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## Assessing Couples Outcomes in a Student-Facilitated Marriage Enrichment Workshop

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### ABSTRACT.

Family practitioners come from many walks of life and may include students, provided they are sufficiently prepared or supported through hands-on learning experiences. In this study, we report the outcomes of community different-sex couples who participated in a free, six-week, student-facilitated Marriage Enrichment Workshop between 2015 and 2018, offered over distance via Interactive Video Conferencing. Data from  $n = 39$  individuals (25 couples) indicated positive change during workshop participation regarding negative interaction, commitment, and sexual and emotional intimacy. At six months post-workshop, only change in negative interaction retained significance. No significant results were reported for overall marital satisfaction, and no effects of booster sessions were detected. This workshop showed slight positive gains for couples, a favorable outcome for an experience with dual goals of providing student practice and strengthening couple relationships in the community.

*Keywords:* marriage enrichment, family life education, experiential learning, community engagement

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### **Assessing Couples Outcomes in a Student-Facilitated Marriage Enrichment Workshop**

Intimate romantic relationships, particularly marriage, hold special significance in American life (Cherlin, 2004). Maintaining these relationships is not easy, but accessible education programs may give families the tools to build their strengths and sustain relationship health. Family life education (FLE) was born of this mission to aid families in preventative and maintenance care from a strengths-based perspective (National Council on Family Relations, 2021). Getting this groundwork into communities is not always straightforward. In the current study, we used two novel delivery methods – interactive video conferencing (IVC) and student-led workshops – to present a free marriage enrichment workshop to community different-sex couples in a rural city in the Intermountain West. The student experience of this workshop has been evaluated elsewhere (Law et al., 2017; Law et al., 2018), so in this study, the experience of the community couples is detailed. We assessed couples before, immediately after, and six months after the workshop experience on scales including relationship satisfaction, commitment, negative interaction, emotional intimacy, and sexual intimacy. Additionally, due to support for booster sessions in prior work in this area (Markman & Rhoades, 2012), we compared two years of the workshop in which once-a-month booster sessions were offered for the six months following the workshop to two years when they were not.

#### **Family Life Education**

FLE is a preventative relationship care approach that often occurs in social settings such as workshops and groups through a psychoeducational framework. A significant difference between FLE and marriage and family therapy is that FLE provides couples with the tools and resources to prevent distress within their relationship rather than serving as a treatment for entrenched struggles (Darling et al., 2017). Moreover, FLE also allows couples to meet in a social environment and begin to enhance their skills in communication, conflict resolution, commitment, expectations, and adaptive behaviors (Carlson et al., 2014). FLE can be beneficial for couples of any race, sex, or ethnicity, and couple-specific FLE is sometimes known as Couple Enrichment/Education or Marriage Enrichment. FLE allows for professional educators (and student educators) to work with couples to improve specific aspects of their relationship (Darling et al., 2017). Having FLE focus on a more preventative and lower-intervention level of care than therapy can free up therapists to focus on more targeted care. Additionally, having accessible FLE programming can help de-stigmatize help-seeking by inviting couples into a lower-pressure group setting instead of individual or couple therapy. Indeed, evidence suggests more couples receive some kind of relationship education than relationship therapy (Markman & Rhoades, 2012). During this study we created an environment to encourage learning, development, and collaboration between couples. The couples could then implement the educational material into their relationships and develop healthier relationships with one another. In the current study, we used a combination of in-person and virtual education and facilitation. The use of virtual communication technologies can extend the course to more participants.

#### **Outcomes of FLE in Prior Studies**

Numerous studies have been published with the goal of evaluating relationship education. One of these was Hawkins et al. (2008), which included 117 studies on Marriage and Relationship Education (MRE). They noted that much of the research done until then lacked ethnically diverse data but saw that MRE had a generally positive effect, though the effectiveness of MRE up until that point was measured based on communication skills rather than actual relationship quality (Hawkins et al., 2008). More recently, Arnold and Beelmann (2019) published a meta-analysis of 16 research reports pulled from 48 different studies. In this sample, which was more diverse than that of Hawkins and colleagues, Arnold

and Beelmann saw an overall positive effect, albeit small. Participants rated 5% better scores overall compared to the control group regarding marital satisfaction and happiness (Arnold & Beelmann, 2019). However, that rating varied greatly depending on the participants' characteristics and involvement in the program, with a more significant effect size with greater participation. Moreover, older, more educated, and/or more economically advantaged couples were also shown to have a greater positive effect size (Arnold & Beelmann, 2019).

Another area of note in MRE is the effect of booster sessions. Booster sessions refer to continued education sessions after the MRE has run its scheduled course. There has been research showing that booster sessions may also affect MREs' outcomes; at the very least, more long-term follow-up and perhaps continued contact with couples should be considered in MRE work (Markman & Rhoades, 2012). Couples may need reminders of what they have learned to fully apply what was covered in their MRE. These booster sessions could be a powerful tool in helping people create healthy long-term habits rather than short-term changes.

