Becoming Fathers: Initial Exploration of a Support Program for New Fathers

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ABSTRACT

Emerging fathers experience a variety of stressors, including identity and role transitions, changes in their relationships, and challenges in developing caregiving skills. Increasing expectations for father involvement in childcare are emphasizing the importance of the father role, but social supports for new fathers remain scarce. Nineteen expectant and new fathers participated in a pilot 5-week group intervention aimed at improving stress coping and involvement attitudes using a combination of mindfulness practices and skill-building for parenting and partner communication. We administered surveys pre- and postintervention to assess efficacy in the areas of stress, depressive symptoms, father involvement attitudes, and mindfulness. Within-participant differences were compared across participants as well as examining individual reliable change. Results indicated initial reductions in stress and depressive symptoms and increases in the mindfulness constructs of nonjudgment and nonreactivity. No significant changes were found in father involvement attitudes. Perinatal intervention specific to fathers holds promise as an underexplored avenue for supporting families across the transition to parenthood.

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Men's adjustment to fatherhood is a significant contributor to family well-being (Trillingsgaard et al., 2014). Adjusting to parenthood involves coping with a variety of stressors, including physiological stressors related to parenting (Loutzenhiser et al., 2015; Wilson et al., 2019), identity stress (Knoester & Petts, 2017), decreased relationship satisfaction (Doss et al., 2009), and changing social roles (Kushner et al., 2014). As such, intervening with fathers early in the process might support a strong start for new families, but worldwide, parenting interventions are aimed overwhelmingly toward mothers (Panter-Brick et al., 2014). Only about a third of new fathers participate in any kind of childbirth or parenting class (Hofferth, 2003), and in childbirth classes, men may find their needs and experiences marginalized (Kowlessar et al., 2015b). Expectant and new fathers' mental health and well-being may be supported by programs that help them build stress and coping skills such as mindfulness. Moreover, these programs can help new fathers develop parenting skills to respond effectively and sensitively to their newborn and build

more positive attitudes about being involved in the care of their newborn (Tremblay & Pierce, 2011). To begin to address this need, we delivered a 5-week mindfulness and skills building program to expectant and new fathers and assessed changes in perceived stress, depressive symptoms, father involvement attitudes, and mindfulness. This study is guided by two research questions. The first is whether an intervention for expectant and new fathers shows promise for increasing their ability to cope with stress and improving their well-being. The second is whether such an early intervention can increase father involvement attitudes.

NEW FATHERHOOD, STRESS, AND WELL-BEING

Modern fatherhood has an increasing emphasis on involvement in child-rearing (Gerson, 2010). Fathers are becoming more involved as caregivers but may be attempting to balance this with perceptions of the male as provider and workplace pressures that undersupport family time (Kowlessar et al., 2015a; Kowlessar et al., 2015b). Conflicts in expectations paired with a lack of social support around fathering contribute to a variety of intra- and interpersonal stressors for fathers (Machin, 2015). Actual fathering practices involve less caregiving than fathers believe they should be providing (McLaughlin & Muldoon, 2014), suggesting men are struggling to adapt to their own expectations. In a metasynthesis of data from 13 qualitative studies, men in all studies expressed worry over the impending changes in experience and responsibility (Kowlessar et al., 2015b). Lack of a supportive network and limited education about childbearing and child-rearing can increase psychological distress for new fathers (Boyce et al., 2007), and higher paternal parenting stress has been linked with decreased engagement and other problematic coping strategies such as increased alcohol use (Halme et al., 2006).

A buildup of stressors can impact the mental well-being of new fathers. Recent research has focused on the potential for men to experience prenatal and postpartum mood disorders as they undergo the stress of role transition, changes in the couple relationship, and physiological stressors such as reduced sleep (Da Costa et al., 2017). Men frequently describe a feeling of depression during their partner's pregnancy (Kowlessar et al., 2015b), and a recent meta-analysis found a paternal postpartum depression rate of 8% (Cameron et al., 2016). It has also been found that depressive symptoms increase on average by 68% through the first 5 years of fatherhood for fathers who are living in the home with their children (Garfield et al., 2014).

