

Queensland Centre for Perinatal and Infant Mental Health

SMS4 Parents:

A feasibility research project

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SMS4 Parents Population

Target population:

- Mothers with diagnosed perinatal mental illness, with an infant less than six months of age.
- The mothers partner (did not have to be a biological parent).
- Parent group was an indicated population recruited from two perinatal mental health services in regional Queensland (Townsville and Toowoomba).

SMS4 Parents-Rationale

- **Women are more likely to develop mental health concerns or illness in the perinatal period more than at any other time in their lives.**
- Dads are at greater risk of developing a mood disorder if they are caring for a partner with mental illness.
- **Stress involved in adjusting to new parenthood and negotiating the co-parenting relationship can contribute to emotional distress.**
- New parents experiencing mental illness are also highly vulnerable to co-parenting relationship difficulties.
- **Advances in technology can provide innovative solutions to deliver mental health promotion and prevention strategies, particularly where resources are limited.**

SMS4 Parents Aims

The project addresses three particular aims:

- Demonstrate the feasibility of the use of smart phone (SMS) technology to deliver mental health promotion and prevention messages in Queensland regional areas.
- Test fathers and mothers response to SMS-based support where the mother has a diagnosed perinatal mental illness.
- Observe factors that may impact on the acceptability of SMS-based support services.

SMS4 Parents Objectives

Objectives:

- Develop a set of SMS messages for mothers with perinatal mental illness and their partners.
- Measure fathers' distress levels and observe if distress affects fathers' help-seeking.
- Test the extent to which the SMS messages encouraged help-seeking and if participants follow links to resources provided in the messages.
- Explore the effectiveness of specific SMS messages
- Observe parents perceptions of their co-parenting relationship, and if message supported this.
- Evaluate all aspects of the program for future research.

SMS4 Parents Study Protocol

- Parents were recruited by their perinatal mental health clinician from the two participating services and provided with a detailed explanation of the study and information about the process.
- On sign up parents provided the expected date of birth of their infant or their infant's age. Messages were sent between 20 weeks antenatally and 24 weeks postnatally, and synchronised according to parents weeks of pregnancy or infants age.
- Participants signing up for the full time could potentially receive up to 154 messages. All participants received at least 3 months of messages.

SMS4 Parents Study Protocol

- SMS messages of approx 160 characters were then sent to parents on average 14 times per month delivering information and strategies about:
 - parents own mental health and wellbeing
 - how to support their partners wellbeing
 - their infants development and needs over the weeks and months they were involved in the study.
 - support to track their mood with the option for mental health support should their mental health risk escalated.
- A “Stop Message” function was available to participants to opt out of the study at any time.
- Parents were interviewed by phone about their experience of the messages on completion of their message protocol by the QCPIMH project researcher.

SMS4 Parents Method - Message Development

- Expert Advisory Group was established, 14 members. Group included researchers, psychiatrists, psychologists, mental health promotion and prevention experts.
- SMS messages for fathers previously trialled with a universal population (SMS4Dads), adapted for use with this indicated population.
- Messages for mothers were developed from scratch. EAG worked to gain consensus on relevant topics for mothers with mental illness during pregnancy and postnatally.

SMS4 Parents Method - Message Development

- Messages were evaluated by the EAG using a rating scale and feedback on acceptability.
- EAG members were encouraged to re-word messages where the topic was acceptable but the wording needed work.
- All EAG members provided suggestions about message weblinks to attach.
- All messages were evaluated by the group three times before final acceptance into the protocol.
- Messages were developed by topics relevant to pregnancy, parenting, mental health and infant development.

SMS4 Parents Message Examples

Mums and Dads:

- “How will you find agreement with each other on the best things to do when caring for your baby? Working together in the early months will be important”.
- “Feeling irritable or angry can be a sign of anxiety or depression. See your doctor if you are worried about these feelings”.
- “It may take time to gain confidence in each other’s parenting abilities. Doing lots of small things will help her to develop trust in you as a dad”.
- “Keep expectations real for your partner and self. Nobody can do it all. Nobody does it perfectly. Celebrate the things you are doing well as parents”.
- “Baby crying can stress parents and people can start to feel angry. If you are beginning to get angry put baby in a safe place and give yourself some space”.

