

Space for you and your baby: Participant perceptions of community-based postnatal parenting support and adjustment to parenthood

Linde-Marie Amersfoort¹ and Myron Dean Friesen²

¹School of Health Sciences, University of Canterbury

²School of Educational Studies and Leadership, University of Canterbury

Space for You and Your Baby is a preventative support programme for new parents based on the Australian supported playgroup model. In Aotearoa New Zealand, Space is provided to approximately 2000 participants each year but has never been formally evaluated. This study employed a cross-sectional retrospective research design and examined why new parents attend Space and how Space contributed to their adjustment to parenthood. Over 500 current and former participants completed a mixed-methods survey. The results showed that participants were primarily motivated to attend Space for social support and highly endorsed the programme across all of the targeted outcomes. Facilitator competency moderated these generally positive findings. The results have implications for facilitator training, community partnerships, and point to opportunities for further evaluation research.

Keywords: *First-time parents, parenting support, postnatal care, programme evaluation*

INTRODUCTION

There is strong evidence in both the quantitative (e.g., Kunseler et al., 2014; Parfitt & Ayers, 2014) and qualitative (e.g., De Haan, 2016; Wilkins, 2006) literature that, overall, parents find the transition to parenthood to be both a time of delight and joy, but also a time fraught with new challenges and stress as they adjust to the needs of their new baby and their parenting role. Thus, the transition to parenthood is deemed a period where first-time parents are at higher risk for experiencing distress and, consequently, for developing mental health difficulties (Parfitt & Ayers, 2014; Sanders et al., 2014). Even though most new parents are able to cope with the many changes that accompany their new roles, Sanders et al. (2014) found many new parents felt underprepared, unsure, alone, and inadequate as they entered into parenthood - much of which could have been prevented with greater preparation, more realistic expectations, and high-quality support both pre-and postnatally.

There is a growing body of evidence for the efficacy of parenting programmes that offer support to new parents, including the Incredible Years Parents and Babies™ Program (Webster-Stratton, 2008) and Baby Triple P (Spry et al., 2010). These have been shown to be efficacious in their aims to provide new parents, especially those considered at-risk, with specific knowledge and skills that result in improving positive parenting practices and reducing child behaviour problems over time (e.g. Evans et al., 2015; Jones et al., 2016). However, there is a paucity in the research as to the effectiveness of more universal preventative programmes focused on assisting first-time parents through parent education and support (Hickey, 2019; McLean et al., 2017). The research is also scant as to the efficacy of such preventative initiatives when delivered outside of formal

or clinical settings but within the voluntary and community sector (Gardner & Woolgar, 2018). This is despite studies suggesting that vulnerable and isolated parents are less likely to engage with formal, top-down parenting training programmes, and are more likely to engage with programmes conducted in familiar and/or informal locations, delivered by facilitators known to parents, and where social networks can offer comfort and security (Gardner & Woolgar, 2018; McLean et al., 2017).

Despite the lack of research into the efficacy of parent education and support programmes delivered in volunteer/community settings, evidence for the efficacy of parent education and support delivered through the 'Playgroup' model is growing. Research has found that playgroup attendance provides families with increased social support and connection, increased caregiver knowledge and awareness of the benefits of early childhood education, and promotes young children's social interaction (McLean et al., 2020; Mize & Petit, 2010). Whilst playgroups do not focus specifically on new parents, they can be described as groups regularly attended by caregivers and their preschool children (aged 0-5) in order to provide children with social experiences through play and parents with "child-rearing guidance and social support" (Mize & Pettit, 2010, p. 1271). Consequently, playgroups operate on the principles of play-based learning, social interaction, peer support, and positive modeling of parenting practices (Wright et al., 2019). Playgroups are especially popular in England and Australia where they are run and coordinated by local or regional bodies subject to, and supported by, a national organisation such as Playgroup Australia (McLean et al., 2020; Mize & Petit, 2010). In New Zealand, playgroups are endorsed by the Ministry of Education, and have been recognised as providing learning environments that are

varied and responsive to individual children's interests and learning needs, and informal support networks for caregivers (Ministry of Education New Zealand, n.d.).

Whilst there are many different types of playgroups in New Zealand, for example those focused on a specific culture (e.g., Pasifika playgroups), language (e.g., Ngā Puna Kōhungahunga; Māori language playgroups), or philosophical approach (e.g., Montessori playgroups), these groups are all run by the parents and caregivers themselves (Ministry of Education, New Zealand, n.d.). However, in Australia, the playgroup model offers a two-tiered approach which classifies playgroups either as community playgroups or supported playgroups (McLean et al., 2020). Community playgroups are akin to those endorsed by the New Zealand Ministry of Education in that they are caregiver-led, occur throughout a range of communities, and are attended by caregivers and children from a variety of socioeconomic and cultural backgrounds (McLean et al., 2017; McLean et al., 2020). Although supported playgroups still operate on the basic playgroup principles, in general they are not parent-led but run by trained facilitators, most often early childhood educators, and often have a greater focus on specific cohorts of families, including young parent families, migrant families, and families with children who have developmental disabilities (Commerford & Robinson, 2016; Wright et al., 2019). Jackson (2011) found the benefits of supported playgroups for parents to include friendship and social network support, peer support, emotional support, parenting role support, information and resource support, and multidisciplinary support (i.e., the opportunity to have professionals attend the playgroup and offer insights and access to services that would not have ordinarily been available to parents in informal, non-clinical settings).