### **Telecommunication and FLE**

The defining medium used by the workshop described in this study is Interactive Video Conferencing (IVC), a method of "broadcasting" educational experiences across distances. Similar to the increasingly popular medium of Telehealth, IVC is a form of telecommunication. Both IVC and telehealth are particularly useful in providing services to geographically isolated or rural areas. Telehealth is useful for accessing care from remote areas or when a physical visit is infeasible or impractical (Health Resources and Services Administration, n.d.). Telehealth is more commonly used for reactive medical measures like doctor visits or therapy sessions; IVC provides preventative aid in a classroom-like setting. It should be recognized that there is a significant boundary between FLE, healthcare, and other forms of therapy and treatment (Myers-Walls et al., 2011), thus the workshop in the current study did not use a true Telehealth platform. Rather, the workshop adhered to traditional FLE as a group-based psychoeducational program (Markman & Rhoades, 2012) but took the unique route of blending both IVC and in-person instruction and interaction. The IVC system used by this program is still a form of telecommunication and has a parallel in both benefits and challenges. As research has been more widely studied regarding Telehealth, the examples presented will be primarily Telehealth focused; however, they apply to the current project and IVC as well.

The development of telecommunication and its improvement to medical and mental aid can open services to a greater population. The IVC setting can make FLE more accessible to the average person (Springer et al., 2020). Though different from FLE programs, similar technology and telecommunication benefits were found with nurses in dialysis care for kidney failure patients; the support of "The HHD-RMS (My Home Hemo app)" allowed for nurses to cover large geographical areas and provide more consistent support and care to a more significant number of patients (Nidao et al., 2017, p. 47). The same geographical benefits found in the study can be found when using IVC. In addition to the geographical benefits, individuals can take advantage of telecommunication benefits due to increased internet accessibility due to the COVID-19 pandemic. Despite the confusion that comes with a global pandemic and the changes implemented to in-person interaction, the need for marriage education does not halt. Although the workshop evaluated in the current study concluded before the pandemic's start, the results can be helpful in understanding how to deliver FLE content to broader audiences through IVC.

As an example of technology in FLE, an experimental study was performed on three couples in the Philippines, with the goal of creating an "online ME curriculum" that could "offer an effective, flexible-delivery ME format when a traditional or blended format is unattainable" (Chalmers, 2019, p. 164). This online program (Four Gifts of Love Class) was offered over two months during a

governmental lockdown due to COVID-19, and consisted of seven lessons which took couples a few hours each week to complete. In addition, there was a personalized check-in of about 15 minutes weekly (Chalmers, 2019). As the research progressed, including the check-ins, the evidence suggests that the program successfully supported couples during the high-stress lockdown, overall improving marital satisfaction (Chalmers, 2019). This study demonstrates that such educational programs through technology-enhanced settings are both possible and practical, an excellent option to consider.

As discussed above, FLE has been shown to have positive outcomes in various couples. However, FLE education for rural or low-income couples is not always practical due to geographic accessibility (Neff & Karney, 2017). With telecommunication technology, these couples could receive the same benefits. The current project examines how this distance communication medium works with rural couples.

### **Students Offering FLE**

The other unique characteristic of the current study is the level of educators: all lessons were offered by undergraduate students in an upper-level Family Life Education Methods course. Adult college students benefit from hands-on learning experiences (Pappas, 2013), which is why this workshop's dual purpose was to provide relationship enrichment and give senior-level college students a mentored and guided opportunity to apply their FLE skills to a real experience. The results of this experience for students are reported in another paper (Law et al., 2018). From the side of the participants who attended this workshop, student facilitators bring the benefit of lower-cost or even (as was the case in the reported workshop) free services for the community. Thus, this program delivers the dual benefits of providing educational services and giving students practical experiences. Using students to present FLE is not a new idea, though it is rare. Under proper supervision, high-level students have been found to effectively provide parenting programming while using an evidence-based approach (Law et al., 2015), and at least one university maintains a student-facilitated ongoing FLE program (Stronger Families Project, n.d.).

### **Boosters for FLE**

Some prior work in FLE has called for booster sessions (Ooms & Wilson, 2004; Scott et al., 2013), and evidence has been given for their usefulness in encouraging couples who receive such services to retain positive gains (Braukhaus et al., 2003). The activities counted as “boosters” may vary widely, from giving participants materials to take home and email or text reminders (Nichols et al., 2018) to additional meetings after the initial program ends (Scott et al., 2013). In the current study, we offered once-a-month discussion meetings to the final two cohorts of this study. Although limited data was collected on the booster sessions, curtailing our ability to explore their effectiveness in detail, one purpose of this current study was to detail initial data comparing booster cohorts with those who had not received such an opportunity.

### **Current Study**

FLE is an opportunity to provide preventative support to relationships through psychoeducation and social support. Utilizing novel methodologies such as IVC and student educators may allow for broader reach of FLE and related care. In this study, we assess the outcomes of a Marriage Enrichment Workshop (MEW) offered by upper-level student educators over an IVC system under the supervision of a professional educator and therapist.

### **Method**

This was an exploratory design: a one-group pre-post analysis of change over time in the participants of the workshop. Because of the relatively small sample and challenge in recruiting and

maintaining a control group in this setting, this pre-experimental design was appropriate (DeCarlo, 2018). Because there was not a control group, results should not be interpreted as causal.

