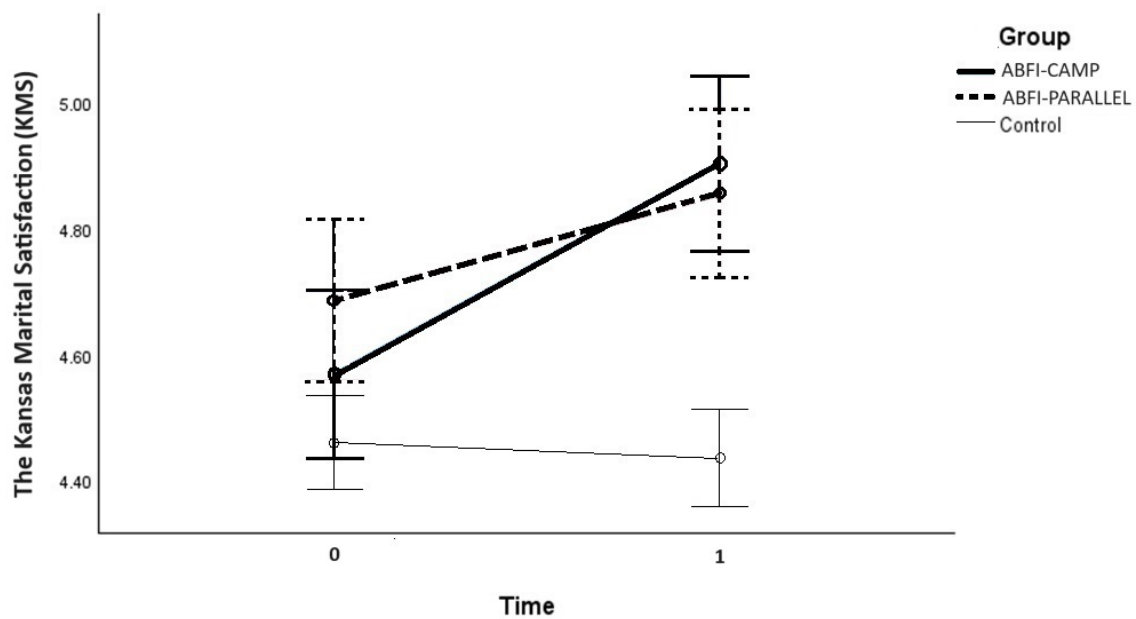


Figure 4. Means of Parent-child Conflict of Intervention and Control Groups

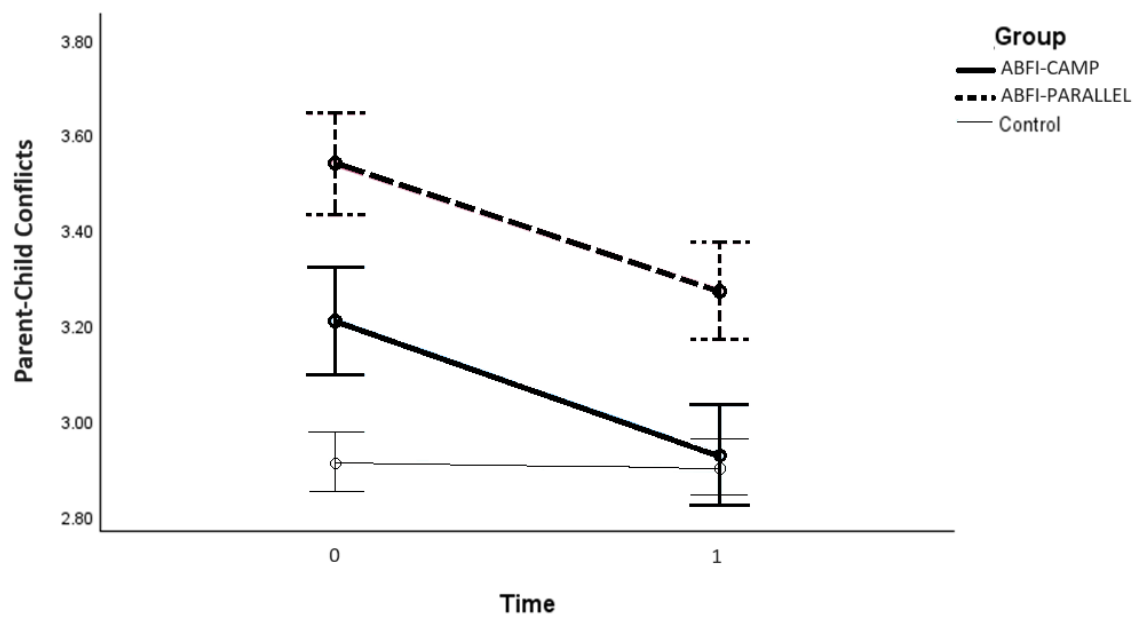