The benefits of attending supported playgroups appear to align with the research concerning the needs of new parents, and mothers in particular. This is particularly true when this form of parent education is sensitive to the social context of early parenting, as well as the dramatic lifestyle changes that confront new parents, simultaneously enabling them to learn, integrate, and intuitively apply positive parenting practices (Copeland & Harbaugh, 2019; Wilkins, 2006). Thus, parent education and support that alleviate feelings of self-doubt and isolation, help parents to manage unrealistic expectations of parenthood, and offer opportunities for skill acquisition within a supportive and reassuring environment, are likely to be the most impactful (Hanna et al., 2002; Sanders et al., 2014; Wilkins 2006).

Space for You and Your Baby (Space)

Space for you and your baby (Space) is a parent education and support programme focused on supporting parents during the transition to parenthood. It operates in a manner similar to that of the Australian supported playgroups. Space was developed in 2003 as a Playcentre New Zealand programme, but has now grown to include providers from a wide range of early childhood centres, as well as in settings such as community centres and churches. In order to run the Space programme, all partner organisations, including Playcentre, pay an annual licensing fee to Parenting Place. Established in 1993,

Parenting Place is a for-purpose charitable trust that develops parenting programmes, including its flagship Toolbox and Building Awesome Whānau courses. The programmes are delivered to parents nationwide within Aotearoa New Zealand through a range of community partner organisations such as churches, early childhood education centres, and social services agencies.

The Space programme sessions are attended by both the parents or caregivers and their infants. Whilst the programme can be attended by multiple caregivers and whānau, overwhelmingly the participants are the biological mothers of the infants and the programme is seldom attended by both parents, multiple caregivers, or extended whānau. The sessions are organised and delivered by trained Space facilitators. Although the majority of facilitators are early childhood educators, they also come from a range of backgrounds and include social workers and community volunteers. Parents who attend the Space programme through Playcentre register for the course directly through the Playcentre booking system for a one-off fee of \$105 which covers both their registration fee and their attendance dues. Parents who attend the programme at any other provider pay a registration fee of \$32 to Parenting Place and an additional cost to the Space partner delivering the programme. This additional cost varies amongst partner organisations and can range from \$1-\$2 per session to a termly fee of \$50. The standard Space programme involves 30-40 weekly sessions that vary between 1.5 and 2.5 hours in length. The first half of the curriculum, delivered across the first 20 weeks of the programme, has a strong parent education focus where topics such as 'Becoming a Parent', 'Infant Sleep', and 'Infant Brain Development' are presented by a facilitator or guest speaker and discussed by parents. The Space sessions include opportunities for social interaction and discussions between parents, as well as specific opportunities for infant-parent interaction through the inclusion of music, stories, and heuristic play baskets. The second half of the programme (i.e., approximately the last 20 weeks of the programme) has a stronger focus on infant-parent play. These sessions provide an opportunity for dyads to explore a new play experience through, for example, the use of elements or materials such as sand or water, or through a play modality such as 'messy play'. The play activities are organised by the facilitator and parents are encouraged to both observe and participate in their children's play experiences. During the play-based sessions, facilitators continue to support interactions and discussions relevant to the session amongst parents and also provide parents with ideas and activities that can be implemented or replicated at home. The Space curriculum incorporates some bicultural elements including opening and closing karakia (prayers) as well as karakia mō te kai (blessing of the food), whakataukī (Māori proverbs), and waiata (songs) in te reo Māori.

Present Study

A literature search revealed a paucity in research examining the efficacy of parent education and support delivered through the Australian supported playgroup model that targets the transition to parenthood specifically, and the Space programme has not been previously evaluated. As part of a research and evaluation

collaboration between the University of Canterbury and Parenting Place, we worked with key programme staff to develop a theory of change (ToC) model to guide programme evaluation and redevelopment strategies (Amersfoort et al., 2021). A ToC is similar to a programme logic model, but goes further in the conceptualisation of how and why programme strategies lead to specific short- and long-term outcomes, while explicitly including the assumptions on which a programme is based, and the additional variables that may moderate the process (De Silva, Breuer, et al., 2014; Centre on the Developing Child, n.d.). Consequently, the purpose of this study was to test key assumptions and the targeted outcomes from the Space ToC through a large retrospective investigation of the programme-related experiences of current and former Space participants.