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Maternal perinatal depression is a well-known risk to family well-being and is the subject of efforts toward routine screening, education, and intervention. Paternal mental well-being is also important to family functioning but has been slower to receive attention. Paternal depression has been found to worsen maternal depressive symptoms (Paulson et al., 2016), decrease father attachment to the infant (Wynter et al., 2016), and correlate with poorer developmental outcomes for children at age 3.5 (Ramchandani et al., 2005). Mental health has also been found to be a mediator between parenting stress and couple adjustment (Rolle et al., 2017).

Intervening to support father adjustment may contribute positively to the family as well as the father himself. Fathers can be important and unique attachment figures for their children (Bretherton, 2010; Grossman et al., 2002; Jeynes, 2016). Paternal attachment representations can even begin before birth, with prenatal fetal attachment representations positively correlated with postpartum attachment to the infant (Condon et al., 2013). Fathers who can establish confidence in caregiving early on experience benefits such as a higher sense of parental effectiveness and higher perceived involvement from their partner (Tremblay & Pierce, 2011), which may be protective. Father coparenting involvement has been linked with better relationship quality (Durtschi et al., 2017; Schober, 2012), decreased conflict (Newkirk et al., 2017), and reduced likelihood of divorce in the first year (Schober, 2012).

A growing body of evidence consistently links mindfulness meditation with reduced markers of stress (Pascoe et al., 2017), and mindfulness has been successfully utilized as a stress-coping strategy for new parents. Prenatal mindfulness education is associated with reduced rates of mental health symptoms in mothers (Duncan & Bardacke, 2010). Prenatal mindfulness practice is also associated with decreased levels of the stress hormone cortisol (Matvienko-Sikar & Dokray, 2017) and reduced symptoms of depression in postpartum

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mothers (Dimidjian et al., 2016). Mindfulness as a stress coping strategy has not been reported on for expectant fathers, but we expect it would have similar benefits.

As expectant fathers attempt to navigate such a significant life transition, they may benefit greatly from prenatal preparation that specifically addresses their needs. Community intervention for men becoming fathers may help them to connect with others in a similar life stage while learning how to manage the array of potential stressors and better understand and prepare for their transition to parenthood. Opportunities to learn skills in positive stress management, infant care, and partnership while clarifying roles and identities may serve to address formerly unmet needs in this population.

In an effort to identify more ways to meet the needs of families transitioning to parenthood, we developed "Becoming Fathers," a group intervention for first-time expectant and new fathers that incorporated mindfulness practices, self-reflection, group discussion, and skill-building. A more detailed explanation and justification for these elements is presented in Rayburn (2019). This pilot study tested the preliminary efficacy of the program using a nonrandomized, noncomparative design. We hypothesized that participants in the group intervention would report increased mindfulness, reduced stress and depressive symptoms, and increased father involvement attitudes.

METHODS

Participants and Recruitment

Expectant and new fathers were recruited using convenience and snowball sampling with flyers distributed locally at obstetric clinics, childbirth classes, social media, and new parent groups. Participants were also recruited via e-mail using university listservs. Inclusion criteria were that participants must identify as male and be in a cohabiting relationship with their romantic partner who is expecting a baby or recently had a baby. The age of the fetus/baby must have been between 20 weeks gestation to 3 months postpartum at study onset. Participants must have been expecting or newly parent to their first child, have no prior experience fathering another infant, and must expect to take on a fathering role for the infant. As the intervention was only offered in English, participants were required to be able to read and speak English fluently.

We ran the study with two cohorts (*N1* = 13, *N2* = 6). Participants were primarily White (89.5%). One participant identified as both White and Latino, one as both White and Asian, and one as Latino. The average age of participants was 32 (standard deviation [*SD*], 4.92; Range, 23–42). Most participants had a bachelor's degree (*N* = 11, Range = some college–doctoral degree). All participants reported being full-time employees. Estimated household incomes were higher than the local population average.

Measures

Stress. The Perceived Stress Scale (PSS) is a 10-item self-report measure of general life stress (Cohen, 1994). The PSS measures stress as a construct of how overwhelming, uncertain, and out-of-control life has seemed for the respondent with questions such as "In the last month, how often have you felt that things were going your way?" and "In the last month, how often have you been able to control irritations in your life?" Scores range from 0 (*never*) to 4 (*very often*), and a higher score on the scale indicates higher overall perceived stress. In previous studies, the PSS has demonstrated good test–retest reliability (r = 0.85), high internal consistency (α = 0.84–0.86), and valid correlations with related constructs (Cohen et al., 1983). In this study, the PSS had a Cronbach's alpha of 0.89 at pretest. Posttest was similar.