SMS4 Parents Message Examples

Infant:

- “Although it is noisy in here I will be able to hear your voice from about 20 weeks. Try telling me about the things we will do together Mum”.
- “You might not believe it but I could sleep for 16-18 hours a day in the early weeks. When was the last time you managed that dad?” [*Static Link*]
- “It will be important for me to sleep in a safe place and in a safe position Mum. Get more info on safe sleeping from” ... [*Static Link*]
- “I will cry Dad, it's how I'll communicate for a while. Did you know my crying will probably peak at about 6 weeks after birth but settling after?” [*Static Link*]
- “From birth to age 3, my brain will make 700 new connections every second! Pay attention to what I’m doing, and help me learn”.
- “Looking into each other’s eyes and exploring each other’s faces will help us to get to know each other Dad. This time is important”. [*Static Link*]

SMS4 Parents Mood Tracker Messages

- Risk management - Mood tracker messages were sent to monitor participants distress levels and were sent approximately every 3 weeks.
- Mood tracker messages are a series of questions introduced focused on a relevant topic e.g. infant crying.
- Participants indicating high levels of personal distress were directly followed up by either the perinatal mental health clinician in their service or by the service Acute Care Team for further assessment and support.

SMS4 Parents Mood Tracker Message

Example:

1. Antenatal Stress:

- **SMS4MUM** Some mums find the lead up to the birth really stressful “How are you feeling as you head toward the big day?” [113]
- ☐ I’m looking forward to it.
- **Good to hear. You may want to check out how other new mums are doing [LINK]?**
- ☐ I think I’ll be OK
- Reply text: **Well done. How would you say you were personally doing?**
- ☐ I’m doing well.
- **Good to hear. You may want to check out how other new mums are going [LINK]?**
- ☐ Some days are better than others, I’m feeling quite stressed.

Reply text: **Soon things will get even busier and you need to take care of yourself. Have you got someone to talk to?**

- ☐ Yes
- **If you can’t get onto them there are also people ready to listen at these websites [beyondblue] [PANDA]**
- ☐ No
- Reply text: **We will call you for a chat**
- ☐ I’m really stressed and not coping.
- Reply text: **We will call you for a chat**

Data Collection and Analysis

Quantitative information:

- collected through the technology identifying the number of participants, number and type of messages sent, resource links used and responses to the mood tracker.

Qualitative information: via post-project interviews, asking parents about:

- helpfulness of the messages
- actions if any, taken as a result of the messages
- effects the messages on the co-parenting relationship
- if parents experienced other behavioural changes in relation to their partner and infant
- changes they suggest to the messages and/or the program
- and the extent to which fathers and their partners sought further information/assistance as a result of the project.

Data Collection and Analysis

Demographic:

- 45 mums and 24 dads enrolled, 32 mums and 16 dads in total provided feedback via phone survey.
- Mums age range: 19-41 years, average age of 28.51 years.
- Dads age range: 20-49 years, average age of 29.3 years.
- Townsville mums = 14 Dads = 8, Toowoomba mums = 29 Dads = 16.

Mothers enrolment:

- 71% Mums antenatal phase, between 26 – 29 weeks gestation, with an average SMS message intervention of 30.9 weeks.
- 29% Mums postnatal phase, infant age averaging at 2.5 weeks old and an average SMS message intervention of 20.5 weeks.
- 6 Mums (5 antenatal 1 postnatal) withdrew from the study with an average SMS message intervention of 11.5 weeks.
- In total an average of 90 messages were sent to each mother who completed the study.

Data Collection and Analysis

Dads enrolment:

- Majority of dads antenatal phase with an average SMS message intervention of 27.35 weeks.
- 1 Dad (antenatal) withdrew from the study with an average SMS message intervention of 14.9 weeks.
- In total an average of 96 messages were sent to each dad who completed the study.

Web Link access:

- 24 Mums accessed weblinks, (click range 14)
- 17 Mums clicked on more than one link
- 8 Dads accessed weblinks, (click range 15)
- 4 Dads clicked on more than one link

SMS4 Parents Participants Experience

Feasibility of SMS Messages as a mechanism:

- 95% parents reported that the use of SMS messaging was an acceptable method to deliver information and weblink resources.
 - “It saves a lot of energy”
 - “The messages from the baby explaining what he was doing encouraged me to keep going when I was dead tired and frustrated and to keep doing things to grow that connection and bond”.
 - “It was good to get information that came straight to your phone and you didn’t have to go looking for it”.
- 95% parents reported that the content of the messages was acceptable, with the exception of 3 people about messages around alcohol use and 1 about the partner messages as she was a single parent.
 - “The diversity of the messages was really good, covered a lot of different topics”.
 - “Just how they were so relevant to how I was feeling and the timing of the messages about the baby’s development. A friend of mine has just had a new baby and he was struggling with anxiety so I talked about the messages and sent him some that I thought would be helpful to help him. He really liked them”.