The key research questions for this study included:

1. What are the main reasons parents choose to participate in Space?
2. How do Space participants feel about how the programme promoted their development as a new parent in terms of (a) developing quality parent-infant interactions, (b) growing in parenting confidence, (c) experiencing social support and a sense of community, and (d) relating the information and strategies provided by Space to their family situation?
3. Were there significant differences in parents' self-reported Space outcomes across sociodemographic characteristics?
4. What aspects of Space did parents find most/least helpful in their journey as a new parent, and what are the main reasons parents were satisfied/dissatisfied with their participation in Space?

METHOD

Participants

The majority of survey respondents were biological mothers to the infants in their care (see Table 1). Only one participant indicated a different relationship, and only three men responded to the survey. Table 1 also shows that participants tended to be from more recent Space cohorts (2016-2018), and were slightly over thirty years of age when they first became a parent. When parents first started Space their infants ranged in age from less than one month old to nine months old (70% reported beginning Space when their infants were between two and four months old). A majority of survey respondents identified with a European/Pākehā ethnicity with far fewer numbers from Asian, Māori, and people groups from the Pacific and other geographic regions (e.g., Latin America and Africa; 3%). The majority of survey respondents were well-educated, with just over three out of four having earned a Bachelor's degree or higher level of qualification. Additionally, over 70% had returned to work, with over three quarters of these (77%) returning to occupations that, based on the 2013 Australian and New Zealand Standard Classification of Occupations, were managerial or professional (Statistics NZ, 2020).

Materials

Participant engagement measures: A mix of questions with categorical response options and open response options queried how respondents came to know about the Space programme, where they attended the programme (i.e., geographic region, community partner), and the length of the course they attended. In order to understand participants' reasons for attending a parent support programme during the transition to parenthood, we asked participants to "Briefly describe why you decided to attend a formal parenting support and education programme in the first instance" and "Briefly describe why you chose the Space programme".

Outcomes measures from Space participation: As described above, the outcome measures were drawn from the Space ToC. These were measured by asking participants to reflect how Space affected their feelings about being a parent, their relationship with their baby during the first year, the effectiveness of the information and strategies provided by Space that they applied in the care of their baby, and the social support network developed through Space. This section of the survey included a combination of questions drawn from established measures and adapted for the context of the current evaluation along with custom written items specific to the Space programme. All questions were scored on 5-point Likert scales (1 = Disagree; 5 = Agree). All of these items were included in a principal components analysis (PCA) with Promax rotation and Kaiser normalization due to the potential of correlated components. The first analysis identified four factors with an Eigen value greater than one. However, inspection of the Scree plot pointed to a three-factor solution, and the pattern matrix revealed items that had high loadings across factors (> .30) and a few items that did not

Table 1. Demographic characteristics of study participants

Demographic characteristics	M (SD) /Freq (%)	Min – Max
Gender		
Female	549 (99.5%)	
Male	3 (0.5%)	
Year of Space Participation		
2018	190 (34.1%)	
2017	148 (26.5%)	
2016	104 (18.6%)	
2015	52 (9.3%)	
2014	64 (11.5%)	
Age first became a parent	31.84 (4.44)	19 - 47
Age of infant when starting Space (months)	3.02 (1.41)	< 1 – 9
Ethnicity		
European/Pākehā	469 (85.0%)	
Asian	36 (6.5%)	
Māori	31 (5.6%)	
Pacific peoples and all other groups	16 (2.9%)	
Educational qualifications		
Tertiary degree (Bachelor's or higher)	457 (75.7%)	
Tertiary certificate or diploma	56 (10.2%)	
NCEA Level 3 or other secondary qual.	22 (4.0%)	
NCEA Level 1 or 2 (or equivalent)	9 (1.7%)	
No educational qualifications	2 (0.4%)	
Returned to employment after Space	402 (73.6%)	

NOTE: Study N = 564

Missing data across individual demographic questions ranged from 2 to 18

substantially load on any factor. After removing these items and completing a second analysis, the pattern matrix showed that all items loaded cleanly across three factors which are described below (each item loaded $>.45$ on its respective factor and together the three factors accounted for 61% of the total variance across items). Composite scales were created by averaging the individual items from each factor.

Parents' reflections of how Space contributed to the quality of parent-infant interactions and parenting confidence included 11 items ($\alpha = .93$). Sample items included: The Space programme helped me to develop a stronger bond with my baby; The Space programme helped me be more affectionate with my baby; The Space programme helped me be more effective in meeting my baby's needs; The Space programme supported me to be more confident in my parenting.

Ten items assessed the relevance and applicability of information and caregiving strategies ($\alpha = .91$) facilitated by Space. Of the 10 items, six focused on the extent to which participants felt they were presented with, and able to learn, new information and caregiving strategies during the Space sessions (e.g., The Space programme facilitators supported me to learn the parenting information and strategies they provided). The remaining four items were more strongly focused on the extent to which the information and strategies they had learned during the Space sessions were relevant and applicable to their unique family situation, including their cultural heritage (e.g., The information and strategies provided by the Space programme fit well with the values of my cultural heritage).