Depression. The Edinburgh Postnatal Depression Scale (EPDS) is a scale for postpartum depression that has been validated for men as well as women (Matthey et al., 2001). The 10-item scale asks participants to rate themselves on how they have been feeling over the past week with questions such as "I have looked forward with enjoyment to things" and "I have been so unhappy that I have been crying" (Cox et al., 1987). Item answers are ranked from 0 to 3 with a higher overall score indicating more depression symptoms. When tested for men, the EPDS demonstrated an internal consistency of α = 0.81, strong split-half reliability (r = 0.78), and correlates well with the Center for Epidemiologic Studies Depression Scale (r = 0.62; Matthey et al., 2001). In this study, the EPDS had a Cronbach's alpha of 0.83 at pretest.

Father Involvement Attitudes. The Father Involvement Attitudes Scale (FIAS) is an eight-item self-report measure of the degree to which fathers believe their involvement can have a positive impact on child development (Hofferth, 2003). The scale includes items such as "A father should be as heavily involved in the care of his child as the mother," and "Fathers are able to enjoy children more only when the children are older." Responses range from 1 (*disagree a lot*) to 4 (*agree a lot*). The scale was found to be have good Cronbach's internal consistency for fathers of older children ($\alpha = 0.70$), and positive fathering attitudes demonstrated an association with actual father involvement (Hofferth, 2003). In this study, the FIAS items did not demonstrate strong internal consistency ($\alpha = 0.47$ at pretest). Analyses indicated that removal of items did not significantly improve the reliability.

Mindfulness. The 15-item Five-Factor Mindfulness Questionnaire (FFMQ-15) is a short-form version of the 39-item Five-Factor Mindfulness Questionnaire. The FFMQ-15 is a self-report measure of activities related to mindfulness in the domains of observation, description, awareness, nonjudgment, and nonreactivity (Gu et al., 2016a) with questions such as "I pay attention to the wind in my hair or the sun on my face." Answers are provided on a scale from 1 (*Never or very rarely true*) to 5 (*Very often or always true*). Internal consistency ranges from 0.64 to 0.83, and scores for the FFMQ-15 strongly correlate to scores for the FFMQ-39 (Gu et al., 2016b). In the present study, internal consistency for the FFMQ-15 was $\alpha = 0.76$. Reasonably good reliabilities were found for subscales observing ($\alpha = 0.64$), describing ($\alpha = 0.75$), acting with awareness ($\alpha = 0.82$), and nonjudging of inner experience ($\alpha = 0.74$). The subscale of nonreactivity to inner experience had a low consistency in this study ($\alpha = 0.34$).

Procedures

This study utilized a mixed-methods descriptive feasibility design that included a single-group intervention with pretest and posttest surveys. All procedures were approved by a university internal review board. Surveys were completed online preintervention and immediately postintervention (approximately 7 weeks later).

Intervention. The Becoming Fathers curriculum (Rayburn, 2019) was administered over 5 weeks, 1 hour each week. Each week included a combination of mindfulness practice, small- and large-group discussions around topics specific to fatherhood (e.g., participants' ideas of what it means to be a father, the role of their own fathers in their lives, and factors in their relationships), and skills-based education on the topics of baby care (e.g. responsive parenting, basic infant care, and soothing a crying baby), partner communication, and mental health.

Understanding the nature and potential applications of positive male community at this critical transition point is an important avenue for further inquiry.

RESULTS

Analysis Plan

Because of the small sample size, the study was underpowered to detect statistically significant effects. We set the alpha level for statistical analyses at a conservative 0.1 level in order to assess trends for further exploration in subsequent studies. Efficacy outcomes are detailed here by type. Unless otherwise noted, paired samples *t* tests were used to identify within-participant differences between pre- and postintervention scores. We also conducted reliable change analyses which can provide additional information about changes in small samples. Reliable change is the chance that variation in pretest to posttest scores for an individual is not likely to be due to natural measurement variation alone and is likely to indicate actual change in the individual (Jacobson & Truax, 1991). Confidence intervals at 1.96 standard errors of the measurement ($p < .05$) were graphed around the line of no change in a scatterplot to determine individuals who are likely to have demonstrated real change beyond measure variation. "Correlations among all study variables at baseline are presented in Table 1."

