

Canadian Fathers' Preferences for Support During the Transition to Fatherhood

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ABSTRACT

While there is growing recognition that fathers lack social support during the transition to fatherhood, little is known about the types of services fathers would access. An online survey was conducted with Canadian fathers asking about the type and helpfulness of support they sought. Participants also rated their interest in, convenience of, and the likelihood of using alternative options. All fathers sought support and the majority relied on partners, friends, and family. Fathers were equally likely to have accessed online support versus support from professionals. While fathers rated face-to-face interactions as potentially helpful, they rated online sources as most convenient.

Keywords: fathering, transition to parenting, social support

RÉSUMÉ

Bien que l'on constate de plus en plus que les pères manquent de soutien social lors de la transition vers la parentalité, on en sait peu sur les types de services auxquels ces derniers auraient accès. Un sondage en ligne a été mené avec des pères canadiens sur le type et l'utilité des soutiens qu'ils ont recherchés. Les participants ont également évalué l'intérêt, l'avantage et la probabilité d'utiliser d'autres options. Tous les pères ont demandé de l'aide et la majorité comptait sur leurs partenaires, leurs amis et des membres de leur famille. Les pères étaient aussi susceptibles d'avoir eu accès à du soutien en ligne qu'à du soutien de professionnels. Alors que les pères ont jugé les interactions en face à face potentiellement utiles, ils ont considéré les ressources en ligne comme plus pratiques.

Mots clés : paternité, transition vers le rôle parental, soutien social

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The birth of a first child is a time of joy, transition, and stress for new parents. However, there are significant physical and social differences in how women and men experience this transition (Bennett et al., 2017). While men experience some hormonal changes during and after pregnancy when in a close, cohabiting relationship (Gettler et al., 2011; Storey et al., 2000), men do not experience the same profound physical changes as women do during this time. However, once their baby arrives, men experience fundamental and lasting changes to their identity and social roles necessitating the balancing of multiple responsibilities while tending to their mental health and relationships (Baldwin et al., 2019).

During the first year of a baby's life, fathers frequently report substantial challenges in continuing to manage the demands of paid employment while also juggling responsibilities to their family (Daly & Ball, 2012; Darwin et al., 2017). Coupled with the lack of sleep involved with infant care, fathers are left experiencing high levels of fatigue in the postpartum period, which in turn is associated with higher levels of psychological distress (Loutzenhiser et al., 2015). A systematic review found a prevalence rate for anxiety in men to range between 2.4% and 18.0% during the postnatal period (Leach et al., 2016). Meta-analyses examining postpartum depression (PPD) in fathers found an overall prevalence rate of between 8.4% and 10.4% (Cameron et al., 2016; Paulson & Bazemore, 2010; Rao et al., 2020). Fathers' PPD has been shown to be associated with the development of future psychopathology in their children (Ramchandani et al., 2008). Clearly, the postpartum period is a time when targeted and responsive mental health support services are needed for men.

Despite the need for support, men in general are reluctant to access mental health services and typically only do so in times of crisis (Vogel & Heath, 2016). This hesitancy is heightened in the postpartum period when men report prioritizing their partner's needs over their own (Baldwin et al., 2019; Darwin et al., 2017). To further complicate matters, fathers are most likely to rely on their partner as their primary means of social support. However, their partners may also be experiencing heightened levels of fatigue and distress (Loutzenhiser et al., 2015) and numerous studies have documented stress in the couple's relationship following the birth of a baby (Baldwin et al., 2018). These strains are important to recognize and address, especially considering that fathers develop and understand their parenting role within the context of the relationship with their child's mother (Doucet, 2018; Sevigny et al., 2016). Therefore, while partners may be fathers' first preference for support, men will also likely need to look elsewhere during the transition to parenthood.

The preponderance of literature examining services offered to fathers over the transition to parenthood has focused upon formal prenatal education offered by professionals in a structured setting (Baldwin et al., 2018). Unfortunately, prenatal classes traditionally focus primarily on the needs of mothers, paying less attention to the needs of fathers or preparing them for their own personal transition into fatherhood (Gilmer et al., 2016). A recent narrative review of fathers' experiences in prenatal classes found that fathers frequently feel excluded, would like more education in the postnatal period, and recognize their own need for support services (Lau & Hutchinson, 2020).

Since many prenatal education models do not meet the needs of expectant fathers, it is important to determine what they want from parental education programs (Gilmer et al., 2016). A few studies have asked expectant fathers about their current and anticipated needs. Men in these studies cite a desire to learn about the practical aspects of caring for an infant such as feeding and changing diapers (Huusko et al., 2018). In addition, while they often anticipate that they will need some type of emotional support, men report being

unsure of what support they actually will need (Rowe et al., 2013). While a recent review highlighted the importance of providing services to fathers that facilitate their social connections, the authors noted the limited research available to assess the efficacy of such services (Bennett et al., 2017). Another systematic review of first-time fathers' experiences reported clear and consistent findings across numerous qualitative investigations that new fathers lacked sufficient informational and social support (Baldwin et al., 2018). In a follow-up qualitative study, these same authors interviewed 21 fathers to better understand their mental health and well-being needs. They found that fathers wanted better access to information and services and a greater variety of services (Baldwin et al., 2019). While the variety of services suggested spanned a continuum of formal to informal health and social supports (Bennett et al., 2017), it remains unclear what the relative preferences and perceived barriers to accessing services may be.

Overall, while there is emerging research highlighting the support needs of new fathers, it remains unclear how to best meet these needs, or which intervention approaches would be acceptable to most men. To address this gap in our understanding, we asked first-time fathers with young children about what formal and informal sources of support they sought at the time of the transition to fatherhood as well as what they believe would have been the most helpful. As part of a larger investigation exploring support for fathers, we conducted a cross-Canada survey asking fathers specifically about their informational and support needs over the transition to parenthood. The research questions for the current study were:

1. What supports do experienced fathers report accessing during the transition to parenthood and how helpful did they find these to be?
2. What support do experienced fathers think would be helpful, convenient, and of interest to new fathers?

