

Survey on parenting practices among Chinese in Singapore

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ABSTRACT

Introduction: Cultural, religious and personal factors impact greatly on parenting. This survey aims to identify gaps in knowledge and perception about common parenting issues, with respect to mandarin-speaking Chinese in Singapore. There is an emphasis on first-time parents, who the authors feel may be the group which will require additional education and support on these issues.

Methods: A 37-item written survey was conducted before a public mandarin-language forum. Our response rate was 67 percent.

Results: Only 44 percent felt that paediatricians allocated sufficient time to discuss parenting issues. 99 percent of parents believed that breast milk was better than formula milk and that 93 percent intended to breastfeed. However, the vast majority of respondents thought that breastfeeding should be stopped if jaundice developed, and that sunning was effective in preventing jaundice. Moreover, the majority did not recognise the seriousness of jaundice, prolonged or otherwise. Widespread misconceptions existed about milk formulas, with half of the respondents thinking that it was necessary to change to lactose-free formula once a child developed diarrhoea. The majority also thought that certain milk formulas could help improve IQ.

Conclusion: We hope that more comprehensive and accessible parental education will be available to aid in raising awareness of parental practices, and to dispel misconceptions regarding neonatal care.

Keywords: breastfeeding, neonatal jaundice, parent education, parenting

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INTRODUCTION

Parenting issues have a major impact on child health and development. Cultural, religious and personal factors impact greatly on the way parents raise their children. However, parenting practices and knowledge have been an area in which research is relatively lacking in the local context. To our knowledge, there has been no local survey done on parenting knowledge. There is also a need for healthcare surveys which specifically target parenting practices in the neonatal or infant period, which is the time when parents require the greatest amount of knowledge, confidence and support, as they adjust to having a new baby in the family. This is especially true for first-time parents.

In addition, we have not found any research specific to parenting practices among the Chinese, which is the largest ethnic group in Singapore. As ethnic practices and culture have a major impact on general parenting practices, healthcare providers who are dispensing ethnic group-specific advice will be more effective. This survey aims to fill an information gap in the knowledge and perception of common parenting issues among Chinese parents in Singapore. We have particularly targeted first-time parents, as we feel that this may be the group that will require additional education and support on these issues. We hope to identify lacking areas of knowledge for further public education and anticipatory family-oriented guidance from healthcare providers.

METHODS

A 37-item written survey was conducted before a public mandarin-language forum with topics concerning common parenting concerns and issues in neonates. Held together with obstetricians, it targeted prospective first-time Chinese parents, although experienced parents were also welcome. The survey involved the following areas: general confidence and expectations about parenting knowledge, breastfeeding, neonatal jaundice, vaccinations, formula milk feeding, bowel habits, coping with the crying infant, infant massage and normal child development milestones. This survey was approved by the hospital institutional review board. A copy of the survey is found in Appendix 1.

RESULTS

The survey was conducted in July 2006 in Singapore.

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Table I. Demographics of the respondents.

Demographics	No. (%)
Role of respondent	
Father	34 (36.6)
Mother	52 (55.9)
Grandparent	2 (2.2)
Others	2 (2.2)
No response	3 (3.2)
Age (years)	
20–24	3 (3.2)
25–29	19 (20.4)
30–34	41 (44.1)
35–39	18 (19.4)
40–45	4 (4.3)
45–49	0
≥ 50	4 (4.3)
Married	
Yes	92 (98.9)
No	0
No response	1 (1.1)
Educational level	
PSLE or below	0
“O” levels	13 (14.0)
“A” levels/polytechnics	37 (39.8)
University	42 (45.2)
No response	1 (1.1)
No. of children	
0	73 (78.5)
1	8 (8.6)
2	2 (2.2)
3	3 (3.2)
No response	7 (7.5)

Table II. Survey response to parenting issues.