SMS4 Parents Participants Experience

Feasibility of SMS Messages as a mechanism:

- All parents surveyed were positive regarding the frequency of the messages with 3 mums reporting they would have liked more messages.
 - “Frequency was right and messages were short and brief which was good”.
 - “Frequency was good enough that you felt cared for but not too much to be annoying”.
 - “Definitely didn’t annoy me and I was a bit disappointed when the goodbye message came and I knew it was finished”.
- All parents surveyed reported that the timing of the messages was a positive feature of the program enabling them to track their infants development, address parenting issues and self and other care.
 - “The timing of the messages was scarily accurate”.
 - “The timing was really good and they always seemed to come when I needed them like when I would get frustrated a message would come that would sort of explain what was going on and that helped”.

SMS4 Parents Participants Experience

Mums Themes: Self care

Normalising experience:

- PM18: “It was good to know that others experience what I have gone through as a parent. Good to know I’m not crazy and messages were validating of my experience”.
- PM8: “It was really helpful especially for new parents and getting tips about your baby and what they are doing, things you just don’t know about babies and that your experience is normal and you can cope”.

Reminders to care for self:

- PM13: “Messages reminded me to take a breath and relax. The information provided a good reality check for me and reminded me about things to do with the baby I already knew but sometimes forget in the fog of having a baby”.
- PM2: “Messages to support your partner and one that said give yourself 5 minutes to regroup and then manage whatever is going on”.
- PM4: “The one that said it was important to take care of myself so that I could then take care of my baby”.

Awareness and reflection on mood state and managing feelings:

- PM39 reflected the messages “really helped me to evaluate how I was feeling and going”.
- PM47 reported “at times it’s difficult for me to manage my feelings and they have a tendency to spiral out of control so those messages made me stop and think and provided some space to rein my feelings in and keep me more on track”.

SMS4 Parents Participants Experience

Mums Themes: Self care

Complementary role of messages to clinical treatment:

- PM23: “It was a good tool to maintain my clinical appointments and information I got from those. I would learn things from my clinical appointments and then the messages would remind me of things I learned in my sessions and support me”.

Reducing isolation:

- PM33: “The links to the information was really good. They made me feel much less lonely and isolated and it was good to know someone was there supporting you (even though it was a message) Also that I wasn’t the only one going through the tricky times. I also knew that other parents were getting the messages so that made it feel more normal. Having a message in text writing also made the challenges seem less of a big deal and think in a different way”.
- PM57: “I did talk to my partner more about my emotional state and what was going on with the baby and we would come to more of an understanding together about a particular issue or situation and how we would manage it”.
- PM35: “My family and friends live interstate and the messages would come just at the right time. It felt like my friend or one of my family was here and checking in on me”.

SMS4 Parents Participants Experience

Mums Themes: Support for partner

Reminders to support partner:

- PM66: “Yes they were from the point of view of remembering to encourage dad and tell him he was doing a good job being a dad. We’ve recently separated though so not really in the fact that we didn’t stay together but he’s a really great dad and they reminded me to tell him that”.
- PM53: “My partner didn’t receive the messages but they reminded me that we were going through the same thing and highlighted what he might be feeling at times”.
- PM2: “Messages to support your partner were helpful for me as it reminded me to check in with him. My husband had to return to work 5 days after the baby was born and it took longer for him to bond with our son. He struggled with not having the time to connect with the baby and the messages reminded me to ask him how he was going/ feeling and provide support to him which helped”.

Paying attention to their relationship:

- PM33: “I think they reminded my husband to take time to do things to help me. But also for me to not take my frustrations out on him as soon as he got home and that I needed to make time for me to relax. The reminded me that I can’t just focus on the baby alone and there is a relationship to still be part of and that we were doing this together”.
- PM49: “Messages were much more helpful in this respect. Prompting us to check in with each other was good and they helped my husband think about what I was going through and how he could help. It’s easy to get lost in the day so being reminded to check in with your partner was good”.