METHODS

Participants

This research was part of a larger project exploring men's transition to parenthood. This project received ethical approval from the University of Regina's research ethics board and data were collected between January and March 2017. Respondents were recruited using Qualtrics Survey Panels (<https://www.qualtrics.com/research-services/>). As part of their research services division, Qualtrics recruits participants from various sources, including website intercept recruitment, targeted email lists, gaming sites, customer loyalty web portals, permission-based networks, and social media. From their database of panelists, Qualtrics sends surveys to individuals who meet specified criteria and receive nominal remuneration for survey completion. A total of 207 Canadian fathers with at least one child 6 years of age or younger completed the survey. Given our interest in support during the parenthood transition, the analyses reported below were carried out with the 104 respondents who had only one child, and whose child was 6 years of age or younger. This age range was selected to ensure that the transition to fatherhood occurred relatively recently while allowing us to recruit a sample of sufficient size and diversity. See Table 1 for a description of participant demographics. Our sample was better educated than the Canadian population with 67.3 % of participants having a post-secondary degree or diploma compared to 54.0% of the Canadian population (Statistics Canada, 2017a). Income levels of our participants were comparable to the Canadian median income of \$61,400 (Statistics

Canada, 2020). Our participants also represented a greater ethnic diversity than the Canadian population. While over 72% of the population is Caucasian, our sample consists of 64.4% reporting from this ethnic group (Statistics Canada 2017b).

Table 1
Participant Demographics

	Fathers <i>n</i> = 104
Province of Residence	
Alberta	14 (13.4%)
British Columbia	13 (12.5%)
Manitoba	3 (2.8%)
New Brunswick	4 (3.8%)
Newfoundland	1 (1.0%)
Nova Scotia	4 (3.8%)
Prince Edward Island	0
Ontario	40 (38.5%)
Quebec	14 (13.4%)
Saskatchewan	0
Marital Status	
Married	68 (65.4%)
Common law	15 (14.4%)
Never married	15 (14.4%)
Separated/divorced	6 (5.8%)
Age Range	
<18	1 (1.0%)
18-24	13 (12.5%)
25-34	49 (47.1%)
35-44	27 (26.0%)
45-54	10 (9.6%)
55-64	1 (1.0%)
>65	3 (2.8%)
Ethnicity	
Caucasian	67 (64.4%)
Asian	20 (19.2%)
African	5 (4.8%)
Aboriginal	3 (2.8%)
Middle Eastern	5 (4.8%)
Hispanic	1 (1.0%)
Mixed	3 (2.8%)
Income	
< \$20,000	5 (4.8%)
\$20,000 – 40,000	17 (16.3%)
\$40,000 – 60,000	29 (27.9%)
\$60,000 – 80,000	24 (23.1%)
> \$80,000	29 (27.9%)

Table 1, continued
Participant Demographics

	Fathers <i>n</i> = 104
Highest Education	
Some high school	2 (1.9%)
High school graduate	13 (12.5)
Some community college/technical	8 (7.7%)
Community college/tech school graduate	15 (14.4)
Some university	11 (10.6%)
Undergraduate degree	29 (27.9%)
Master's or professional degree	19 (18.3%)
Doctoral degree	7 (6.7%)

Survey

Participants completed a 20-item survey that, in addition to demographic information, asked about the types of support they sought, or would have sought, in the transition to fatherhood. As part of a larger investigation, survey questions were derived from two focus groups ($n = 10$) carried out with men with at least one child under 6 year of age who responded to a university-based email list server advertisement asking for volunteers who wished to provide input to a research project designed to help other fathers. Participants were university students, staff, or interested partners of students and staff. Focus group participants were asked about the support they used, and the support they would have liked to have available to them at the transition to fatherhood. Based upon the support options arising from these focus group discussions, we designed the survey used in the current study. Questions were divided into two blocks. A block of six questions asked about how helpful and convenient respondents would have found various support options at the time of the transition to fatherhood, and how likely they would have been to have actually used those supports. A second block of two questions following the first block asked about the supports respondents actually used, and how effective they found them to be. The survey can be found in Appendix A.

Analysis Plan

Descriptive statistics were computed for each question and groupings were created to provide a general sense of whether fathers preferred formal vs. informal supports, and whether they preferred to receive these supports online or in person. Where feasible, we carried out binomial tests to determine whether a particular source of support was favoured by significantly more respondents than expected if participants were responding randomly. Because we had a comparable number of respondents under and over the age of 35, we also carried out chi square analyses to test for differences in the kinds of supports that were accessed by the men in our survey at the transition to fatherhood.

RESULTS

Support Used

Examining the support respondents reported using, we categorized supports as informal face-to-face (friends, family, partners, work colleagues, other new fathers), informal online (parenting blogs and Facebook pages), and formal (physicians and public health nurses; Figure 1). Overall, 100% of respondents reported seeking some form of support during the transition to fatherhood. Almost all (97.1%) sought support from informal sources. Of these, the vast majority (92.3%) sought some type of face-to-face support. Support was sought by 72.1% of respondents from family members other than their spouses and of these, 96.0% found this source of support at least somewhat helpful (i.e., rated as 3 or higher on a 5-point scale). Similarly, 71.1% of fathers sought support from their partners and 97.3% found this source helpful; and 68.3% of respondents sought support from their friends, and 97.3% found this source helpful. Only 19.2% of men in the sample sought support from other new fathers, but 90.0% found this source at least somewhat helpful.