Feedback on parenting issues	No. (%)
Confident of sufficient parenting skills.	
Yes	27 (29.0)
No	65 (69.9)
No response	1 (1.1)
Like to see more talks on parenting.	
Yes	91 (97.8)
No	1 (1.1)
No response	1 (1.1)
Child's doctor/paediatrician spends sufficient time discussing parenting issues.	
Yes	27 (29.0)
No	41 (44.1)
No response	25 (26.9)
Carrying infant every time he/she cries will result in overpampering.	
Yes	55 (59.1)
No	25 (26.9)
Unsure	8 (8.6)
No response	5 (5.4)
Usually able to console the baby when he/she cries.	
Yes	34 (36.6)
No	19 (20.4)
Unsure	22 (23.7)
No response	18 (19.4)

Based on a total of 93 responses out of 138 participants for the forum, our response rate was 67.4%. Each participant completed a separate questionnaire. The profiles of our respondents were summarised in Table I. The majority of our respondents are either fathers or

Table III. Survey response to breastfeeding practices.

Feedback on breastfeeding practices	No. (%)
Breastfeeding is better than formula milk.	
Yes	92 (98.9)
No	0
Unsure	1 (1.1)
No response	0
Intend to breastfeed?	
Yes	86 (92.5)
No	2 (2.2)
Unsure	4 (4.3)
No response	1 (1.1)
How long will you breastfeed your child?	
1 month	4 (4.3)
1–3 months	15 (16.1)
4–6 months	21 (22.6)
6–9 months	20 (21.5)
As long as possible	30 (32.3)
Not intending to breastfeed	0
No response	3 (3.2)

mothers, and most of them were aged 25–39 years. The overwhelming majority (98.9%) were married. Our respondents were generally well-educated, with an attainment of “A” levels or better. Most (78.5%) were prospective first-time parents.

Approximately 70% of our respondents did not feel confident that they have sufficient skills to handle the challenges of parenthood. Even those who felt competent also hoped that there would be more talks on parenting issues. A high proportion of 44% felt that the paediatrician did not spend enough time discussing parenting issues. Only 27% of respondents recognised that carrying the infant every time he/she cries would not result in overpampering, and only 37% of respondents felt confident that they would be able to cope with a crying infant. The responses to the various questions regarding parenting skills and time spent with their paediatricians are reflected in Table II.

On the subject of breastfeeding, we had more correct responses. A vast majority recognised that breastfeeding was better than formula milk. Hence, the majority intended to breastfeed, where 54% intended to breastfeed for 6–9 months or longer (Table III). A surprising 70% were not aware that some vaccines were non-standard, and hence would not be routinely given. However, the vast majority had heard of at least one non-standard vaccine, with the chickenpox vaccine being the best known. 72% of respondents intended to vaccinate their child with at least one non-standard vaccine. For those who were not keen, the most common reason was concern about the adverse effects of the vaccination. The responses of parents on non-standard vaccines are shown in Table IV.

The findings on parental knowledge of neonatal jaundice (NNJ) are shown in Table V. Unexpectedly, 20% of our respondents had never heard of NNJ, and

Table IV. Survey response to knowledge of non-standard vaccines.

Feedback on knowledge of non-standard vaccination	No. (%)
Aware of a set of non-standard vaccines in Singapore?	
Yes	21 (22.6)
No	65 (69.9)
No response	7 (7.5)
Heard of the following vaccines?	
Pneumococcal vaccine	12 (7.0)
5-in-1 vaccine	11 (6.4)
6-in-1 vaccine	17 (9.9)
Flu vaccine	55 (32.0)
Chickenpox vaccine	62 (36.0)
No response	15 (8.7)
Do you intend to let your child go for any of the non-standard vaccines?	
Yes	67 (72.0)
No	17 (18.3)
Maybe	2 (2.2)
No response	7 (7.5)
If no, reasons for not agreeing to non-standard vaccines:	
Unnecessary	1 (5.9)
Too expensive	0
Too many injections	1 (5.9)
Worried about side effects of vaccine	8 (47.1)
All of the above	0
Others	2 (11.8)
No response	5 (29.4)

among those who did, most of them heard about it from friends and relatives, with minimal contribution from healthcare professionals. A large proportion of respondents (86%) thought that breastfeeding should be stopped if the baby developed jaundice, or were unsure. Furthermore, 87% of respondents thought that putting the child under the sun was either an acceptable method to prevent jaundice or were unsure. 52% were unsure about the seriousness of jaundice, and 23% even thought that jaundice was something which was not serious and would resolve spontaneously. 69% of respondents had never heard of G6PD deficiency, despite its prevalence in our population, and that routine screening had been ongoing for the past 40 years since 1965.⁽¹⁾ Only 28% recognised that prolonged NNJ was important and a potentially serious condition.