Figure 5. Means of DASS of Intervention and Control Groups

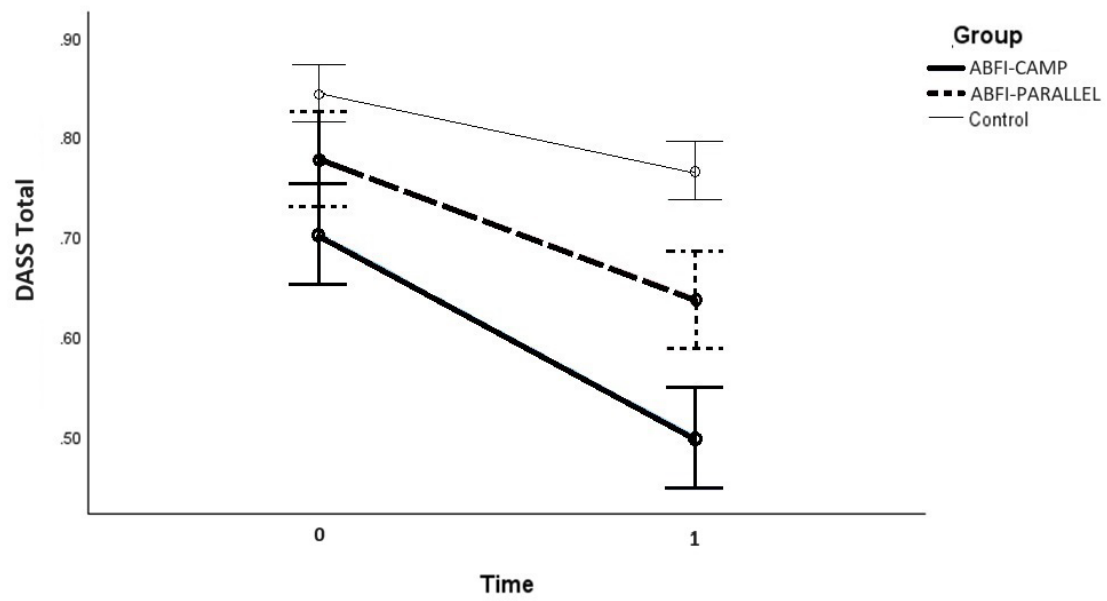


Figure 6. Means of Hopelessness of Intervention and Control Groups

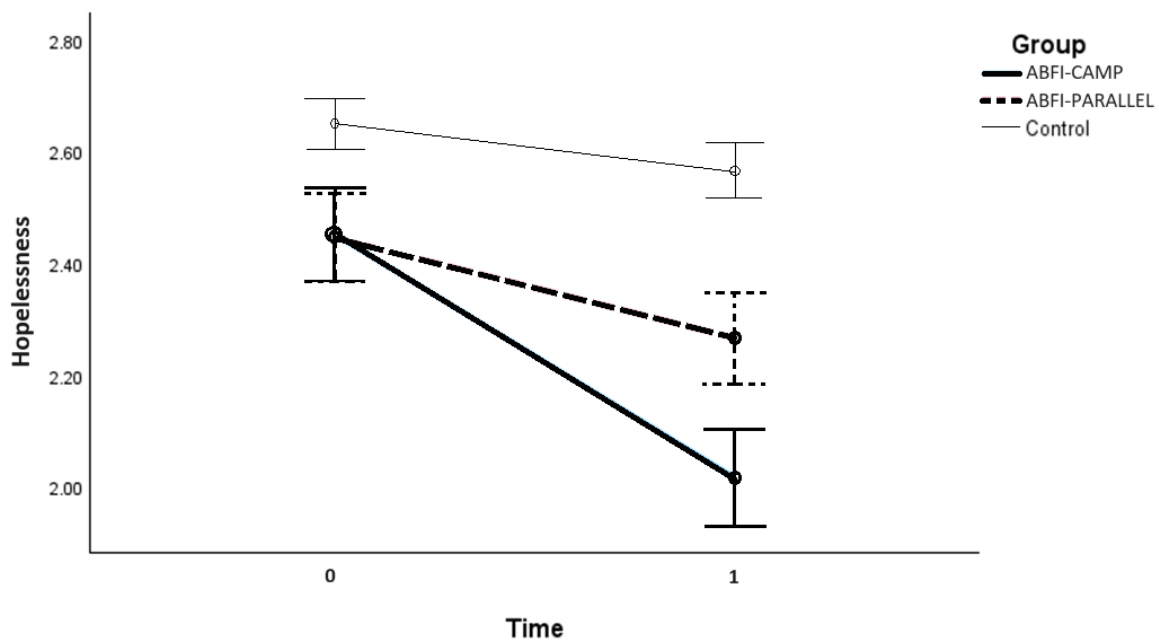