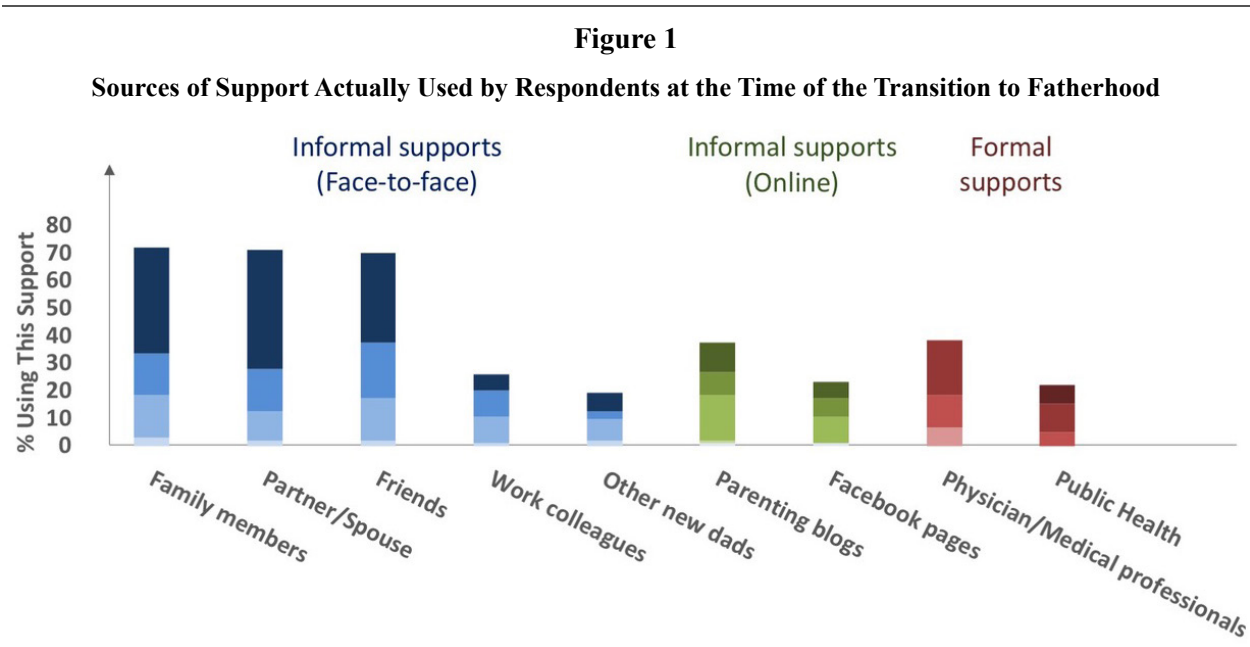
Approximately half (47.1%) of fathers also sought support online. Parenting blogs were consulted by 37.5% of all respondents, and of these, 94.9% found this source helpful. Similarly, 23.1% of respondents sought assistance from Facebook pages, and of these 95.8% found this source helpful.

Approximately half (47.1%) of fathers sought help from formal sources. Assistance from physicians was sought by 38.5% of respondents, and of these, 82.5% found this source helpful. Similarly, only 22.1% of respondents sought help from public health nurses, but 100% of them found this source helpful. In addition to the types of support we asked about, respondents cited their own fathers ($N = 1$), parenting books ($N = 1$), and Google searches ($N = 1$) as sources for support.

Support Desired

Helpfulness of support. Respondents were first asked to rank seven potential alternatives of support from most helpful to least helpful. They were then asked, “Thinking about your number 1 ranking from above, what about this option would you find helpful?” Mean rankings are listed in Table 2. Fathers reported the most helpful option would be home visits from public health nurses. In total, 32 cited this as the most helpful source of support and only 14 ranked it as the least helpful. To better understand what men perceived as helpful, we computed an index of helpfulness for each alternative by summing the number of respondents who ranked each choice as the first or second most helpful option, and subtracted from this the number of respondents who ranked that alternative as the least or second-least helpful. Scores on this index are displayed in Figure 2.

Respondents generally believed that formal support (public health nurse visits, father-led meetings) would be more helpful to new fathers than informal support, and generally thought it would be more helpful to receive social support outside of their workplaces. Respondents were also skeptical about the helpfulness of informal online supports such as social media or mobile apps, and indeed, mobile apps were viewed by more respondents as unhelpful than expected by chance. Home visits from public health nurses were viewed as the most helpful option. Those choosing this option as their first choice tended to cite the expertise of the nurse (e.g., “good informative advice”; “I could ask questions and be checked that I am doing things



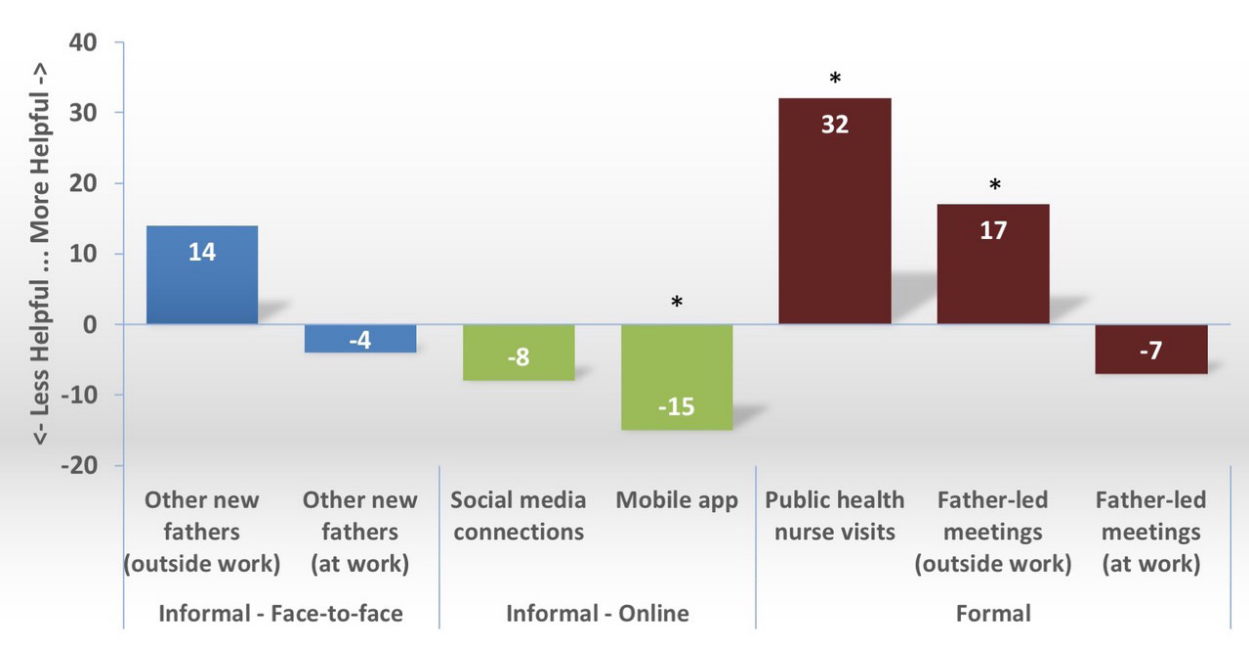
Note. Taller bars indicate more respondents used the support; darker segments indicate higher ratings of helpfulness.