Finally, four items assessed how parents felt about the social support network ($\alpha = .79$) that Space participation provided. Items queried how Space facilitated the development of supportive friendships within Space, confidence to build supportive relationships outside of Space, understanding of community resources and supports, and sense of preparedness to access support services if required.

Participant satisfaction measures: Open-response items queried if participants completed their Space course and also the reasons for why some participants may not have completed the programme. Additionally, one open-response question was used to examine which aspects of the Space programme participants found most helpful as new parents (i.e., "Overall, what did you experience at the Space programme that was the most helpful for you as a new parent?").

Formative evaluation measures: In order to investigate which aspects of the Space programme participants felt were most and least effective in supporting them during their first year of transition to parenthood, we asked survey respondents to rank eight features of the programme according to which they valued most (1) to least (8). These programme features included: (a) the interactions with facilitators, (b) infants interacting with other infants, (c) the overall length of the programme; (d) interaction with other parents/caregivers of babies; (e) the various activities during the Space sessions; (f) the topics discussed during the Space sessions; (g) guest speakers from the community; and (h) the atmosphere of the Space sessions. Two open-response

follow-up questions asked, "Reflecting back on the Space programme, do you remember any topics that were particularly helpful, or that addressed a specific need you had at the time? Please describe the topic and how it helped you." and "Reflecting back on the Space programme, do you feel there were any important topics that were missing or not covered well enough? If so, please describe/explain."

Procedure

Current and former Space participants were recruited in June of 2019 via email to respond to an online survey hosted by the University of Canterbury's Qualtrics survey platform. The survey was organised according to the key assumptions and outcomes from the Space ToC and involved a combination of quantitative (i.e., Likert scales) and open-response qualitative questions. Initial emails were sent to over 10,000 addresses, representing those who participated in a Space programme from 2014 to 2018. A total of 871 people accessed the questionnaire. Adequate responses across key variables ranged from $n = 685$ (e.g., geographic region of Space programme) to $n = 181$ (qualitative open-response questions).

Data analysis

Missing Data Analysis: In order to be as inclusive as possible across participants, missing data for the quantitative variables were analysed separately for the outcome measures and the rank-order formative evaluation items. For the outcome measures, after removing all participants who failed to complete the majority of items across the four scales, the sample was reduced to $n = 567$. A test of missing data (Little's Completely at Random (MCAR) test) was statistically significant ($\chi^2 = 377.19$, $DF = 326$, $p = .03$). A visual inspection of the data identified three cases each with three missing values (although on different items). Omitting these participants from a second MCAR test revealed a non-significant result ($\chi^2 = 260.33$, $DF = 264$, $p = .55$). Since the missing values from these participants were each in separate scales, they were retained in the analyses, and other individual missing values were not replaced as composite scores for each of the measures were calculated as the average (rather than the sum) across items. A similar procedure for the rank-order items resulted in a refined sample size of $n = 549$, with six of these participants all having a single missing value. A visual inspection of this data revealed that for these participants one of the eight rank items had been omitted and these were individually replaced (e.g., rankings included 1, 2, 3, 5, 6, 7, 8, but no 4, so the missing descriptor was replaced with a 4).

Quantitative Data Analysis: The Statistical Package for the Social Sciences (SPSS) 25 was used to analyse the quantitative data. Descriptive statistics (means, standard deviations, and percentages) were calculated on all variables. Bivariate correlations (Spearman's rho or Pearson) were employed to test the associations between Space outcomes and demographic characteristics measured on ordinal or continuous metric (e.g., education and age), respectively. Analysis of variance (ANOVA) examined the possibility of mean group differences on the Space outcomes across categorical demographic characteristics (e.g., ethnicity), and variables developed

from themes identified in the qualitative data analysis. Rank-order data was analysed with the non-parametric Friedman Test and Wilcoxon signed-rank post-hoc analyses with a Bonferroni correction ($p < .006$).

Qualitative Data Analysis: The second author and a research assistant coded the data to individual qualitative questions, with each person analysing one or more specific questions. Both coders had access to the full range of data, trained together, and frequently reviewed each other's coding strategies to ensure similar strategies and coding schemes were being applied. Due to the collaborative nature of the qualitative coding strategy, formal estimates of inter-rater reliability were not assessed. A combination of content analysis and thematic analysis was applied to the data. First, content analysis was applied to participant responses that included specific references to course content and programme elements. Then, following the procedures recommended by Braun and Clarke (2006), thematic analysis was employed to examine those responses that were more generic and to organise all coded data into the broader themes.

RESULTS

Space participation

Participants were referred to Space from a variety of sources. The majority of parents (56%) discovered Space through a word-of-mouth referral, followed by referrals from antenatal groups (18%), postnatal well-health providers (11%), and midwives (10%). Very few (<5%) found Space through advertising or an internet search. Overall, survey respondents primarily participated in Space programmes that were delivered in the major centres of the North Island of New Zealand (88.4%), with 32.6% of all survey respondents attending Space programmes that were delivered in Auckland. Of the small cohort of survey respondents who attended programmes in the South Island (11.5%), the greatest proportion attended their Space programmes in Dunedin (5.4% of all survey respondents). Reflecting the historical roots of Space, 69.7% of participants attended Space through their local Playcentre, followed by church denominations (12.2%), and then other Early Childhood Education providers (9.1%). The remaining participants (9%) attended Space through a variety of other social service/community providers.