SMS4 Parents Participants Experience

Mums Themes: Support for partner

Including partner in the care of their infant:

- PM39: “Yes my partner participated in the research and we would often talk about the messages and the information in them. Often we would compare what the message was saying with what was going on at the time with the baby”.
- PM41: “We talked about the baby’s development and what she was doing comparing it with the message”.

Legitimised issues to communicate with partner:

- PM33: “We would comment about what we had read and the message about why the baby cries created quite a long discussion. The messages were a good talking point to bring up an issue with each other and gave us the words to use to discuss what we were concerned about. Made it easier to bring things up with each other”.
- PM47: “Yes as I said we would get excited when a message came through and compare them or a message would highlight an issue or raise something important and I would think I need to speak to him about that. It was really positive for us in that way”.

SMS4 Parents Participants Experience

Mums Themes: Relationship with infant

Ability to track infant's development:

- PM66: "I loved it. I would wait for the messages and they were really helpful. They made me feel a lot less alone and helped me to anticipate what might happen with my baby or confirm what was happening for us. I loved the messages that would give me strategies or tips on what to do with the baby like "be patient with me, I'm learning" or "sing to me and that will make me happy".
- PM23: "Some messages about the baby normalised negative experiences and to keep going, that the baby was on track in spite of what other people said e.g. parents in law saying he should be sleeping through the night".

Relate to and understand infant's needs:

- PM10: "Messages were a good reminder about the hard things that babies have to do like figuring the world out. That if my baby was having a hard time like crying a lot that he was not trying to upset me but he was trying to do something or feeling bad and that he needed me. The messages were uplifting and supportive".
- PM47: "The messages about attachment and baby's emotional needs were particularly helpful. They made me pay more attention to what she needed when she cried and helped me understand that there were many reasons for her crying and it made these times less frustrating. The messages gave me more knowledge about what she needed".
- PM25: "Messages from the baby saying it might be a bit bored too resonated. It was a good reminder that they also probably get sick of looking at the same thing and I would then take my baby around the house with me to each room when I was doing something so that the baby got different stimulation".

SMS4 Parents Participants Experience

Mums Themes: Relationship with infant

Improve interaction with infant to support connection and bonding:

- PM48: “The messages gave me something tangible to focus on while you are waiting for the baby to come. I agree that the messages being worded from the baby was helpful in the delivery of important information and to know what they might be needing”.
- PM11: “Messages were just friendly reminders of what was going on with the baby and what to do. One day I got a message about the importance of just playing and taking time to watch them and I came home from work and spent time just playing with our baby”.
- PM4: “Messages reminded me about how to connect with my baby and had tips to play with him. The messages reinforced the bond”.
- PM66: “For sure, the messages helped me connect with him and to know what to do with him. I loved that the messages were worded from the baby it kind of like gave him his own little personality”.
- PM39: “The tips were great and let me know what to expect from my baby. The messages being worded from the baby helped as well as it was like she was talking to me and that made me feel more connected to her”.

SMS4 Parents Participants Experience

Dads Themes: Self care

Supportive normalising information:

- PD26: “Good info at your finger-tips. Helped you feel normal and that things with the baby were pretty normal”.
- PD63: “Having the information at your fingertips was definitely helpful and you knew it was accurate”.
- PD61: “Good information for new parents that is helpful when you don’t really know what you’re doing”.
- PD67 reported “The program gives you more of an understanding of what is going on the first three months and provides peace of mind that everything is pretty normal”.

Virtual Mate:

- PD52 stating “It’s like someone is with you on this journey and they support you through having a baby”.
- PD52 reflected, “The one about talking to your baby and the messages in general were encouraging. The ones that say you’re doing a good job were really helpful because no one really tells you that, especially during the rough days”.

SMS4 Parents Participants Experience

Dads Themes: Self care

Reminders to care for self:

- PD30: “Gave me something to think about or made me stop and think about how I was doing things”.
- PD50: “I can’t put a finger on something specific but just the one’s encouraging you to keep going and giving you tips on what to do made me take a breath, stop and think and choose a particular way to be”.
- PD40: “Tips and tricks to help with keeping calm and not stressing out were good”.

Useful information:

- PD15: “It was good to get helpful hints with new babies. It was good to know I was on the right track the messages confirmed this”.
- PD50: “Yes in a way it was the timing of the messages that was good and that these were the same as the baby’s development was helpful”.
- PD59: “It was good to get information that came straight to your phone and you didn’t have to go looking for it. I didn’t really feel isolated in the first place but it was good to know that help was there”.