Table 2
Mean Rankings of Seven Alternatives for Support during the Transition to Fatherhood

Support Option	Mean Ranking
In-person visitation by a public health nurse or healthcare worker	3.59
Small group meetings led by an experienced father outside of work	3.77
Small face-to-face meetings with other new fathers outside of work	4.14
Small face-to-face meetings with other new fathers at your workplace	4.61
Social media connections with other new fathers (e.g., Facebook)	4.77
Small group meetings led by an experienced father at your workplace	4.79
A mobile app offering opportunities to connect with other dads	4.80

Note. Smaller values correspond to higher-ranked options

Figure 2
Rated Helpfulness of Seven Different Alternatives for Supports to Facilitate the Transition to Fatherhood

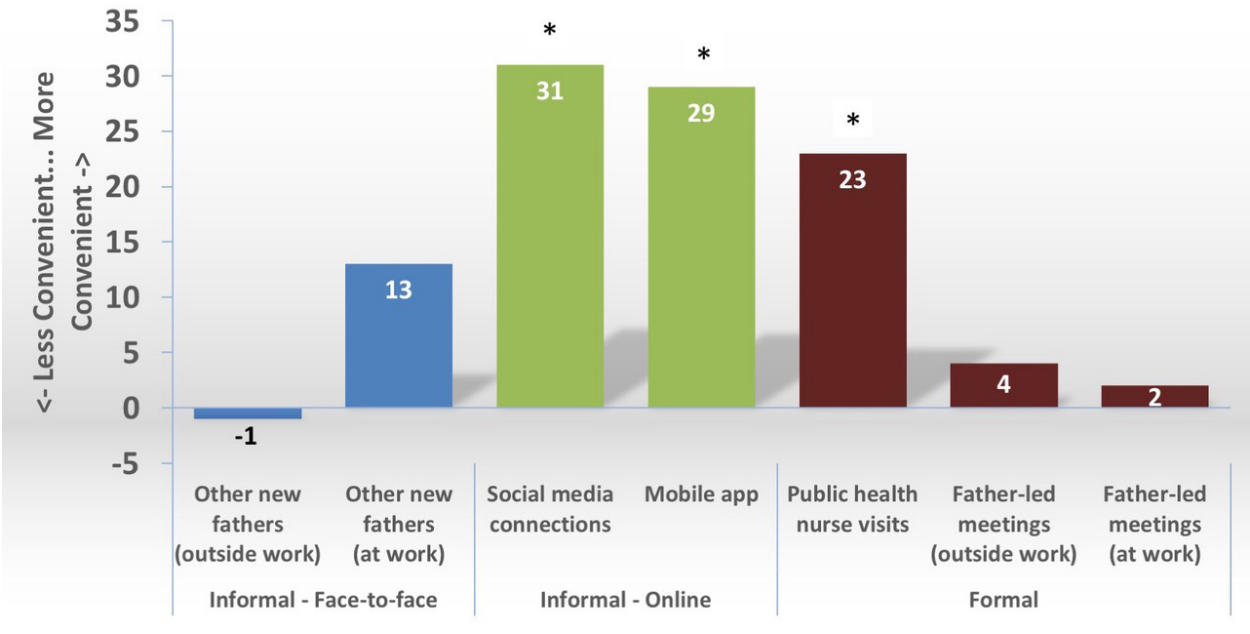


Note. Respondents rated each potential source of support on a scale from 1 (not helpful) to 5 (very helpful). An index of perceived helpfulness was computed for each option by summing the number of respondents rating the option as a 4 or 5 then subtracting from that value the number rating the option as a 1 or 2. Positive values indicate the option is generally viewed as helpful; negative values indicate the option is generally viewed as unhelpful. Options denoted with an * were viewed by more respondents as helpful than unhelpful, or by more respondents as unhelpful than helpful, than would be expected by chance alone, as indicated by a two-tailed binomial test with $\alpha = .05$. See Appendix B for details.

correctly”) and convenience (“make sure baby is healthy without leaving the house”; “having a nurse visit us instead of us visiting the doctor just would have saved us time”).

Convenience of support. We next asked respondents to rate the same seven options for support on a scale from 1 (Not at all convenient) to 5 (Very convenient). For each option, we computed a convenience index by summing the number of respondents who rated the option as a 4 or 5, then subtracting from this the sum of the number of respondents who rated the option as a 1 or 2. The results are displayed in Figure 3. Respondents generally rated informal online supports as more convenient than formal supports and informal face-to-face supports, with the exception of visits from public health nurses, which—like informal online supports—were viewed favourably by more of the sample than expected by chance.

Figure 3
Ratings of Perceived Convenience of Seven Different Options for Possible Sources of Support for New Fathers in the Transition to Fatherhood



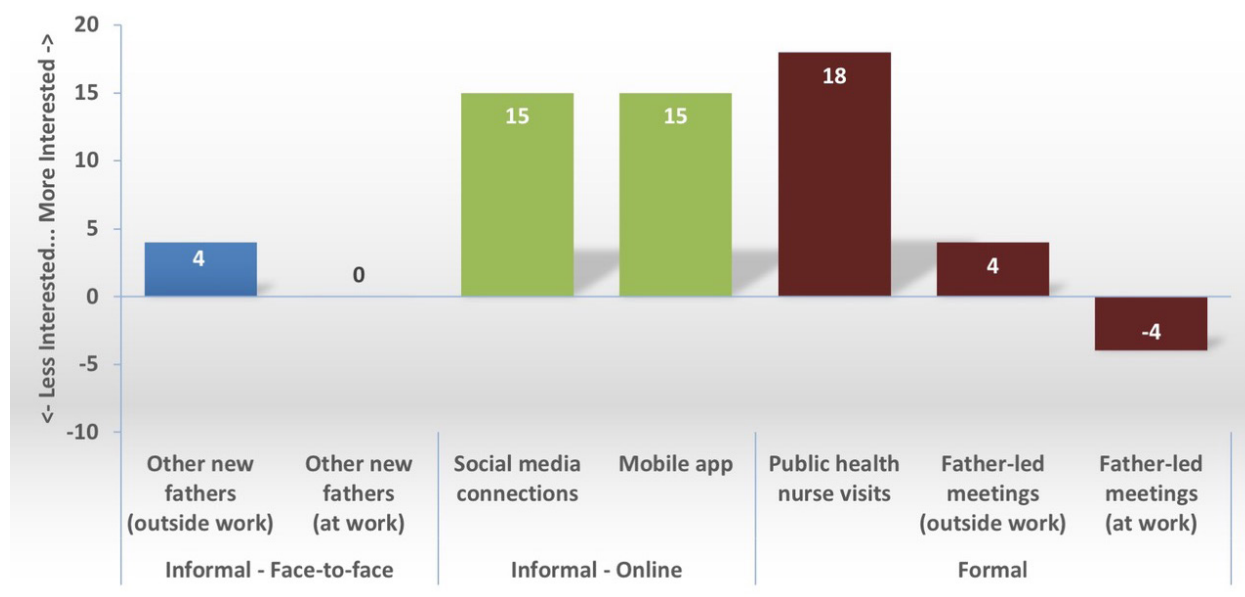
Fathers rated each option on a scale from 1 (Not at all convenient) to 5 (Very convenient). For each option, an index of convenience was computed by summing the number of respondents who rated the option as a 4 or 5, then subtracting from this value the number of respondents who rated the option as a 1 or 2. Options denoted with an * were viewed by more respondents as convenient than inconvenient than would be expected by chance alone, as indicated by a two-tailed binomial test with $\alpha = .05$. See Appendix B for details.