We suspect that there is reduced vigilance among healthcare workers on the healthcare education of NNJ and also among parents, as the improved availability and effectiveness of therapy, especially phototherapy, has reduced the kernicterus rates drastically. The traditional practice of putting babies under the sun had been widely perpetuated among caregivers and even some healthcare workers. Fortunately, 66% of respondents would bring their child to see a doctor within two weeks of jaundice onset. Overall, these

Table V. Survey response to neonatal jaundice knowledge.

Feedback on knowledge of NNJ	No. (%)
Have you heard of NNJ?	
Yes	74 (79.6)
No	19 (20.4)
No response	0
Where have you heard of NNJ?	
Previous child had NNJ	3 (3.2)
From friends or relatives	68 (71.6)
From doctors or healthcare professionals	8 (8.4)
Others	6 (6.3)
No response	10 (10.5)
Breastfeeding should be stopped if baby develops jaundice.	
Yes	13 (14.0)
No	29 (31.2)
Unsure	51 (54.8)
No response	0
Putting baby under the sun helps to prevent jaundice.	
Yes	47 (50.5)
No	12 (12.9)
Unsure	34 (36.6)
No response	0
Seriousness of NNJ.	
Not serious, as it will resolve spontaneously	21 (22.6)
Serious, as it can cause brain damage	21 (22.6)
Unsure about seriousness	48 (51.6)
No response	3 (3.2)
G6PD is an important cause of early NNJ.	
Yes	14 (15.1)
No	8 (8.6)
Unsure of what is G6PD deficiency	64 (68.8)
No response	7 (7.5)
When to bring infant to see a doctor if NNJ persists.	
One week old	35 (37.6)
Two weeks old	26 (28.0)
Four weeks old	3 (3.2)
Six weeks old	1 (1.1)
Unnecessary	17 (18.3)
No response	11 (11.8)
Prolonged NNJ is important.	
Yes, it is caused by certain conditions that require surgery	26 (28.0)
No, it will resolve itself	10 (10.8)
Unsure about seriousness	49 (52.7)
No response	8 (8.6)

findings suggest that NNJ is an area which urgently requires public education.

Parental views on milk formula and the baby's bowel habits are summarised in Table VI. Only 13% realised that the frequency of bowel movements in infants is very variable, and hence it may be normal if the infant does not defaecate regularly. 48% thought that it is necessary to change to a lactose-free formula if the child is having diarrhoea. 89% of respondents will institute incorrect measures in response to constipation in infants. 62% of respondents also had the misconception that certain milk formulas can help to improve a baby's IQ. Aggressive advertising by milk formula companies in Singapore may have led

Table VI. Survey response to information on bowel movements and milk formulas.

Feedback on the bowel movement and milk formulas	No. (%)
Frequency of bowel movements in infants.	
A few times a day	49 (52.7)
Once daily	20 (21.5)
Once in 2 days	1 (1.1)
Once in 4–5 days	3 (3.2)
Variable	12 (12.9)
Do not know	1 (1.1)
No response	7 (7.5)
Necessary to change to a lactose-free formula if the child is having diarrhoea?	
Yes	45 (48.4)
No	23 (24.7)
Unsure	16 (17.2)
No response	9 (9.7)
The following measures help to relieve constipation in infants.	
Diluting the milk	11 (11.0)
Giving small amounts of water in between milk feeds	26 (26.0)
Changing the milk formula	21 (21.0)
All of the above	30 (30.0)
None of the above	2 (2.0)
Unsure	1 (1.0)
No response	9 (9.0)
Certain types of milk formula help to improve a full-term baby's IQ.	
Yes	58 (62.4)
No	9 (9.7)
Unsure	21 (22.6)
No response	5 (5.4)

Table VII. Survey response to knowledge on infant massage.