In this section, we will first describe the structure and setup of the workshop, including facilitator training and curriculum design, and then discuss data collection and measurement details. Additional details of the workshop structure and student involvement can be found in companion manuscripts (Law et al., 2017; Law et al., 2018) for those interested in additional description and student and research assistant involvement in the work. **Description of Workshop and Interactive Videoconferencing**

This workshop was held in the spring semesters of 2015-2018 as part of a course offered by an intermountain land-grant university to students in the family science undergraduate major. The student facilitators in this course were enrolled at campuses and learning centers across the state. In contrast, the professor, undergraduate research assistants, and participating couples were all located at a statewide campus spread across two counties. One of the counties held a population of about 32,600, with 47% residing in a rural area, and the other county, smaller at 18,600, was 68% rural (U.S. Census Bureau, 2010 Census). Couples could reside anywhere within these counties. Although most lived near the campus, a few participants lived as many as 40-50 miles away.

The course and workshop were both offered using IVC. Through IVC, participants can hear, see, and share information in real-time. For the workshop, couples were all located in one room with the professor of the course, undergraduate research assistants, and any student facilitators enrolled at that local campus. The rest of the student facilitators were located at other sites, and their images were projected onto a large screen in the workshop room. Couples and facilitators interacted using microphones and cameras situated throughout the room.

### **Student Facilitator Preparation**

The workshop was presented and facilitated by advanced undergraduate students majoring in family science enrolled in a semester-long, senior-level course meant to teach students appropriate FLE methods. The course was regularly offered using the IVC format, and the first nine weeks of the course functioned as a routine class: the students were assigned readings, activities, and role plays to help them learn methods of education and facilitation. These weeks of training led to teams of two to four students presenting their assigned workshop session to the participating couples during the last six weeks of the semester. More detail about the students' experiences of the workshop can be found in a companion manuscript (Law et al., 2018).

### **Couple Recruitment, Screening, and Participation**

Couples were recruited to the free workshop via newspaper ads, radio ads, flyers, social media, and word of mouth. Interested individuals were directed to an online screening survey. The screening included questions assessing characteristics required for participation in the workshop (married or cohabiting and at least age 18), contact information, and the Revised Dyadic Adjustment Scale (RDAS; Busby et al., 1995). Individual's scores on the RDAS were used to indicate distressed marriages. In 2015, we used a cutoff score of 31 to screen out couples considered too distressed for the workshop (Myers-Walls et al., 2011). In the following years the score was used to assess a couple's potential fit with the workshop but was not a hard cutoff in itself. Those in relationships where either member of the couple scored as "distressed" were contacted by the professor of the course (a Licensed Marriage and Family Therapist) to determine if they would be appropriately served by this workshop or by another resource. Only the most distressed (for instance, those who were currently separated or who had a recent history of intimate partner violence), who were likely to be better served with more intensive family therapy (Myers-Walls et al., 2011), were excluded from this workshop and referred to other providers for therapy. Couples that completed the screening and fit the workshop criteria were contacted by the

research assistants and informed that they would each receive an email with a personal link to the pre-assessment. The couples were instructed to complete the assessments separately. Once both members of the couple completed the pre-assessment they were invited to the workshop.

The workshop sessions were held on the same weeknight evening each week for six weeks during the regularly-scheduled course time. The couples were invited to arrive 15 minutes before the start of the workshop for a free meal. While the couples finished their meals the workshop started. With the exception of the first session, the group who delivered the previous content was allotted 15 minutes to speak with the couples about the homework the group members had assigned. Following this, the next group would provide content to the couples for roughly 75 minutes, with activities and discussion throughout the session. The professor and research assistants helped to facilitate group discussions when appropriate. The students assigned the couples a new homework activity at the end of the session. The research assistants administered an anonymous satisfaction survey to each participant after each workshop session. Following the last session, the couples completed the post-workshop assessments, were presented with a certificate of completion and a parting gift, and completed an interview about their experience.

### **Workshop Curriculum**

In a previous article (Law et al., 2017) we describe how the teaching philosophy of *Learn, Apply, Share* was used to redesign this upper-division Family Life Education course. Several learning theories influenced this philosophy and how the course was delivered to students and the community. Using Jean Piaget's cognitive theory (Pappas, 2013), we describe how students' mental models of how families work are constructed over time. In addition to Piaget's work, we draw from American educator Malcolm Shepherd Knowles's (1984) focus on effective andragogy, the art, and science of adult learning. The principles of adult learning formulated by Knowles are the foundation of experiential learning (Sullivan & Rosin, 2008). Well-designed experiential learning activities move students from a theoretical model of their understanding of families to one of application to themselves and others.

The curriculum of the workshop, which was aimed towards the community members, was based on the following books: *The Seven Principles for Making Marriage Work* (Gottman & Silver, 1999), *His Needs, Her Needs: Building an Affair-Proof Marriage* (Harley, 2011), and *Love, Limits, and Latitude: A Thousand Small Moments of Parenting* (Wells et al., 2007). The workshop's first session focused on increasing emotional intimacy in couples as they rekindled positive memories and explored their fears, dreams, and aspirations. In session one, couples also focused on specific behaviors that nurture fondness and admiration for each other. Session two focused on ways to increase affection and sexual intimacy. Each partner shared how their needs for affection and sexual intimacy compared to other needs. Couples were given assignments to continue to explore these needs outside of the classroom and to implement a self-chosen plan to meet these needs. Session three focused on reducing negative communication patterns such as criticism, contempt, defensiveness, and stonewalling. Couples learned and practiced positive communication skills using assertive self-disclosure and attentive listening skills. Session four was designed to help couples work through solvable problems using the basic problem-solving skills learned in session three coupled with conflict resolution skills. Also in session four, couples learned that all relationships have unsolvable problems and that by dealing with these unsolvable problems openly and honestly, the tension surrounding the unsolvable problems can dissipate to a more manageable level. Session five helped couples understand the importance of, and ways to have, egalitarian marriages. It also provided an in-depth focus on using learned communication patterns to increase emotional intimacy. Additionally, session five focused on happy couples' daily behaviors that help their marriages stay vibrant. The workshop ended with session six, designed to deepen the shared meaning of each