Interest at time of transition to fatherhood. Respondents were asked to rate how interested they would have been in the same seven options for support at the time of the transition to fatherhood on a scale from 1 (Not at all interested) to 5 (Very interested). Net interest was computed as for the helpfulness and convenience indices described above. The results are displayed in Figure 4. With the exception of visits from public health nurses, respondents generally indicated that informal online supports would have been of greater interest to them at the time of the transition to fatherhood than formal supports and informal face-to-face supports, although these options were not favoured by more respondents than expected by chance.

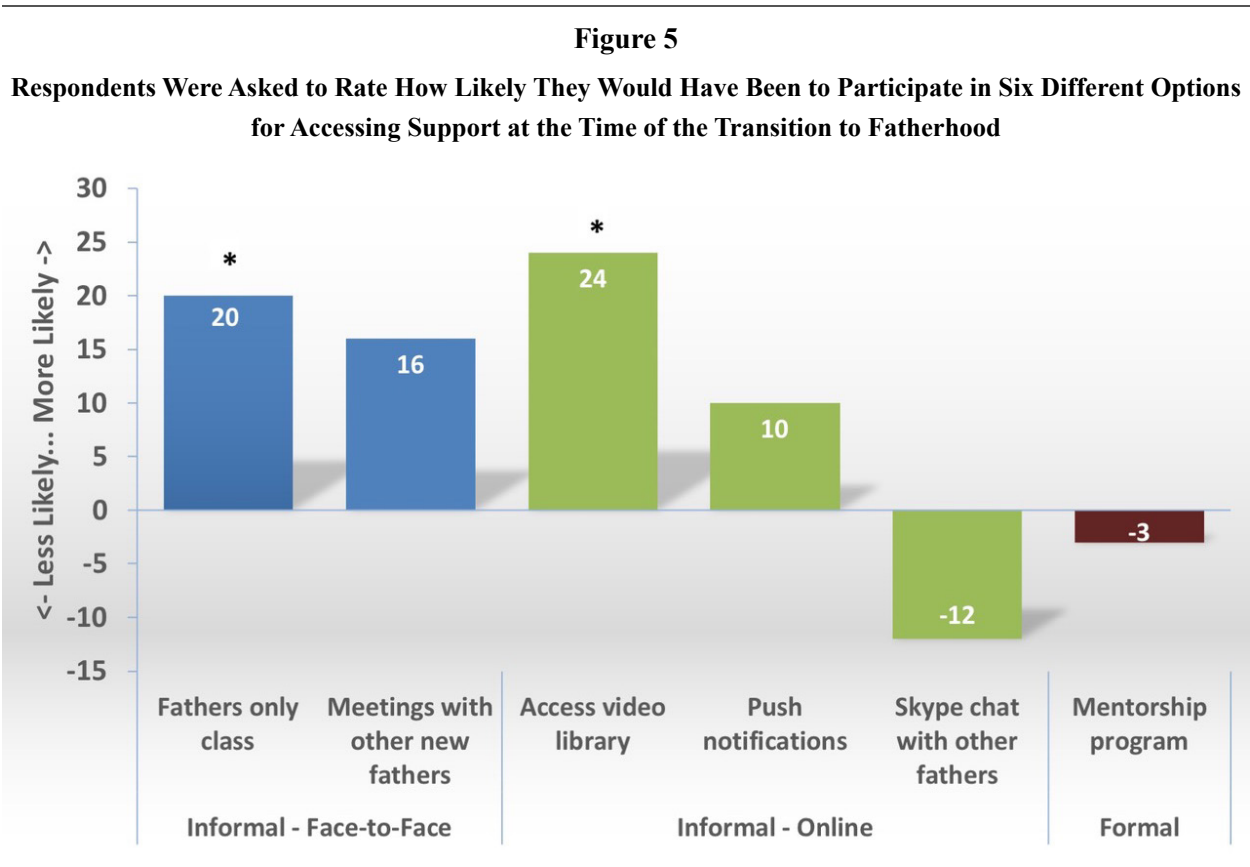
Likelihood of using supports. Respondents were presented with six new options for supports and asked to rate how likely they would have been to use each one on a scale from 1 (Very likely) to 5 (Very unlikely). A likelihood index was computed by summing the number of respondents who rated the source 1 or 2 and subtracting from this value the number of respondents who rated the source 4 or 5. The results are displayed in Figure 5.

Figure 4

Respondents Rated How Interested They Would Have Been in Each of Seven Options for Support Had They Been Available at the Time of the Transition to Fatherhood



Each option was rated on a scale from 1 (Not at all interested) to 5 (Very interested). An index of interest was computed for each option by summing the number of respondents rating the option 4 or 5, from which the sum of the number of respondents rating the option 1 or 2 was subtracted. Positive values indicate respondents would generally have been interested in the option; negative values indicate respondents would generally have not been interested in the option; a value of zero indicates there were as many respondents who would have been interested as there were who were not. Note: A binomial test comparing the number of respondents who indicated they were interested in an option vs. not interested did not reveal any significant differences. See Appendix B for details.