Well over three quarters of survey respondents participated in either a 40-week Space programme (53.8%) or a 30-week Space programme (28.9%). Attendance in programmes with a duration of 25 or 20 weeks were much less common (3.8% and 8.1%,

respectively). Over three quarters of all participants indicated that they completed the full Space programme that was offered. Those who did not complete a full programme ($n = 143$) identified five broad issues: (a) returned to work (36%); (b) personal or baby-related circumstances (21%); (c) still attending a course (17%); (d) course content or facilitator issues (14%); and (e) enrolled in the course at a late stage (8%).

Motivation to attend Space

The majority of survey participants (71%) indicated that they decided to attend a formal parenting programme because they wanted to meet other parents, make friends, and receive support as a first-time parent with others having the same experience. Three additional reasons that were listed by almost 10% or more of respondents included a motivation to learn about parenting and child development during the infant years (26%); a need to get out of the house (13%); and the desire to engage in a structured activity with their infant (9.5%).

Most parents chose Space specifically because it was recommended by, or they actually attended with, someone they trusted (52%); because it was conveniently located or the only programme of its kind in their area (17%); it was educational, interesting or addressed their parenting needs (16%); they heard positive reviews (13%); it was an opportunity to meet other parents with similar aged children (10%); and it was affordable (7%). Most respondents (72%) also indicated that they participated in other parenting group activities with their infants in the first year. The vast majority of these (79%) included informal parent-led activities (e.g., antenatal coffee groups), followed by miscellaneous baby and toddler activities such as baby massage or baby sensory classes (39%), swimming lessons (29%), a formalised music programme for babies called Mainly Music (27%), other organised parenting support programmes (25%), and library activities (e.g., story time; 13%).

Outcomes from Space participation

As per Table 2, the vast majority of participants felt that Space successfully contributed to all of the outcomes under investigation, with over 85% of respondents scoring above the "Neutral" midpoint of the five-point scale. Participants were most favourable about how Space provided relevant and applicable information and caregiving strategies, followed by the support for positive parent-infant interaction and parenting confidence, and finally the facilitation of a social support network.

General aspects of the Space programme valued by participants: Table 3 shows the list of the eight Space

Table 2. Parent related outcomes from the Space theory of change

Variable	M (SD)	% of M Scores <2	% of M Scores 2-3	% of M Scores >3-4	% of M Scores >4
Parent-infant interaction and parenting confidence	3.85 (0.79)	3.4	9.6	42.9	44.1
Relevance and application of information and caregiving strategies	4.09 (0.67)	0.9	7.6	33.0	59.6
Social support network	3.75 (0.89)	4.1	18.1	40.1	37.8

Note. N = 564

Table 3. Participant rank order of Space programme components from most (1) to least (8) valuable

Space programme component	Mean (SD)
Interacting with other parents/caregivers of babies	2.22 (1.73) ^a
My baby being able to interact with other babies	3.50 (2.12) ^b
The activities (e.g., music, reading books, craft-making) during the sessions	3.65 (1.89) ^b
The interactions with the facilitators	4.27 (1.99) ^c
The topics discussed	4.31 (1.80) ^c
The atmosphere of the sessions	4.71 (1.91) ^d
Guest speakers from the community	6.23 (1.94) ^e
The overall length of the programme	6.45 (1.89) ^e

Note. N = 549; Different superscripts in the Mean (SD) column indicate statistically significant differences ($p < .001$).

components that parents ranked from most to least important. The results clearly show that participants valued the interaction with other parents/caregivers the most, which is congruent with the most common motivating factor for attending Space. Baby interaction and the Space activities were the next most valuable components, followed by the interactions with facilitators and the various topics discussed as part of the Space curriculum. The atmosphere of the Space sessions came in sixth place, followed some distance by guest speakers and the overall length of the programme. Thus, it would seem that the survey respondents valued the social interaction and activities (which, in effect, also aid social interaction) significantly more than the educational component (i.e., the curriculum topics) of the programme.

Qualitative analyses of over 500 responses to the question about what was “most helpful” about Space showed that 94% identified some aspect of *community and connection* as the most helpful experience. The value of *community and connection* was described in terms of finding a community of similar parents with opportunities for interaction, sharing, support, encouragement, and gaining information. Within this *community and connection* macrotheme, the idea of “sharing” was mentioned by one third of survey participants. Participants valued the sharing of information and strategies, but also sharing their difficult emotions, accomplishments, and mistakes. The various ways that the experience of community was valuable for participants are illustrated in the quotes below:

Meeting other mothers and babies that were going through the same thing and being able to support each other in a safe friendly place.