couples' life together. This last session aimed to help couples identify personal and couple goals and dreams and discussed how couples could support these ambitions individually and together.

In the last two years of the workshop, once-a-month booster sessions were offered for the six months following workshop completion. Unlike the workshop sessions, which were very structured and had a planned curriculum, the booster sessions were process-oriented. Couples who attended the booster sessions were asked questions about their relationships, what was going well, and what challenges they continued to have. The facilitators of the booster sessions drew from the workshop curriculum to address continued challenges. Thus, new content was not introduced in the booster session, but previous content was applied to the current identified challenges. Also in the booster sessions, meals were not provided, unlike the workshop sessions.

### **Attrition and Analytic Sample**

Of the seven couples who completed the screening in 2015, all were sufficiently low-distress to be included and completed the workshop. In 2016, one couple who was deemed eligible after the screening declined to participate in the workshop, and one couple was determined to be too distressed and was referred to other resources. One couple dropped out part-way through the workshop, leaving eight couples in the cohort. In 2017, three eligible couples declined to participate, one couple was screened out, and one couple dropped out, leaving six couples in the 2017 cohort. In 2018, one couple dropped out, leaving seven eligible couples who completed the workshop. In all, 28 couples completed the workshop over the years considered here. In this study, we report data on 39 individuals who completed all waves of measurement (screening, pre, post, and follow-up). These 39 individuals still represent at least one partner in 25 couples. Because not all couples had both members complete all data collection occasions, we chose to analyze these data as individuals rather than dyads, correcting for interdependence where possible (see analysis plan for details).

### **Measuring Outcomes**

Once the couples were determined to be a good fit for the workshop, both members were sent individual links to the online pre-workshop assessment, which included the measures described below and a demographic questionnaire. Both partners were required to complete this before the workshop's first session. Immediately following the last session, the couples were invited to complete a post-workshop assessment identical to the pre-workshop assessment, minus demographic questions. To encourage timely responses, couples were given the opportunity to complete the assessment on laptops at the workshop site before leaving the final session, and most did. Approximately six months after the last session of the workshop, each couple member was again emailed an individual invitation to a follow-up assessment identical to the post-workshop assessment and encouraged to complete it in a timely manner. Those who did not complete their assessments within a week of the email were personally contacted by the research assistants and encouraged to complete the assessments. All assessments were administered through Qualtrics.

For individuals missing data on less than half of the items of a measure, the mean score of the other items was substituted. Respondents missing more than half of the items in a scale were removed from the analyses of that measure (see *n* in tables). In the case of the measure of commitment, each subscale was evaluated alone for mean substitution, then summed to produce the overall score reported here.

### **Choice of Measured Outcomes**

Table 1 shows the timing of each measure for each cohort. The 2015 cohort varied from the other three cohorts, which were consistent with each other. Most studies of relationship education and enrichment that have found positive effects have examined relationship satisfaction and communication

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skills as significant indicators of change (Hawkins et al., 2008; Markman & Rhoades, 2012). We also measured them in our study. In 2015, respondents completed the 3-item Kansas Marital Satisfaction scale (Schumm et al., 1986; "How satisfied are you with your relationship?"  $\alpha = .96, .93, \text{ and } .93$ ), but we later decided to use the more comprehensive CSI to assess changes in satisfaction. In 2016 through 2018, the individuals completed the RDAS only at screening, and they completed the Couple Satisfaction Index (CSI; Funk & Rogge, 2007; 32 items; "Please indicate the degree of happiness, all things considered, of your relationship") at each of the three assessment points ( $\alpha = .98, .98, \text{ and } .95$ ). To assess communication, we asked the participants to complete the Negative Interaction Scale (Stanley et al., 2002; 5 items; "Little arguments escalate into ugly fights with accusations, criticisms, name calling, or bringing up past hurts") at each assessment point in all years ( $\alpha = .85, .83, \text{ and } .84$ ).