Aim 1

Our first aim was to test the intervention's efficacy for altering expectant and new fathers' perceived stress levels, mindfulness, and their well-being as indicated by symptoms of depression.

Stress and Well-Being. Although overall participant mean stress levels decreased from pre- to postintervention, this difference was nonsignificant with a small effect size (Table 2). Because several participants' babies were born between assessments

TABLE 1

Correlations Among Study Variables

Variable	Father Involvement	Perceived Stress	Depressive Symptoms	Mindfulness
Father Involvement	—			
Perceived Stress	–0.13	—		
Postnatal Depression	–0.25	0.67*	—	
Mindfulness	0.19	–0.50	–0.60	—

*$p < .05$.

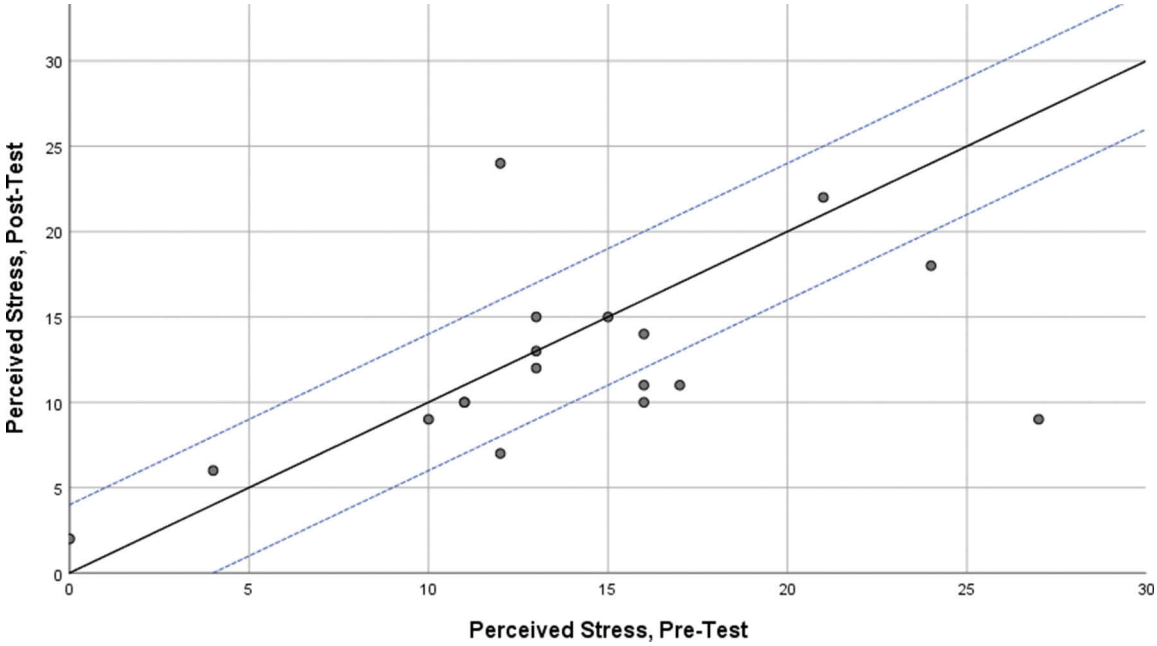

Figure 1. Reliable change in perceived stress for all participants.
Note. SE_{MEAS} = 2.04. The solid line represents the line of no change. Dots above the line of no change represent increased scores, and dots below the line of no change represent decreased scores. The dotted lines represent reliable change confidence intervals set at 1.96 ($p < 0.05$) standard errors of the measure.

and stress levels would be expected to *increase* at the immediate transition to parenthood, we decided to conduct a post hoc test to examine whether time of birth moderated these effects. Results of these analyses indicated that stress levels declined significantly between pre- and postintervention for those whose babies were born either before the intervention started or after they completed the postintervention survey. Six participants demonstrated reliable decreases in stress in the total group (Figure 1), and five participants in the group of those whose babies were not born between pretest and posttest demonstrated reliable decreases in perceived stress (Figure 2).