Connecting with other new parents and discussing how our babies were developing each week, know[ing] that it is often normal development and you are not in it alone.

Meeting with other new parents and sharing our highs and lows in a structured and formal way, that was monitored and facilitated.

The chance to learn in a relaxed, supportive, caring environment and the chance to connect with other mums and their babies and see how they did things.

Apart from the macrotheme of *community and connection*, there were two other related categories of experiences that parents felt were also most helpful to them during Space. One in five survey respondents (20%) identified the *information* provided by facilitators and other parents as most helpful. This included general information around infant development, and more specific information on important topics such as nutrition and feeding, sleep, play, attachment, self-care, baby massage, and first-aid. One participant wrote, *Knowledge about my babies’ development and strategies to support this i.e. settling, feeding teething, physical movement, and emotions. Also enjoyed learning different songs/activities and listening to other parents and realising we all have the same struggles but at different times.*

Related to the theme of *information*, just over 10% of parents identified the activities that they and their infants did together as the most helpful aspect of Space. This included the singing and music, crafts, and creative and messy play:

Music! We now sing and dance all the time as she loves it

The play term! I loved learning about the importance of play for child development and getting practical ideas for how we could have fun with my baby at home.

Space curriculum topics participants found helpful: Survey participants were also asked to reflect on the extent to which particular topics, delivered as part of the Space curriculum, were helpful. Far fewer parents responded to this question ($n = 365$) compared to the aforementioned ranking question ($n = 550$). Even so, almost all of the responses could be included in seven categories. First, a majority of parents (68%) identified one or more child development topics that were particularly helpful, including neurological development, physical and motor development, emotional development, sensory development, and topics related to attachment, language, and child temperament. Second, just over half of parents (57%) also identified a topic around child safety that was helpful. This included specific topics such as water safety, general household safety (i.e., baby-proofing), CPR and first-aid, and the safe use of car seats. Following these broad themes, the two specific topics of nutrition (26%) and sleep (21%) were identified by many parents as important. Finally, parents also identified specific activities that they enjoyed, such as music, baby massage, reading, and crafts (14%), followed by the broad topic of play (11%), and then topics that encouraged parents to reflect on the process of becoming a parent and how their own lives were changing as a result of this major shift in their roles (11%).

Space curriculum topics participants found lacking: Survey participants also self-reported on any important topics that were missing from the Space curriculum or not covered well enough. This question had the fewest

responses of all ($n = 181$). Rather interestingly, certain topics that were identified as particularly helpful by participants were also identified as needing more time and attention. These topics included those on sleep (16%) and nutrition (i.e., breastfeeding, weaning, and introducing solids; 11%). Although these topics may have been addressed by facilitators, some participants felt that the facilitators did not cover the topics adequately, were based on the opinions of the facilitators rather than being evidence-informed, or that only one perspective was presented. However, the theme that was identified by the most participants as needing further attention was maternal mental health (i.e., postnatal depression, anxiety, stress, and recovery from birth trauma; 19%). The following two examples illustrate the range of how this was described by parents:

We did not cover or get a chance to discuss mental health of the mums. I myself was struggling with postnatal depression, but never felt safe enough to discuss it with the other mums or facilitators. It just never came up and I left it.

More information about mum's health - physical well-being post birth, nutrition while breastfeeding, support while sleep deprived and support with mental wellbeing (and how to access this if needed).

Other reasons for participant satisfaction/dissatisfaction with the Space programme: In their responses to the question regarding missing or inadequately presented topics, almost one in ten respondents (9%) mentioned facilitator competency. Facilitator competency was also mentioned as a reason for participants stopping their attendance of the course early ($n = 15$; 10.5% of those who did not complete), citing issues of disorganisation, a lack of familiarity with the curriculum, ignoring individual differences in parents' ability to cope and infants' developmental progress, pushing personal opinions in spite of other evidence, and facilitators being perceived as judgemental. Although the quantitative scores suggested that the vast majority of participants felt well-supported by their facilitators in learning and applying the information and strategies provided in the Space curriculum (83% indicated 'Agree somewhat' or 'Agree' to this question), the impact of poor facilitator competency on participants' experience is illustrated in the following quotes:

The whole thing was just terrible. We started with about 15 families, by the end of the first term there were 3 left. The facilitators were so poorly informed and judgemental. I still get angry when I recall these sessions.

I don't feel like anything we covered was relevant. All our facilitator did was bully us as we didn't follow her way of parenting and three friends left the group in tears. I didn't have to go back as luckily I started back to work the week after. Otherwise I was likely to give her a piece of my mind and place a complaint.

As mentioned above, and in contrast to these participants, many more participants expressed satisfaction and positive sentiments toward their facilitators, their competency, and their willingness to go

the extra mile in supporting their participants ($n = 60$; 11% of all responses for the 'Most helpful' aspect of the course). Two examples of these positive responses are provided below:

Our facilitators created a safe space for us to be completely honest without fear of judgement. It meant that you could vent about your struggles and hear other people's honest experiences. It helped to know that other people were often having the same struggles. They responded with empathy and gave advice when called for, or just reminded us to trust our instincts and not listen to mother/mother-in-law/sister/blogger etc.