Feedback on infant massage	No. (%)
Heard of infant massage?	
Yes	66 (71.0)
No	21 (22.6)
No response	6 (6.5)
Interested to learn infant massage?	
Yes	84 (90.3)
No	2 (2.2)
No response	7 (7.5)
Benefits of infant massage are:	
Improves bonding with baby	22 (19.8)
Calms baby down	8 (7.2)
Relieves infant colic	0
Improves baby's sleep	12 (10.8)
All of the above	62 (55.9)
None of the above	0
Unsure	1 (0.9)
No response	6 (5.4)
One can start infant massage at:	
Three days after birth	10 (10.8)
One week after birth	11 (11.8)
One month after birth	29 (31.2)
Anytime	31 (33.3)
Unsure	2 (2.2)
No response	10 (10.8)

Table VIII. Survey response on knowledge of developmental milestones.

Feedback on developmental milestones	No. (%)
Able to notice delayed development in child?	
Yes	48 (51.6)
No	34 (36.6)
Unsure	1 (1.1)
No response	10 (10.8)
Child should speak by what age?	
10 months	7 (7.5)
12 months	19 (20.4)
18 months	24 (25.8)
24 months	15 (16.1)
Don't know	19 (20.4)
No response	9 (9.7)
Child should walk by what age?	
10 months	10 (10.8)
12 months	21 (22.6)
18 months	28 (30.1)
24 months	13 (14.0)
Don't know	13 (14.0)
No response	8 (8.6)

to various misconceptions among both parents and healthcare workers.

Infant massage is gaining popularity among parents in Singapore. Given the media publicity about infant massage, it was not surprising that 71% had heard of infant massage. A large number of the respondents were also interested to learn infant massage. Most understood the benefits of infant massage and that one could start infant massage anytime after birth. The results are shown in Table VII. 52% of respondents were aware of the expected milestones in young children. 46% were able to tell that a normal child will speak by 12–18 months. 53% knew that children will walk by 12–18 months. The various responses on development are delineated in Table VIII.

DISCUSSION

Our respondents were fairly well-educated with qualifications of "A" levels or better, and the majority were prospective first-time parents. Our response rate was 67%. There was a demand for paediatricians to discuss more parenting issues with the parents, as 44% of the respondents felt that insufficient time was allocated for this. 70% of respondents did not feel confident that they had sufficient parenting skills, but this may be because a majority of them were prospective first-time parents. It was encouraging to note that 99% of parents understood that breastfed milk was better than formula milk, and that 93% intended to breastfeed. However, only 54% intended to breastfeed for more than six months, which was recommended by the World Health Organisation.^(2,3)

Various gaps in knowledge were identified in our survey. For instance, only 23% of respondents were

aware that some vaccines were non-standard and these would not be routinely administered. However, most knew of the existence of at least one non-standard vaccine and the majority intended to vaccinate their child with at least one non-standard vaccine. Knowledge in NJJ was deficient in a significant proportion of the surveyed first-time parents. As a result of a local surveillance programme for NJJ involving health education of doctors, nurses and the lay public, as well as screening of the newborn and the early treatment of jaundice, kernicterus is rare in Singapore.⁽⁴⁾ It has always been regarded as a topic that is well known to parents. The results of the survey are sobering. Many of the respondents thought that breastfeeding should be stopped if jaundice develops and that sunning was effective in preventing jaundice. Moreover, the majority did not recognise the seriousness of jaundice, whether or not it was prolonged.

Widespread misconceptions existed about formula milk, with almost half of respondents thinking that it is necessary to change to a lactose-free formula once a child starts having diarrhoea. The majority also thought that certain brands of formula milk can help to improve the child's IQ. 89% provided incorrect responses to questions regarding constipation in infants. Infant massage has only been recently introduced in Singapore. It seems that most parents are interested in learning about infant massage and there is a demand for more of such programmes in Singapore. Approximately half of respondents had the confidence to detect delayed development in children. Similarly, half of respondents were able to give the correct response to when they expected a child to start to speak or walk.