The EPDS sets the level of possible depression at a score of 10 or higher (out of 30 possible). Only two participants scored high enough at pretest to fall within clinical levels of depression. All other participants scored below 10 at pretest. No participant scored higher than 15 at any time (Figure 3). Participant mean depression decreased overall from pretest to posttest but fell outside the level of statistical significance with a small effect size. Following our analytic strategy to examine changes in stress, we examined whether time of birth moderated the effects. It is worth noting this excluded both participants with clinically elevated levels of depressive symptoms. Depressive symptoms decreased significantly between pretest and posttest for those who did not have a baby in that timeframe. Effect sizes for those who did not have a baby between pretest and posttest were large. Depressive symptoms were low overall for the sample. Two participants with moderate depressive symptoms demonstrated reliable change to decreased depressive symptoms. Two participants with very low depressive symptoms

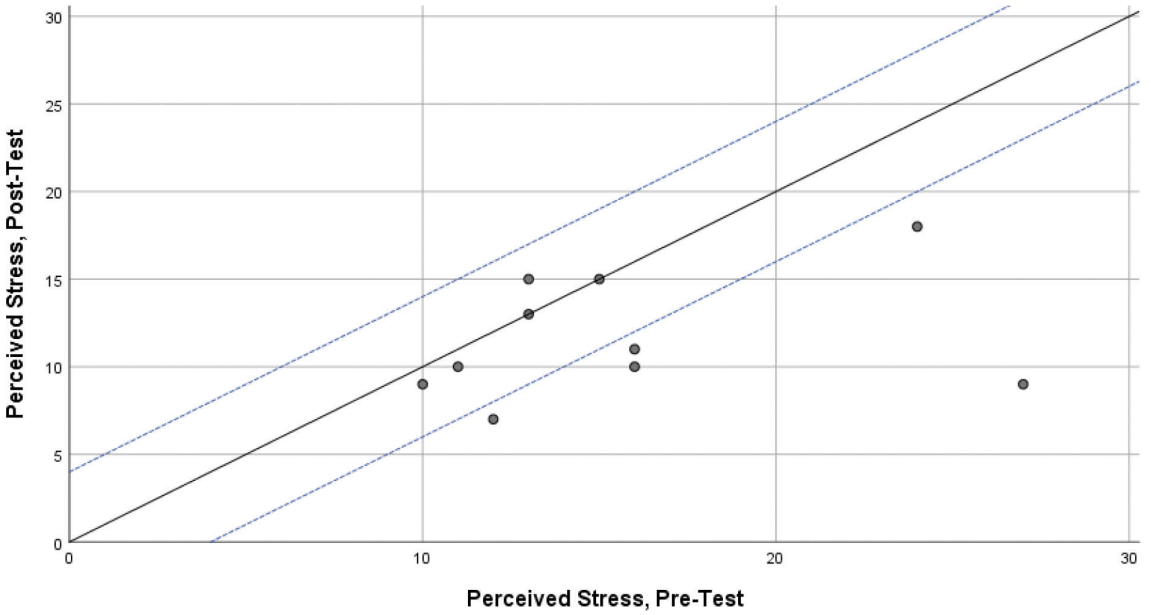

Figure 2. Reliable change in perceived stress for participants who did not have a baby between pretest and posttest.
Note. The solid line represents the line of no change. Dots above the line of no change represent increased scores, and dots below the line of no change represent decreased scores. The dotted lines represent reliable change confidence intervals set at 1.96 ($p < 0.05$) standard errors of the measure.