My child was diagnosed with...whilst I was attending Space...The facilitators were amazing - loving, caring, supportive, arranged a care package (food!), encouraging, totally non-judgmental and keen to learn about [my child's illness]. The[ir] support and "cheering on" was the most helpful thing for me. And being able to come to Space where my baby was just one of many, ...just a baby like everyone else.

Individual differences: As is shown in Table 2, between 0.9% and 4.1% of survey respondents had scores in the lower ranges of the scale for the four Space outcomes, and another 7.6% to 18.1% had scores that were lower than the midpoint of the scale. This suggests that there was a small group of parents who did not find Space to be very beneficial for them. In order to identify factors that might have contributed to the low scores of these parents, we created a dummy variable (1 = Yes, 0 = No) for all participants who either responded with frustration or disappointment over the competence of their facilitator in an open-response question ($n = 16$), or ranked the interaction with facilitators in the lowest quartile of all programme components. This variable was included in a multivariate analysis of variance (MANOVA) that compared the mean scores for the Space outcomes for those who were dissatisfied with how the course was facilitated ($n = 88$; 15.6% of all respondents) compared to the rest of the sample. The results showed highly statistically significant group differences with small to medium effect sizes. Those dissatisfied with how the course was facilitated provided significantly lower scores across the three Space outcomes (M differences ranged from 0.48 to 0.66, F s (1, 561) ranged from 22.33 to 59.01, all p s < .001; partial eta squared ranged from .04 to .10). Thus, it seems one explanation for why some parents reported substantially lower Space outcomes involved issues with perceived facilitator competency.

Further analyses tested if there were significant differences in the outcomes reported in Table 2 based on participants' demographic characteristics (age, educational qualification, ethnicity, and current employment status). The results showed only one statistically significant association. Space participants with higher educational qualifications reported slightly lower experiences of social support ($r = -.10$; $p = .02$).

DISCUSSION

This research provides the first preliminary evidence that a supported playgroup for new parents and their infants has the potential to effectively address new

parents' needs for social support and provide a sense of community in an environment where parents can address their concerns about the personal and caregiving challenges they are facing, and receive evidence-informed education about effective caregiving practices. Although the results from this study largely support the assumptions and targeted outcomes from the Space ToC (Amersfoort et al., 2021) and compliments research on the effectiveness of supported playgroups (Commerford & Robinson, 2016; Wright et al., 2019) and the needs of new parents (De Haan, 2016; Lee et al., 2019; Sanders et al., 2014), the following discussion will address several qualifications to these findings and the opportunities provided for further research.

Motivation for postnatal parenting support

The qualitative results showed that parents' major motivations for attending Space was to improve social connections with other parents who were going through the same experience, to gain a sense of community, and to receive social support. Correspondingly, participants rated the social interaction with other parents and facilitators as the most valuable component of Space. These findings echo research on the needs of new parents from broad surveys (Hanna et al., 2002) as well as in depth qualitative studies (Paris & Dubus, 2005), and supports the ToC assumption that the transition to parenthood involves a period where new parents feel isolated, and therefore, are more likely to seek out postnatal support programmes such as Space. Because the current sample was largely Pākehā, it is an open question whether this issue of social isolation is also a motivating factor for new mothers who are Māori or Pasifika and may have more established social support networks. A recent study found that expectant Māori mothers have higher rates of anxiety and depressive symptoms and life stress than non-Māori (Signal et al., 2017), but the role of social support was not investigated and is an opportunity for further research.

Space ToC outcomes

In both the quantitative and qualitative results, study participants felt that Space contributed to all three of the ToC outcomes that were queried (i.e., developing quality parent-infant interactions combined with growing parenting confidence, being able to relate and apply Space content to their family situation, and experiencing social support and a sense of community), and we did not find any evidence of significant associations between the quantitative scales and participant sociodemographic characteristics. These results are difficult to compare to previous studies as there are very few supported playgroups that target infants and their caregivers (for a review see Williams et al., 2018). In a supported playgroup with mothers and children ranging from four to forty months old, Bohr et al., (2010) found reductions in parental stress and improvements in parenting confidence, but no significant changes in maternal sensitivity. As acknowledged by some parents in this study, their shifts in parenting confidence may have come naturally as they became adjusted to being a parent. How that may (or may not) be enhanced by participating in Space could only be addressed in a future study with a matched control group.

In terms of perceived social support and social networking, the findings suggest that the majority of

participants felt their Space facilitators provided excellent support in developing the social connections that they were looking for, and that the programme facilitated the development of a peer support network that provided parents with a sense of community during the time that they attended Space. The literature suggests that four elements of social support are relevant for new mothers to gain confidence in caring for their baby; informational, instrumental, emotional, and appraisal (Glavin et al., 2017; Leahy Warren, 2005). The qualitative findings showed that parents could recall receiving all four elements of social support both from their fellow participants and facilitators, but seem to have valued affirmational, emotional, and informational support more than the instrumental support.