**Table 1**

*Measures Used at Each Year and Assessment Point*

Measure Name & Citation	Referred to in Results	2015	2016-2018
Revised Dyadic Adjustment Scale, RDAS (Busby et al., 1995)	Satisfaction (2015)	Scr Pre, Post, F/U	Scr
Couple Satisfaction Index, CSI (Funk & Rogge, 2007)	Satisfaction (2016-2018)	-	Pre, Post, F/U
Negative Interaction Scale (Stanley et al., 2002)	Negative Interaction	Pre, Post, F/U	Pre, Post, F/U
Commitment Inventory Scale (Stanley & Markman, 1992)	Commitment	Pre, Post, F/U	Pre, Post, F/U
Couples Pre-Counseling Inventory Communication Assessment Sexual Satisfaction (Stuart & Jacobson, 1987)	Emotional Intimacy Sexual Satisfaction	Pre, Post, F/U	Pre, Post, F/U*
Kansas Marital Satisfaction Scale (Schumm et al., 1986)	-	Pre, Post, F/U	-
Harley's Recreational Companionship (Harley, 2011)	-	Pre, Post, F/U	-
Center for Epidemiological Studies Depression Scale (Miller et al., 2008)	-	Pre, Post, F/U	Pre, Post, F/U

*Note.* Scr = Screening, Pre = Pre-workshop, Post = Post-workshop, F/U = 6-month Follow-up.

\*Sexual Satisfaction not recorded in 2017 F/U

Marriage enrichment has the potential to address other important skills and attitudes as well. For instance, Markman and Rhoades (2012) suggest that these programs should consider measuring other protective relationship characteristics, including commitment to the relationship, friendship, and passion. Thus, we assessed commitment in the relationship using five subscales of the Commitment Inventory (Stanley & Markman, 1992), including Morality of Divorce, Social Support, Couple Identity, Relationship Agenda, and Primacy of Relationship (6 items each, other than Primacy which had 9;

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example from Agenda, “I want this relationship to stay strong no matter what rough times we may encounter”). We assessed change in overall commitment by combining all times in one score ( $\alpha = .75, .61, \text{ and } .69$ ). In addition, we assessed a component of friendship using the Emotional Intimacy/Friendship subscale of the Stuart Pre-Counseling Inventory (Stuart & Jacobson, 1987; 8 items; “My partner listens attentively when I speak”) at each measurement point ( $\alpha = .91, .92, \text{ and } .92$ ). For passion, we assessed sexual satisfaction with the Sexual Satisfaction subscale of the Stuart Pre-Counseling Inventory (Stuart & Jacobson, 1987; 12 items; “How satisfied are you with the way you and your partner approach each of the aspects of your sexual interaction?...The way we decide to have sex”) at each point ( $\alpha = .91, .94, \text{ and } .82$ ). Although we gave couples the entire subscale of 14 questions, we assessed change in satisfaction using 12 questions; the additional 2 questions asked about satisfaction with birth control method, but some individuals failed to answer one or both of these questions due to various orientations towards contraception, thus we did not include these in the analyses to better focus on a more general satisfaction with other aspects of the sexual relationship.

We removed or added assessments between 2015 and the other years to better fit study goals. For instance, in 2015, individuals were asked additional questions regarding satisfaction with recreational companionship, modeled after Harley (2011), but these questions were not retained in subsequent years. In addition, in each cohort and assessment period we asked individuals to report on their depressive symptoms using the 10-item form of the Centers for Epidemiological Studies – Depression scale (such as used by Miller et al., 2008), but these data were determined to have suffered in quality due to an issue with the survey software, thus we do not report results of these data. Finally, in 2017, there was a coding error in the survey that precluded recording results of the Sexual Satisfaction data at the 6-month follow-up.

### **Consideration of Human Subjects**

All study procedures were approved by the university’s Internal Review Board and all study personnel and student facilitators were trained in appropriate human subjects research practices and certified through the Collaborative Institutional Training Initiative..

### **Analytic Plan**

All data preparation and analyses were conducted in Stata15. Once individual items were reverse-coded as appropriate, scores on all assessments were summed (other than the CSI, of which the mean was computed). We recognize the potential interdependence of our data both by couples and cohort. However, given the small sample size and the lack of complete dyadic data for all couples, we elected to analyze the cohorts and spouses together following the example of Owen and Rhoades (2012).

To first assess overall results from the workshop and examine change over time (a proxy measure for participation in the workshop, given that there was not a control group), in Table 4, we report the results of within-subjects, or repeated measures, analyses of variance (ANOVA). We report Box’s conservative correction of the p-values to account for interdependence within data and  $\eta^2$  estimates of effect size of significant results (StataCorp, 2017). For variables with significant effects of Wave identified in the ANOVA, post-hoc paired t-tests of pre- to post-workshop change and pre-workshop to follow-up change are also reported, as well as effect sizes of each calculated as  $d = t/\sqrt{n}$ . We assess the effect sizes according to recommendations by Cohen (1992) of .2 as small, .5 as medium, and .8 or greater as large.

Our second goal was to assess the potential for six-month booster sessions to help couples maintain changes over time, thus we conducted a mixed-ANOVA test for each variable that had been measured at all four years, interacting the measure of time with an indicator of having received booster sessions (booster = 1, years 2017 and 2018) or not (booster = 0, years 2015 and 2016). Results are

reported in Table 5. These results were also corrected using Box's conservative correction of p-value and  $\eta^2$  scores are reported.

### Power

We computed a post-hoc power analysis using G\*Power 3.1.9.7 (Faul et al., 2007). With a sample size of 39 and  $\alpha = 0.05$ , the ANOVA analyses were sufficiently powered to detect small effect sizes, with  $\beta > 0.90$ . The post-hoc t-test analyses were sufficiently powered to detect medium effect sizes, at  $\beta > 0.80$ , other than for sexual satisfaction, which only achieved  $\beta > 0.60$ , suggesting that those tests may have been underpowered to detect even medium effects. It should be noted that power analyses were conducted assuming statistical independence of data; as described above, the interdependence present in some observations was accounted for where possible.