TABLE 2

Preintervention and Postintervention Scores, *t* Values, and Effect Size for Outcomes

Measure	*N*	Pre *M* (*SD*)	Post *M* (*SD*)	*t*	*d*
Perceived stress all participants	18	13.94 (6.33)	12.11 (5.40)	1.32	0.31
Perceived stress baby not born	10	15.70 (5.58)	11.70 (3.43)	2.22*	0.86
Depression all participants	18	5.39 (3.79)	4.11 (3.39)	1.69	0.35
Depression baby not born	10	6.20 (3.61)	3.90 (2.68)	2.04*	0.72
Five-factor mindfulness 15Q	18	3.66 (0.32)	3.68 (0.49)	–0.22	0.05
–Observing	18	3.31 (0.90)	3.11 (0.80)	0.93	0.23
–Describing	18	3.85 (0.78)	3.78 (0.86)	0.54	0.09
–Nonjudging of inner exp.	18	3.83 (0.77)	4.07 (0.78)	–1.69	0.31
–Nonreactivity to inner exp.	18	3.63 (0.82)	3.93 (0.72)	–2.25**	0.39

*$p < .1$. **$p < .05$. ***$p < .01$.

at pretest demonstrated reliable increases in depressive symptoms, though still subclinical, at posttest. Figure 3 depicts reliable change in depressive symptoms.

Mindfulness. Overall mindfulness did not change significantly from pretest to posttest, and mindfulness effect sizes were very small to small. The subscale of nonjudgment of inner experience increased approaching significance, and four of the participants demonstrated reliable increases (Figure 4). The subscale of nonreactivity to inner experience increased significantly.

Aim 2

Our second aim was to test the intervention's efficacy for altering expectant and new fathers' attitudes about involvement with their child.

Father Involvement Attitudes. Father involvement attitudes demonstrated an increased overall mean between pretest and posttest, but this increase was nonsignificant with a small effect size. With a high score for each item at 4 and individual means clustered above 3 at both pretest and posttest, there may be a ceiling effect on this measure.

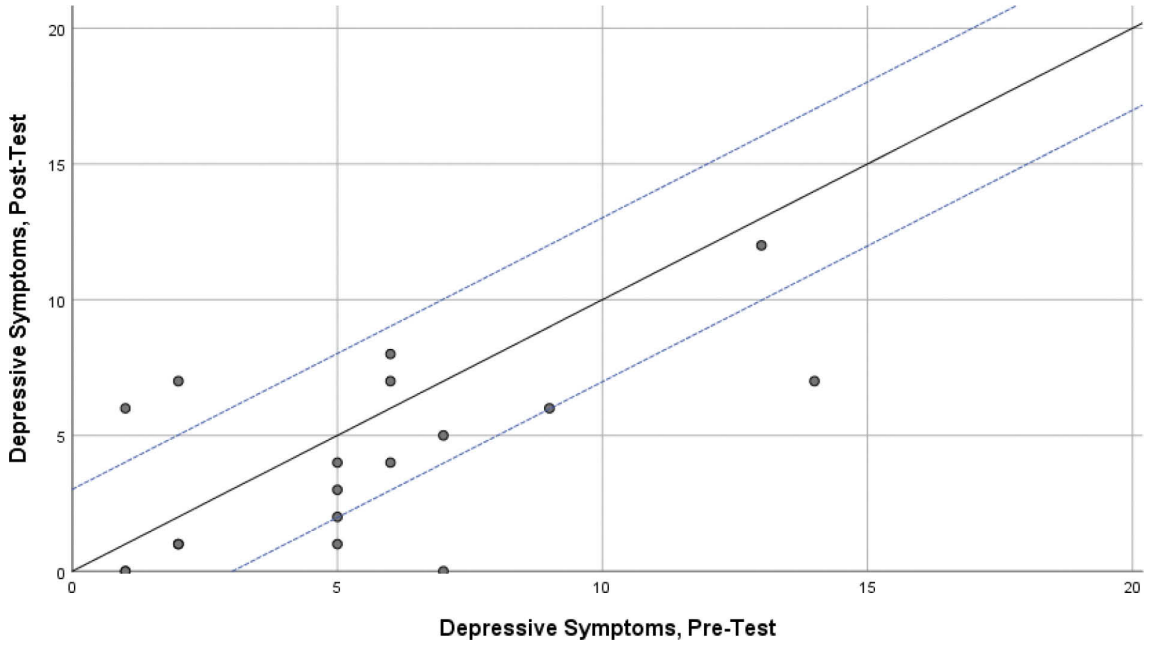

Figure 3. Reliable change in depressive symptoms for all participants.
Note. SE_{MEAS} = 2.18. The solid line represents the line of no change. Dots above the line of no change represent increased scores, and dots below the line of no change represent decreased scores. The dotted lines represent reliable change confidence intervals set at 1.96 ($p < 0.05$) standard errors of the measure.