Individual differences and participant reflections on Space strengths and limitations

An important component of the Space ToC is the identification of several variables that may serve to moderate targeted outcomes, including the infrastructure and administration provided by Parenting Place in collaboration with local partner organisations, characteristics of the community partner (e.g., extent of investment into and quality of relationships developed in their local community), characteristics of participants and their infants, and most importantly, the competency and skill of the facilitators (Amersfoort et al., 2021). Our findings showed that the majority of Space participants highly valued the skills and/or support of their facilitators. However, those who felt that facilitator competency was insufficient reported significantly lower agreement that Space contributed to the four target outcomes.

This provides a challenge to community partners and Parenting Place trainers in how to assess and support the development of core facilitator competencies. Not only do facilitators have to have warmth and emotional insight and understanding of the experiences of first-time parents, but they also need to have the necessary skills to facilitate group cohesion and peer relationships, as well as the necessary knowledge regarding child development and infant caregiving. Meeting such requirements could be seen as difficult, particularly for facilitators who are paraprofessionals and/or volunteers in their community. This may point to the value of co-facilitation, where facilitators can utilize complementary strengths, and a need for facilitators to better utilize publicly available evidence-informed resources when some topics go beyond their expertise – both of which are highly-valued components of Australian supported playgroups (Jackson, 2011).

The topic most frequently mentioned as missing or needing more attention was maternal mental health. This is not unexpected since the transition to parenthood marks a time of increased vulnerability for parents (Berlin et al., 2016; Hanna et al., 2002), with increasing evidence of the influence of maternal mental health challenges on child outcomes (Howard & Khalifeh, 2020). Research also suggests that most new mothers are reluctant to seek formal help for mental health challenges (Fonseca et al., 2015; Signal et al., 2017), yet the majority of participants in this study felt that Space provided a safe and supportive environment. Thus, it would seem that the Space

programme could be a suitable context for participants to explore such an emotionally salient topic. However, as facilitator competency appears to be a crucial element in the extent to which parents may find the Space programme beneficial, alternative methods of delivery of sensitive content such as information about maternal mental health should be explored. This could happen through guest speakers who are experts in the field, or through different mediums such as carefully curated video content. Additionally, facilitators should be encouraged to connect with, and work alongside, maternal mental health organisations in their communities or, when not available, national organisations that specialise in these areas. Parenting Place should also consider providing facilitators and partner organisations with the necessary professional development to ensure that facilitators have the capacity and insight to deal with this topic sensitively and compassionately.

Strengths, limitations, and conclusion.

There are a few strengths in this study that should be considered alongside several limitations. First, this study employed a mixed-method design and the results showed that the quantitative and qualitative data complemented each other nicely. A further strength of the study is that it recruited a relatively large sample. Nevertheless, in light of the potential pool of participants, the sample size was modest. Finally, this study was a good preliminary test of the Space ToC, providing important information about participants' perspectives of the outcomes gained from Space participation and helpful formative feedback that can already be actioned. Thus, the results certainly point to the need for further evaluation of Space with more stringent research designs.

The most important limitation that tempers the interpretation of these findings is the retrospective self-report design of this study. This means that the findings are subject to an increased risk for bias and confounding factors. Along these lines, there is an increased likelihood

that respondents to the survey were those participants who were either very satisfied or very dissatisfied with Space and, therefore, were more motivated to respond, compared to parents who were ambivalent about their experience with Space. Recruitment procedures limited participation to those participants with an email contact and internet access. Thus, participants without such technology were automatically excluded from participation. Finally, in terms of demographic characteristics; although the survey respondents were generally representative of Space participants overall, the sample was very homogenous in relation to New Zealand's ethnic diversity. Even though there were no significant differences in the results across sociodemographic characteristics, a more careful examination of how participants from Māori, Pacific, and other ethnic communities experience the programme is warranted. In parallel research, we found that both participants and facilitators recommended greater inclusion of te reo Māori, Māori cultural traditions/tikanga, and traditional caregiving practices in the Space curriculum (Amersfoort et al., 2021).

In conclusion, this study contributes to our understanding of the challenges first-time parents face, as well as the reasons why they engage in postnatal programmes. The results suggest that a supported playgroup programme has potential to provide both the social and educational context in which new parents can acquire caregiving knowledge and strategies, but also the necessary social support that can help them grow in parenting confidence and ease the transition to parenthood. However, as the findings suggest, facilitator skill and competency likely play an important role in achieving such positive outcomes for programme participants. Future research should focus on investigating this association more closely with more robust research designs and heterogenous samples to gain further evidence for the efficacy of the Space programme.

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Corresponding Author

Myron Friesen

Email: myron.friesen@canterbury.ac.nz

Phone: +6433695598