### Sample Description

Sample descriptives are shown in Table 2. Of the 39 individuals in our final sample, representing 25 couples, all were in different-sex relationships, and 95% were married (the remaining 2 individuals who were cohabiting were partners). Individuals had been married for an average of 12 years ( $SD = 9.4$ ), ranging from 2 to 31, with 1 individual missing. The cohabiting individuals (a couple) did not agree on how long they had been living together, one reporting 1 year and the other reporting 2. Just under half of individuals in the final sample identified as male (46%). Thirty-one individuals (79% of the final sample) had not been married before their current relationship. Of the married individuals, 28% had cohabited with their spouse before marriage, with 1 respondent missing data on this question. In this sample at the first measurement, 21 individuals (54%) were employed full-time, 6 individuals (15%) were employed part-time, 6 individuals (15%) were full-time homemakers, and 5 individuals (13%) were unemployed, retired, or disabled (1 individual refused to respond). In our sample, 36 individuals identified as White (92%), 1 as Native American (3%), 2 as Hispanic (5%), and 1 as African American (3%), with 1 refusing to respond. Note that individuals may have identified as more than one racial category, thus percentages do not sum to 100%. In this sample, 3 individuals (8%) had not graduated high school, 9 individuals (23%) had a high school diploma or equivalent, 3 had trade or vocational training (8%), 7 had attended but not graduated from college (18%), and the remaining 21% had an associate degree or higher college education; 9 individuals were missing educational attainment. The mean age of the sample was 36 years ( $SD = 14.5$ ), ranging from 19 to 80 (8 individuals did not report their age). In terms of income, 3 respondents (8%) reported annual household incomes of \$25,000 or less, 14 (36%) reported incomes of \$25,001 to \$50,000, and 7 individuals (18%) reported incomes of either \$50,001-\$75,000; \$75,001 to \$100,000; or above \$100,000 (1 individual refused). Ninety-two percent of the sample (36 individuals) had children living with them at least part time, with 26% of the sample (10 individuals) reporting having children who did not live in their home.

**Table 2***Sample Demographics*

Variable	%/Mean	SD	Missing (%)
Relationship Status			
Married	94.87		
Cohabiting	5.13		
Gender			
Male	46.15		
Female	53.85		
Marriage Length (range 2-31)	12.33	9.42	2.70
Cohabitation Length (range 1-2)	1.5	0.71	
Prior Marriage			
No Prior Marriage	79.49		
One Prior Marriage	17.95		
More than one prior marriage	2.56		
Premarital Cohabitation	28.21		2.56
Employment			2.56
Full-time	53.85		
Part-time	15.38		
Homemaker	15.38		
Unemployed	7.69		
Retired	2.56		
Disabled	2.56		
Race (may select more than one)			2.56
White	92.31		
Native American	2.56		
Hispanic	5.13		
African American	2.56		
Education			23.08
Less than High School	7.69		
High school or GED	23.08		
Trade or Vocational	7.69		
School			
Some College	17.95		
Associates	12.82		
Bachelors	5.13		
Masters or Higher	2.56		
Age (range 19-80)	35.61	14.50	17.95

Variable	%/Mean	SD	Missing (%)
Income			2.56
\$25,000 or less	7.69		
\$25,001 to \$50,000	35.90		
\$50,001 to \$75,000	17.95		
\$75,001 to \$100,000	17.95		
More than \$100,000	17.95		
Children			
Children at home	92.31		
Children outside the home	25.64		

Note.  $n = 39$

## Results

### Workshop Results

ANOVA model results are shown in Table 3, and the descriptive statistics of variables used in these models are shown in Table 4. The ANOVA model for Satisfaction in 2015 (measured by the Kansas Marital Satisfaction Questionnaire) was not significant ( $p > 0.05$ ). The non-statistically significant p-value suggests there is no significant effect of time, as a proxy for program participation, on satisfaction as measured in 2015. The 2016-2018 Satisfaction (measured with the Couple Satisfaction Index) model was also not significant ( $p > 0.05$ ).

**Table 3**

#### ANOVA Model Results

Scale	ANOVA			Pre vs. Post			Pre vs. F/U		
	<i>F</i>	<i>p</i> (adjusted)	$\eta^2$ (Model)	<i>t</i>	<i>p</i>	<i>d</i>	<i>t</i>	<i>p</i>	<i>d</i>
Satisfaction (2015)	2.79	0.1276	0.72	-	-	-	-	-	-
Satisfaction (2016 -2018)	3.67	0.0667	0.80	-	-	-	-	-	-
Negative Interaction	6.99	0.0120	0.74	3.40	0.0017	0.57	2.59	0.0139	0.44
Commitment	4.89	0.0333	0.80	2.54	0.0157	0.42	1.86	0.0707	0.31
Emotional Intimacy	7.30	0.0103	0.78	3.64	0.0008	0.59	1.78	0.0831	0.29
Sexual Satisfaction	4.64	0.0396	0.74	3.05	0.0059	0.64	1.51	0.1444	0.32