Useful for others:

- PD52: “I was feeling ok so I didn’t need to use any of the prompts to speak with someone but for those people not feeling good and having a rough time they would be perfect”.

SMS4 Parents Participants Experience

Dads Themes: Support for partner

- PD15: “My wife was hospitalised after a mental breakdown. The messages helped after she was discharged and home to support her. They reminded me to do the little things like tell her often I loved her”.
- PD52: “Reminders to not forget about your partner and how they are feeling, it’s so easy to focus on the baby, like any bloke sometimes I get a bit slack and you are so busy with tasks with two small children it’s good to have the reminders to connect”.

Reminders to communicate with partner:

- PD61: “Getting them in the first instance and just how they generated discussion between me and my partner. Sometimes we would have a five minute conversation and other times quite a long discussion and this was good for us as a couple as we probably talked about things we wouldn’t have thought of or raised particular issues with each other if the message hadn’t come through”.
- PD61: “Really started talking about the content of the message, we would compare messages and laugh at the quirkiness of some of them but this would then morph into a longer discussion about a particular topic or issue”.
- PD63: “Yes what the message said and if I had got one and compared them. Talked about what the information meant. If my partner hadn’t got a message that week I would share mine with her”.
- PD67: “Probably had more in-depth discussions because of the messages than we would have otherwise”.

SMS4 Parents Participants Experience

Dads Themes: Relationship with infant

Relate to and understand infant's needs:

- PD67: "Around the 2 month mark the baby was developing rapidly and the messages at this time helped manage to settle him more, understand his development and what he might be feeling this was probably the best execution of the messages during this time".
- PD59: "Probably the way the messages were worded helped the most. Helped to know what the baby might be thinking and what they needed. I did think they made me interact with the baby more than I would have as I didn't really understand how important some of that stuff was for example talking to them more and telling them what was going on".
- PD63: "Yes it was good to see these messages and think about things from his point of view. Made you think a bit more about what was going on for him and understand what he needs".

SMS4 Parents Participants Experience

Dads Themes: Relationship with infant

Improve interaction with infant to support connection and bonding:

- PD52: “Like my wife we didn’t really have any trouble being bonded with our baby and because it was our second baby we knew what to anticipate but the messages did trigger thoughts about what to do with the baby, especially play and slow down to just spend time with them”.
- PD61: “I think they helped make more of a connection with her than I otherwise would have as they were worded from the baby and made me feel important and that my role was important to her”.
- PD63: “Yes it was good to see these messages and think about things from his point of view. Made you think a bit more about what was going on for him and understand what he needs”.
- PD67: “The messages worded from the baby mostly gave good explanations of what he might be wanting, how to understand him and also how I could connect with him. For example the one where it said to talk to your baby in pregnancy and they will know your voice and respond when they are born was good. Also if you talk to me I will smile at you meant that he was smiling at me rather than because he had wind or something else. The messages made me do those things more with my baby and he would respond so I’d do them again and he would respond again and it was really reaffirming that he wanted to connect with me”.

SMS4 Parents Summary

- Extremely positive feedback about the message program and support it provided.
- Parents liked the accessibility, frequency and quality of information provided.
- All parents surveyed felt the program would be extremely beneficial for first time parents.
- Message topics were relevant and timed well according to weeks of pregnancy and infants development.
- All parents surveyed reported that the messages helped them to understand their infant's needs and the messages delivered as if the infant was speaking directly to them was key to this.
- Most parents reported interacting with their infant more positively after receiving messages.
- Majority of parents reported they communicated more about parenting issues, their own health and wellbeing and their infant.
- Investigate further:
 - Adaptability of the message program to tailor messages to individuals circumstances.
 - Investigate reasons why people use the Stop Message function.
 - Other influencing factors e.g. risk management processes.

Thank you

- EAG Members:
Janette Garvey, Jennifer Waterson, Dr Richard Fletcher, Dr Chris May, Jennie Richardson, Dr Ann Sved-Williams, Dr Lyndall White, Lea Davidson, Tracey Mackle, Julianne Everson, Linda Campbell, Andrea Baldwin, Sarah Moakes, Graham Stark.
- QCPIMH would like to thank the University of Newcastle Family Action Centre, Townsville Hospital and Health Service and Darling Downs Hospital and Health Service for their collaboration on this project.