Figure 7. Means of Life Satisfaction of Intervention and Control Groups

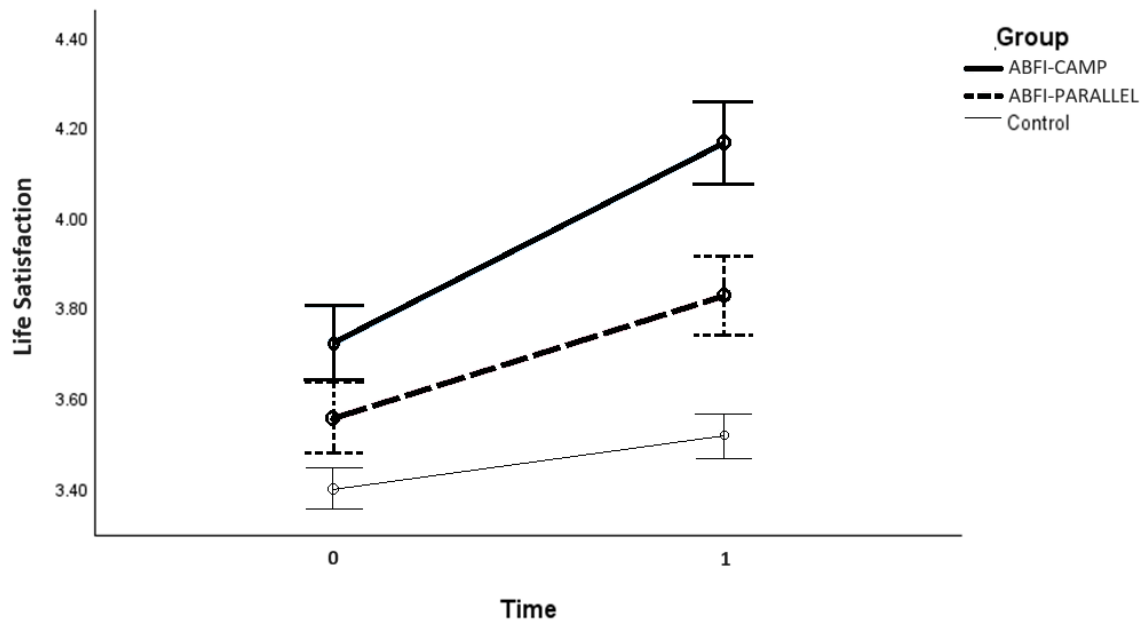


Figure 8. Means of Personal Resilience of Intervention and Control Groups