**Table 4***Descriptive Statistics for Responses Used in ANOVA Tests (total n = 39)*

	Pre-Workshop				Post-Workshop				6-Month Follow-up			
	<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>α</i>	<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>α</i>	<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>α</i>
Kansas Marital Satisfaction	10	16.80	4.21	0.96	10	19.10	2.08	0.93	10	17.80	2.39	0.93
Couple Satisfaction Index	25	121.22	33.52	0.98	25	132.00	28.67	0.98	25	128.84	23.46	0.95
Negative Interaction	35	9.49	2.97	0.85	35	7.91	2.55	0.83	35	8.46	2.82	0.84
Total Commitment	37	185.23	17.40	0.75	37	190.89	13.75	0.61	37	189.10	13.87	0.69
Emotional Intimacy	38	30.63	6.28	0.91	38	33.74	5.77	0.92	38	32.05	6.33	0.92
Sexual Satisfaction	23	38.64	10.89	0.91	23	45.13	10.67	0.94	23	41.96	9.04	0.82

Negative interaction, as a proxy for communication, was tested through a similar model. The ANOVA model was significant overall,  $F(2,39) = 6.99$ ,  $p < 0.05$ ,  $\eta^2 = 0.74$ , leading to post-hoc t-tests. Between Pre-Workshop ( $M = 9.49$ ,  $SD = 2.97$ ) and immediately Post-Workshop ( $M = 7.91$ ,  $SD = 2.55$ ), negative interaction scores decreased,  $t(34) = 3.40$ ,  $p < 0.01$ ,  $d = 0.57$ . This statistically and practically significant (based on the effect size estimate) difference suggests a decrease in negative interactions between the start and end of the workshop for the average couple. Comparisons between Times 1 and 3, Pre-Workshop ( $M = 9.49$ ,  $SD = 2.97$ ) and at the 6-Month Follow-Up ( $M = 8.46$ ,  $SD = 2.82$ ), suggest these changes were maintained,  $t(34) = 2.59$ ,  $p < 0.05$ ,  $d = 0.44$ , a significant and meaningful difference even six months later.

Turning to commitment, measured as total commitment on the Commitment Inventory, the ANOVA model was significant,  $F(2,38) = 4.89$ ,  $p < 0.05$ ,  $\eta^2 = 0.80$ , suggesting that commitment varied significantly over time. Post-hoc t-tests allowed us to explore this result further. Compared to Pre-Workshop ( $M = 185.23$ ,  $SD = 17.40$ ), total commitment was higher at the immediate Post-Workshop measure ( $M = 190.89$ ,  $SD = 13.75$ ),  $t(36) = 2.54$ ,  $p < 0.05$ ,  $d = 0.42$ . However, this difference was not necessarily maintained on average. Compared to Pre-Workshop ( $M = 185.23$ ,  $SD = 17.40$ ), scores were similar at the 6-Month Follow-up ( $M = 189.10$ ,  $SD = 13.87$ ), indicating that the results were not maintained ( $p > 0.05$ ).

The emotional intimacy ANOVA model was significant,  $F(2,38) = 7.30$ ,  $p < 0.05$ ,  $\eta^2 = 0.78$ ; it can be inferred that emotional intimacy varied for couples throughout the time measured. On the emotional intimacy scale, scores Pre-Workshop ( $M = 30.63$ ,  $SD = 6.28$ ) increased immediately Post-Workshop ( $M = 33.74$ ,  $SD = 5.77$ ),  $t(37) = 3.64$ ,  $p < 0.001$ ,  $d = 0.59$ . Between the Pre-Workshop ( $M = 30.63$ ,  $SD = 6.28$ ) and 6-Month Follow-Up ( $M = 32.05$ ,  $SD = 6.33$ ), differences were not maintained ( $p > 0.05$ ).

The sexual satisfaction ANOVA model was significant,  $F(2,38) = 4.64$ ,  $p < 0.05$ ,  $\eta^2 = 9.74$ . Comparing scores from Pre-Workshop ( $M = 38.64$ ,  $SD = 10.89$ ) to immediately Post-Workshop ( $M = 45.13$ ,  $SD = 10.67$ ) suggests a significantly increased sexual satisfaction,  $t(22) = 3.05$ ,  $p < 0.01$ ,  $d = 0.64$ . However, differences between Pre-Workshop ( $M = 38.64$ ,  $SD = 10.89$ ) and 6-Month ( $M = 41.96$ ,  $SD = 9.04$ ) were not significant ( $p > 0.05$ ), though it should be noted that this test was potentially underpowered due to a smaller sample size caused by missing data.

Overall, participation in the workshop seemed to benefit couples on various measures of individual relationship facets immediately. However, six months out, only negative interaction appears to have retained a statistically significant difference, although in all cases, follow-up mean scores were higher (or lower in the case of negative interaction) than pre-workshop means.

### Booster Sessions

A second goal of this study was to test booster sessions as a way to help couples maintain the effects of workshop participation over time. We ran mixed ANOVA models testing time and time\*booster status for the three variables measured consistently across all years, with results shown in Table 5. In no case was the booster interacted variable statistically significant ( $p > 0.05$ ), suggesting that booster status did not interact with time in this study and booster did not improve retention of positive effects.