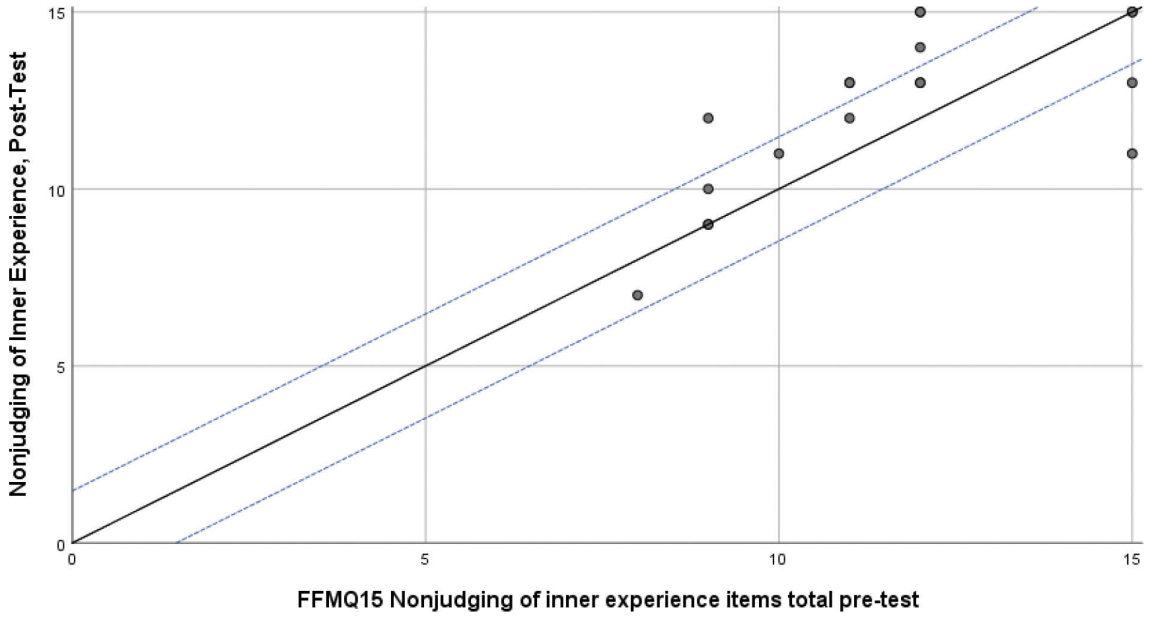

Figure 4. Reliable change in nonjudging of inner experience for all participants.
Note. SE_{MEAS} = 0.75. The solid line represents the line of no change. Dots above the line of no change represent increased scores, and dots below the line of no change represent decreased scores. The dotted lines represent reliable change confidence intervals set at 1.96 ($p < 0.05$) standard errors of the measure.

DISCUSSION

The study's primary aim was an exploration of the potential efficacy of a pilot study of "Becoming Fathers," a father-focused group intervention for expectant and new fathers. We explored initial efficacy trends in the areas of stress, depressive symptoms, father involvement attitudes, and mindfulness. Findings indicate there are potential effects of the intervention on stress, depressive symptoms, nonreactivity to inner experience, and attachment representations. Although this pilot study was underpowered to detect all possible changes at a level of statistical significance, trends in pre–post differences and measures of individual reliable change provide promising evidence for this intervention and directions for future study.