Respondents rated each option on a scale from 1 (Extremely likely) to 5 (Extremely unlikely). A likelihood index was computed by summing the number of respondents rating an option with 1 or 2, then subtracting from this value the sum of the number of respondents rating the option with a 4 or 5. Positive values indicate respondents were generally likely to participate in the option; negative values indicate respondents were generally unlikely to participate in the option. Options denoted with an * were viewed by more respondents as likely to be used than unlikely to be used than would be expected by chance alone, as indicated by a two-tailed binomial test with $\alpha = .05$. See Appendix B for details.

Respondents indicated that they would have been likely to access a video library of testimonials from other fathers about how they handled difficulties with the transition to fatherhood and a fathers-only prenatal class; although support was also expressed for meetings with other new fathers, and push notifications with information about how other new fathers handled difficulties in the transition to fatherhood, these options were not rated as favourably by more respondents than expected by chance. Respondents indicated they would have been unlikely to participate in a mentorship program where an experienced father would check in with them from time to time, nor would they have been likely to participate in a Skype chat with other new fathers, although these again were not rated more favourably or unfavourably than expected by chance.

We considered the possibility that the type of support new fathers were likely to have accessed at the time of the transition to parenthood might be different for younger and older fathers. In particular, we were interested in whether younger fathers might regard online support more favourably than older fathers. To test for this, we carried out a series of chi square tests for independence; the results are displayed in Table 3. Observations were first sorted into one 2 X 2 contingency table for each support option, with the factors Age (Younger: Below 35 years of age, $N = 63$ vs. Older: 35 years of age or older, $N = 41$) and Likelihood (Likely: respondents who rated the option with a 1 or 2 vs Unlikely: respondents who rated the option with a 4 or a 5). None of the chi square tests yielded a significant result for any option, providing no evidence that younger and older first-time fathers differed with respect to how likely they would have been to have accessed these supports at the time of the transition to parenthood.

Table 3
Number of Respondents Indicating They Were Likely or Unlikely to Have Accessed the Listed Support at the Time of the Transition to Fatherhood, as a Function of Age (Younger: < 35; Older >= 35)

		Likely	Unlikely	χ^2	p
Fathers-only class	Younger	31	19	0.0005	0.98
	Older	21	13		
Meetings with other new fathers	Younger	33	19	0.59	0.44
	Older	13	11		
Access video library	Younger	32	16	0.21	0.65
	Older	21	13		
Push notifications	Younger	30	21	0.41	0.52
	Older	16	15		
Skype chat with other fathers	Younger	21	30	0.13	0.72
	Older	14	17		
Mentorship program	Younger	22	26	0.25	0.62
	Older	15	14		

DISCUSSION

Building upon previous research that has found new fathers generally lack social support options, the aim of this study was to better understand the types of support men accessed over the transition to fatherhood. In an effort to further inform resource development and delivery, we also wanted to learn more about the kinds of additional support fathers believe will be most helpful and convenient for them to use.

Reported Sources of Support

All of the fathers in our study sought out support in their transition to parenthood. Comparatively, a recent survey of over 2,000 men in Alberta found that 96% of respondents agreed men need formal support and services for maintaining their well-being and relationships (Lorenzetti et al., 2016). Consistent with prior research, a large percentage of those respondents reported they did not know how to access such supports. During the transition to fatherhood, men do not realize how much support they will need until after their baby is born, and formal supports tailored to meet their needs is limited (Baldwin et al., 2018; Huusko et al., 2018). The fathers in our study overwhelmingly reported that they relied on informal support during their transition to fatherhood. Similar to other studies, they reported turning to their partners, family, and friends to cope with the difficulties of being a new parent, and generally found all of these supports to be helpful (Darwin et al., 2017; Lau & Hutchinson, 2020). These findings were interesting for a few reasons. First, the use of informal supports is consistent with what is known about men's help-seeking behaviours in general. When faced with challenging situations, the men often attempt to problem solve on their own or with a select few individuals who are closest to them (Vogel & Heath, 2016). Second, the preference and salience of receiving support from partners is consistent with the body of literature that demonstrates that mothers are key to the development of confident, high-quality parenting for fathers (Crill Russell et al., 2013; Doucet, 2018). However, this assumes that the relationships between spouses is mutually supportive, and we did not inquire as to how conflictual the interchanges between spouses were in our sample.

Equally interesting, fathers in our study utilized online support as frequently (41.7%) as they accessed formal supports offered by health professionals (41.7%). Certainly, the availability and use of apps and other internet sources designed for use over the transition to parenthood has increased substantially over the past several years (Thomas et al., 2018). A needs assessment of Canadian fathers found substantial interest for using web-based platforms to prepare for the transition to parenthood and support their mental health (DaCosta et al., 2017). There are a few high quality, online resources available for fathers that are based on established evidence (e.g., Fletcher et al., 2019). However, the internet remains unregulated, and it is exceedingly easy for fathers to access and spread misinformation online (Eriksson & Salzman-Erikson, 2012). The nature and quality of the information and support fathers receive online remains understudied (Niela-Vilen et al., 2014).

Desired Sources of Support

Fathers reported that public health nurses were among their least frequently used sources of support. However, in-person home visits from public health nurses received the most overall support in terms of perceived helpfulness, convenience, and interest. Similarly, an in-home intervention study with fathers of

premature infants also reported that fathers in both the intervention and comparison groups appreciated the convenience of home visits and the validation they received (Benzies & Magill-Evans, 2015). Previous research has noted that new fathers desire relevant, timely information, provided to them by knowledgeable sources (Baldwin et al, 2018). Fathers in our study clearly recognize that public health nurses are an important informational source. In addition, given that public health nurses conduct follow-up home visits in many, but not all, Canadian jurisdictions, they are particularly well situated to screen for health issues in not only babies and mothers but in new fathers as well. Consequently, mental health screening, particularly for postpartum depression, should be routinely offered to all new fathers (Singly & Edwards, 2015). Importantly, fathers themselves also welcome this and feel that they should be asked about their mental health by health professionals (Baldwin et al., 2019).