**Table 5**

*Booster Mixed ANOVA Models*

Scale	Wave		Wave*Booster		
	<i>F</i>	<i>p (adjusted)</i>	<i>F</i>	<i>p (adjusted)</i>	$\eta^2$ (Model)
Negative Interaction	6.62	0.0145	0.07	0.7866	0.74
Commitment	4.39	0.0433	0.38	0.5419	0.80
Emotional Intimacy	7.04	0.0117	0.09	0.7695	0.78

### Discussion

Family life education (FLE) has the potential to bolster relationships within a preventative and strengths-based application (National Council on Family Relations, 2021). The current workshop, an example of a novel implementation of FLE through both mode and instructors, suggests that FLE delivery can be modified to positive, albeit modest, results. On the measured outcomes, community couples participating in this free workshop experience reported significant increases in commitment, emotional intimacy, and sexual satisfaction between the start and end of the workshop, with a significant decrease in negative interactions. At six months post-workshop, however, only changes in negative interaction had been maintained to a significant level. Although suggested in prior work to help maintain positive changes from FLE (Markman & Rhoades, 2012), booster sessions did not have a measurable effect in the current study.

Our results are encouraging and contribute broadly to the body of literature suggesting positive outcomes from family life education and relationship education (Markman & Rhoades, 2012). A limitation to much prior research in this area is the lack of long-term follow-up (Markman & Rhoades, 2012), thus the third measurement period of our study was a strength even as it suggested that positive results of the workshop were not consistently maintained. Given the mixed results of other work and the constant need for improving program offerings across modalities (Markman & Rhoades, 2012; Ooms &

Wilson, 2004; Scott et al., 2013), the relative lack of long-term effects is disappointing but the fact that this program was generally well-received and seems to have positive short-term possibilities is heartening. It should also be noted that couple outcomes was only one motivator of the project, with the other being providing an effective real-life experience for students, the results of which are described in Law et al. (2018).

This study bridges the domains of family intervention in the form of Family Life Education and classroom learning. There is growing interest in educational programming to aid families and couples in building healthy, lasting relationships (Chalmers, 2019). This program was modestly effective for the couples who participated, but that was not the only goal. Students also benefited from the opportunity to develop skills in education in a semi-controlled environment, one more hands-on and real than the traditional classroom, but still supportive and safe due to the instructor's continued presence and assistance (Law et al., 2018). Thus, this model of classroom and community FLE may be one that instructors and providers (or those who serve dual roles) may be interested in implementing in other locations. This model of students implementing this level of education in a hybrid setting is not currently common; only one other program with a similar model (Stronger Families Project, n.d.) is known in the state of this workshop (S. Ellsworth, personal communication, July 28, 2021), but this model could grow.

### **Challenges of Distance Communication**

Although distance communication technologies aim to emulate natural interactions through real-time audio and visual data transmission, there are unique challenges to the medium. For example, therapists considering Telehealth fear a lack of control over the situation if clients are in another location (Springer et al., 2020). The leads of the current project anticipated these challenges and had the leading professor and student assistants (separate from those presenting the material) in the same room as participants (Law et al., 2017; Law et al., 2018).

Another challenge present in Telehealth, and potentially more so in group IVC settings, is problematic group discussions. For example, not effectively allowing all couples to share, talking over one another, or the discomfort at being the center of attention (Wrape & McGinn, 2019). Having all participants in the same room helped alleviate this challenge in the current study. Other challenges that were experienced by this program and are common to technology-based communications are issues of audio and visual quality; in session-end surveys, participants sometimes noted these challenges as disruptive to their experiences. However, as technology advances and internet connections are used for more and more regular communication, these problems should be addressed in increasingly successful ways.

### **Limitations of Study**

Limitations of this study include the small homogeneous sample and the non-causal research design. Findings from this mostly White, middle-class, different-sex, married sample may not generalize to lower-income and otherwise disadvantaged or marginalized families; this is a common complaint of FLE and relationship education research (Arnold & Beelmann, 2019). More work should be done to extend results like these to diverse samples, as the results of those studies that have incorporated additional contexts have been encouraging (Arnold & Beelmann, 2019). Because of the lack of control group, this work should not be taken as causal evidence of the effect of this workshop; rather, the goal of this study was to document data from the individuals and couples who experienced the workshop (a necessary step in developing effective programming; Markman & Rhoades, 2012). Future work should consider using control groups of some variety to isolate the effects of participation in workshops like these.

Additionally, limitations to implementing the booster sessions should be noted specifically. Because these were an add-on to the program part-way through, there was not an evaluation put into place for the experience of the sessions themselves; additionally, data on dosage (attendance) was not collected, so we cannot test effects of certain levels of attendance or participation in booster sessions. As such, the positive effects of boosters seen in some prior studies should not be discounted, and future research should pay attention to characteristics of booster sessions and continued contact that make a difference (Markman & Rhoades, 2012).

## Conclusion

Family Life Education is a promising field of prevention and education; one that can be applied in various contexts and through many modes. This study's unique use of telecommunication in the form of interactive video conferencing and student facilitators suggests a unique opportunity for family life professionals and educators to consider when planning for both community engagement and high-impact student learning. Although our results from couple outcomes suggest that initial program changes were not maintained in most areas of interest, the workshop did appear to have an immediate effect on couples and was at least successful in producing lasting decreases in negative interaction amongst couples.

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