Findings partially supported hypotheses for reductions in stress and depressive symptoms, but only for those whose babies were not born *during* the intervention period. Stress levels reduced overall for the sample, but the difference was only significant for those whose babies were born before or after the intervention. It may be that the changes incurred at the immediate transition to parenthood are likely to increase stress symptoms regardless of participation in an intervention. Given that having a baby while the intervention was ongoing was also the primary reason participants missed class sessions, it may also be that attending fewer sessions provided less benefit in stress reduction. Alternatively, it may be that a father-preparation class has more value for those who are currently in a more stable point in the transition to parenthood, either prenatal or postnatal. Given the relationship between perinatal stress and depressive symptoms (Wee et al., 2015), it is not surprising that depressive symptoms would follow a similar pattern. Indeed, in the present study, stress and depressive symptoms were strongly correlated, as expected. A surprising finding, however, is that this correlation vanished for participants whose babies were born between pretest to posttest. Although most participants who had a baby between pretest and posttest experienced increased stress levels, their stress levels were not associated with depressive symptoms. Whether the intervention may have influenced this difference or whether these two constructs fail to move together at the immediate transition to fatherhood is unknown and requires further study.

The hypothesis of increases in father involvement attitudes was not supported. The nonsignificant change in father involvement attitudes was surprising given the class focus on developing a father identity. Scores were high to begin with, all clustered in the upper fourth of the possible range, which likely indicates a ceiling effect from pretest to posttest. It may be that fathers who are likely to participate in a fathering class already have highly positive involvement attitudes. Further study should provide a comparison group to identify possible differences and use a larger and more diverse sample to better understand any possible interaction between the intervention and father development. Considering that internal expectations about fathering are important predictors of involvement (Trahan, 2017), the development of fathering expectations and identity remains an important area of inquiry.

Efficacy of the mindfulness components was difficult to determine in this sample. Findings supported increases in subjective mindfulness in the area of nonreactivity to inner experience but not others. The curriculum utilizes brief mindfulness and compassion practices rather than a comprehensive mindfulness curriculum. Brief practices might not be expected to generate large effects in mindfulness. It may also be that the intervention's mindfulness activities required more individual practice to impart an effect, or that they emphasized particular aspects of mindfulness that was not fully captured by the assessment. Small or medium effects would not be detectable in a sample of this size.

IMPLICATIONS FOR PRACTICE AND FUTURE DIRECTIONS

Interest in father-focused intervention around the transition to fatherhood is gaining momentum but remains far behind the need. Recent studies have assessed feasibility of a text-message intervention for expectant fathers (Fletcher et al., 2017) parenting skills training (Mihelic et al., 2018), a brief group educational intervention focused on childcare skills and role clarification (Bourget et al., 2017), and in-home and text-message stress reduction support for new fathers (Tandon, 2018). Identifying multiple avenues of support for emerging fathers is important to fill the support gap.

Results from this study suggest a focus on stress reduction and building supportive community for fathers are worthwhile components for educators to include in their practice. See Table 3 for a list of suggestions for paternal perinatal education. Little research currently exists on the value of supportive community for new fathers. Understanding the nature and potential applications of positive male community at this critical transition point is an important avenue for further inquiry. This study is limited by a small sample size and a nondiverse sample that is primarily white, English-speaking, college educated, employed with middle-to-high income, and an average age of 32. Understanding the generalizability of this intervention will require a larger and more diverse sample. Future research in this area will also benefit from a control group to best evaluate program efficacy.

CONCLUSION

Involved fathers play a valuable role in family life at the transition to parenthood. Education targeting the

TABLE 3

List of Recommendations for Paternal Perinatal Education

Recommendation	Suggested Format/Topics
Self-reflection	Journaling Art Guided reflection
Group process	Small-group discussion Facilitated large-group discussion Interactive activities
Community-building	Multiple meetings Introductions/check-ins
Stress-coping skill development	Mindfulness Calming skills Taking a break Self-compassion
Relationship skill development	Attachment Communication Coregulation/soothing
Paternal perinatal mood disorders	Symptoms Resources

unique stressors and support needs of expectant and new fathers at the transition to parenthood may be a valuable addition to perinatal education offerings. We conducted a pilot study to examine initial efficacy of "Becoming Fathers," a 5-week group intervention that aims to support perinatal fathers through building stress coping and a sense of father identity by utilizing mindfulness skills, caregiving and communication education, and building supportive community to explore issues related to identity. Initial efficacy evaluation revealed significant decreases in stress and depressive symptoms for a subset of participants and significant increases in the self-reported nonreactivity to inner experiences. Further testing with larger sample sizes and comparison groups will provide additional information on efficacy. Targeted education for expectant and new fathers is a promising avenue of family support at the transition to parenthood.

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