Although most of the first-time fathers in our study agreed that organized, father-led groups or informal meet-ups with other new fathers would be helpful during the transition to parenthood, fathers were equally split between those who would have taken advantage of this opportunity and those who would not. Interestingly, most fathers did not like the idea of attending meetings in their workplace. This is surprising given that meetings were generally rated as the least convenient of the options we presented to participants, so an obvious solution to this problem would be to hold the meeting where new fathers are likely to be anyway. Some might argue that increasing numbers of fathers are taking parental leave and, as such, perhaps the workplace is not as convenient as we thought. However, a recent report found that largely due to financial concerns, 40% of Canadian fathers outside of Québec took no parental leave and only 40% took the maximum allowable (Promundo, 2019). Although most men continue to work after the birth of a baby, clearly the workplace is not an acceptable venue for most men. Nevertheless, the men in our study did generally express support for attending a one-hour, one-time fathers only prenatal class. Thus, it is possible that father-specific interventions can be delivered prenatally and limited in commitment to successfully engage men transitioning into fatherhood.

Fathers indicated a strong interest in using online social media connections or apps. They also reported that the use of such readily available technology would be convenient. Well-designed online tools have the potential to provide both the informational support new fathers want and to reduce the negative effects of social isolation (Doty & Dworkin, 2014; Fletcher, et al., 2019). However, most research has focused on mothers' use of online resources and therefore more studies are needed to further explore whether fathers differ in their use of support from mothers (Doty & Dworkin, 2014). There is evidence that fathers interact online with each other in a different style than mothers do, with more frequent use of humour in their online interactions (Niela-Vilen, et al., 2014). Notably, Thomas and colleagues (2018) caution that many apps continue to have a condescending tone towards fathers and thus further trivialize their role and experiences.

Implications

This study builds upon previous research which found that fathers expressed a desire to have multiple options and modalities of support service delivery across the transition to parenthood (Baldwin et al., 2019). Our research adds to the literature by providing a more nuanced analysis of perceived helpfulness versus convenience. Clearly convenience is an important consideration because fathers identify lack of time as a barrier to seeking help (DaCosta et al., 2017). Since fathers in our study view online services as more

convenient than helpful, an intervention study directly comparing the effectiveness of in-person and web-based services in supporting fathers' well-being is warranted. Because we found support for father-only classes it will be important for such classes to be developed to specifically address the needs and concerns of fathers (Lau & Hutchinson, 2020). In a related vein, evidence from other studies suggests fathers would prefer to have such classes facilitated by an experienced father (Gilmer et al., 2016). Websites have been found to be a good way to meet the information needs of fathers (DaCosta et al., 2017). However, to maintain their usefulness, resources need to be devoted to maintaining and updating content. This can be a challenge for promising interventions that get tested via the use of time-limited research funds and are not able to become self-sustaining. Despite the importance of social connectedness, there has been little research examining how to foster this in new fathers (Bennett et al., 2017). Fathers in our study clearly endorsed social support options but these need additional study to develop and determine their effectiveness. One previously unexplored possibility that combines the convenience of online access to information with embedded social connections is collaborative gaming. The development and testing of an interactive, multi-person online video game, where teams of new fathers could collaboratively and virtually explore the challenges of parenthood, could be a promising intervention.

Limitations

There are limitations in the study to acknowledge. We asked fathers to engage in retrospective self-report of their actions and intentions. Consequently, it is possible that fathers' recall is distorted in some way (Schacter, 1999). While our sample of fathers is small and should be considered exploratory, we obtained perspectives from fathers in different regions of Canada with a broad range of ages and educational backgrounds. Our survey was available only in English, so we were unable to capture the perspectives of Francophones and non-English speakers. Moreover, our survey sought to explore the experiences of fathers in general. We did not explicitly recruit individuals who were necessarily seeking support or experiencing high levels of distress. It is possible that the support needs and preferences of those fathers may be different from the more general group of men we surveyed. Future research specifically targeting fathers experiencing clinical levels of concern will be important for developing appropriate supports to address the needs of new fathers. Since fathers in our study did not like the idea of attending fathering meetings at their workplace, to gain greater understanding regarding this reluctance, it would have been useful to ask further questions about the nature of their workplace. For many men, it may be that it is simply not practical to meet at their workplace (e.g., for those who work outdoors or in their own or others' homes) but would embrace this option if their workplace were to change. The list of potential supports fathers might access was not exhaustive. Even though the options we provided in our survey were generated through a series of focus groups with fathers, it is possible we missed asking about an important support option, or that the nature of our sample (people affiliated with our university or their partners) skewed the types of options that were discussed. Future research is needed to more fully explore the full menu of support choices fathers could potentially access. This study employed quantitative methods as a means of determining support preferences of new fathers. Future work could be enriched further through an in-depth, qualitative exploration of new fathers' experiences, and particularly those of new fathers seeking support, to generate a broader perspective of fathers' needs.

CONCLUSION

This study represents one step in what we hope will be a more fulsome exploration of the effectiveness and acceptability of supports for fathers during the transition to parenthood. New fathers are seeking support, and the vast majority of them seek informal, in person support such as from family, friends, partners, work colleagues, or other new fathers. While only half of our fathers reported using informal, online supports, those who did use them found them very helpful. Given this, it is important for health professionals to develop innovative ways, such as mobile apps, to deliver services to new fathers. Future research should be targeted toward developing multiple, convenient options for information and social support for new fathers that are grounded in empirical evidence.

APPENDIX A

Survey Questions

1. How old are you?

- ☐ Under 18 ☐ 25 – 34 ☐ 45 – 54 ☐ 65 – 74 ☐ 85 and older
☐ 18 – 24 ☐ 35 – 44 ☐ 55 – 64 ☐ 75 – 84

2. How many children do you have?

- ☐ 1 ☐ 3 ☐ 5 ☐ 7 ☐ 9 or more
☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ I don't have children

3. How old is your oldest child?

Years _____
 Months _____

4. Do you currently live in Canada?

- ☐ Yes ☐ No

5. In which province or territory do you currently reside?

- ☐ Alberta ☐ Northwest Territories ☐ Québec
☐ British Columbia ☐ Nova Scotia ☐ Saskatchewan
☐ Manitoba ☐ Nunavut ☐ Yukon
☐ Newfoundland and Labrador ☐ Ontario
☐ New Brunswick ☐ Prince Edward Island

6. Which of the following best describes your ethnicity? Check all that apply:

- ☐ Aboriginal ☐ Caucasian ☐ Other (Please specify _____)
☐ African ☐ Hispanic
☐ Asian ☐ Middle Eastern

7. Are you currently employed in paid work?

- ☐ Yes ☐ No

(If Yes to 7):

8. Do you work inside the home or outside the home

- ☐ Inside the home ☐ Outside the home

9. What is the highest level of education you have obtained?

- ☐ Less than high school ☐ Community college or technical school graduate
☐ Some high school ☐ Some university

APPENDIX A, continued

- ☐ High school graduate ☐ Undergraduate degree
☐ Some community college
 or technical school ☐ Master's or professional degree
☐ Doctoral degree

10. Which of the following best describes your marital status?

- ☐ Married ☐ Widowed ☐ Separated
☐ Common-law ☐ Divorced ☐ Never married

11. What is your total family income?

- ☐ < \$20,000 ☐ \$40,000 – \$60,000 ☐ > \$80,000
☐ \$20,000 – \$40,000 ☐ \$60,000 – \$80,000

12. What would have been most helpful **to you as a father** in dealing with the difficulties of parenthood during the baby's **first** year? Please rank from 1 (most helpful) to 8 (least helpful)[†]

- ☐ Small face-to-face meetings with other new fathers at your workplace
☐ Small face-to-face meetings with other new fathers outside of work
☐ Small group meetings led by an experienced father at your workplace
☐ Small group meetings led by an experienced father outside of work
☐ A mobile app offering opportunities to connect with other dads
☐ Social media connections with other new fathers (e.g., Facebook)
☐ In-person visitation by a public health nurse or health care worker
☐ Daily visits to a lactation consultant

13. Thinking about your number 1 ranking above, what about this option would you find helpful? _____

Questions 14–16 asked respondents to rate each of the following potential sources of support in response to a different prompt:[†]

- ☐ Small face-to-face meetings with other new fathers at your workplace
☐ Small face-to-face meetings with other new fathers outside of work
☐ Small group meetings led by an experienced father at your workplace
☐ Small group meetings led by an experienced father outside of work
☐ A mobile app offering opportunities to connect with other dads
☐ Social media connections with other new fathers (e.g., Facebook)
☐ In-person visitation by a public health nurse or health care worker

14. On a scale from 1–5, as a new father how **convenient** would you have found participating in each of the following? (1 = Not at all convenient; 3 = Somewhat convenient; 5 = Very convenient)[†]

15. On a scale from 1–5, how **interested** would you have been as a new father in participating in each of the following? (1 = Not at all interested; 3 = Somewhat interested; 5 = Very interested)[†]

16. What follow-up service to prenatal education would your spouse or partner be **most supportive** of you committing your time to? (1 = Not at all supportive; 3 = Somewhat supportive; 5 = Very supportive)[†]

APPENDIX A, continued

17. Thinking about what would be helpful for new fathers, are there things other than those listed above that would have been helpful? _____

18. Thinking back to the time just before and after your baby was born, how likely would you have been to have participated in each of the following? (1 = Extremely likely; 2 = Somewhat likely; 3 = Neither likely nor unlikely; 4 = Somewhat unlikely; 5 = Extremely unlikely)[†]

- ☐ Virtual meetings (e.g., Skype, Facetime chat) with other new fathers
- ☐ Face-to-face meetings with other new fathers
- ☐ Sign up for push notifications about how other fathers have addressed difficulties as new fathers
- ☐ Participate in a mentorship program where an experienced father checks in with you from time to time
- ☐ Access a video library of testimonials from other new fathers about how they addressed difficulties
- ☐ Attend a one-hour "fathers only" prenatal class

19. Where have you gone in the past when you needed help in dealing with the difficulties of being a new father? Check all that apply.[†]

- ☐ Parenting blogs
- ☐ Facebook pages
- ☐ Friends
- ☐ Family members (besides partner/spouse)
- ☐ Work colleagues
- ☐ Partner/spouse
- ☐ Physician/medical professional
- ☐ Public health programs
- ☐ Other new fathers
- ☐ Other (Please specify) _____

20. How helpful did you find each of these? (refers to the options above; 1 = Not helpful at all; 3 = Somewhat helpful; 5 = Very helpful)[†]

[†]Options presented in a random order

APPENDIX B

Binomial Tests

Table B1

Respondents were asked to think back to when their child was born and rate how helpful, and convenient, they would have found seven different types of social supports, as well as how interested they would have been in using them

	How Helpful?	How Convenient?	How Interested?
Other new fathers (outside work)	0.059	0.99	0.73
Other new fathers (at work)	0.63	0.15	0.99
Social media connections	0.36	0.000878	0.12
Mobile app	0.058	0.0013	0.12
Public health	0.00017	0.011	0.06
Father-led meetings (outside work)	0.008	0.71	0.73

Note. The number of respondents expressing support (i.e., the highest and second-highest ratings) was computed and from this the number of respondents expressing a lack of support (i.e., the lowest and second-lowest ratings) was subtracted to yield an index of support for each option. This difference was then tested against the null hypothesis that there was no difference in the number of respondents expressing support, or a lack of support, for each option using a binomial test. The values reported in the table correspond to the probability of observing an outcome as extreme or more extreme than that actually observed, given that the null hypothesis is true. A test was deemed to be significant if the outcome would be more extreme than 2.5% of all outcomes in either tail of the binomial distribution of outcomes expected under the null hypothesis. Tests meeting this criterion are presented in **boldface**.

Table B2

Respondents were presented with six possible sources of support and asked to rate how likely they would have been to make use of the support had it been available to them at the time their child was born

	How Likely?
Fathers-only class	0.037
Mentorship program	0.82
Skype chat with other fathers	0.22
Push notifications	0.32
Meetings with other new fathers	0.09

Two-tailed binomial tests with an alpha of .05 were carried out for each option, as described above (please see title for Table B1). By this criterion, more respondents than not would have been likely to have participated in a fathers-only class, but respondents would have been as likely to have participated in the other options as to not have participated.

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