We recognise that there are some limitations to our survey. Most of the respondents were prospective first-time parents who may be less knowledgeable

than parents who have had first-hand knowledge. Furthermore, parenting methods in the local setting are often influenced by other caregivers who are not the parents, such as grandparents, confinement nannies, domestic help and nannies. We also recognise that there was a selection bias, as motivated and well-informed parents are more likely to turn up for a public forum. The Chinese population in Singapore is also not a homogeneous group; those who are non-mandarin speaking or less comfortable with mandarin may not turn up for a Chinese forum, although we believe that mandarin-speaking Chinese in Singapore make up a significant proportion of the local population. However, we believe that prospective first-time parents represent a population who are more likely to lack knowledge in parenting and this lack of knowledge may adversely impact on child health.

In conclusion, we identified various gaps in knowledge among the mandarin-speaking Chinese in Singapore on parenting issues, encompassing the areas of neonatal jaundice, vaccinations, use of formula milk and child development. We hope that more emphasis will be placed on educating parents about the above-mentioned issues, whether in a public setting or when consulting with their healthcare professionals. We also hope that more research can be done on various other parenting issues for children at various age groups, ethnicity, religion and languages.

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APPENDIX I. Survey form on parenting in Singapore.

Please circle:

1. I am a.
a) Father.
b) Mother.
c) Grandparent.
d) Other caregiver looking after children.
Please specify: _____

2. Age: _____

3. Married: Y / N

4. Highest educational level:
a) PSLE and below.
b) "O" levels.
c) "A" levels/diploma.
d) University degree.

5. I have _____ (number) of children.

6. I feel that I have sufficient parenting skills to handle the challenges of parenthood.
a) Yes.
b) No.

7. I hope that more talks on parenting will be conducted.

- a) Yes.
b) No.

8. My child's doctor or paediatrician usually spends sufficient time discussing parenting issues.

- a) Yes.
b) No.

9. How many times should an infant pass motion?

- a) A few times a day.
b) Once daily.
c) Once in 2 days.
d) Once in 4–5 days.
e) Variable.

10. Do you believe that breastfeeding is better than formula milk?

- a) Yes.
b) No.
c) Unsure.

11. Do you breastfeed/are intending to breastfeed your child?

- a) Yes.
b) No.
c) Unsure.

12. How long will you breastfeed your child for?

- a) 1 month.
b) 1–3 months.
c) 4–6 months.
d) 6–9 months.
e) As long as possible.
f) Not intending to breastfeed.

If you do not intend to breastfeed or do not breastfeed your child, please answer Q13.

13. If you do not intend to breastfeed or do not breastfeed your child, what are the reason(s)? [Circle more than one option, if applicable.]

- a) Not convinced of benefits.
b) Inconvenience.
c) Difficulty with technique of breastfeeding.
d) Not enough milk production.
e) Medical reasons, as advised by doctors, e.g., taking certain drugs.
f) Not applicable.

14. Have you heard of newborn jaundice (neonatal jaundice)?

- a) Yes.
b) No.

If you answer "no" for Q14, please skip Q15.

15. Where have you heard of newborn jaundice?

- a) Previous child had jaundice.
b) From friends or relatives.
c) From doctors or health professionals.
d) Others: please specify _____

16. Do you think breastfeeding should be stopped when the infant develops jaundice?

- a) Yes.
b) No.
c) Unsure.

17. Do you believe that putting the baby under the sun will help to prevent jaundice?

- a) Yes.
b) No.
c) Unsure.

18. Newborn jaundice is:

- a) Not a serious condition as it will resolve spontaneously.
b) A serious condition which can cause brain injury.
c) Unsure about seriousness.

19. I know that G6PD deficiency is an important cause of early newborn jaundice.

- a) Yes.
b) No.
c) Unsure what is G6PD deficiency.

20. When should you bring your infant to see a doctor if the jaundice persist? If child is more than:

- a) One week old.
b) Two weeks old.
c) Four weeks old.
d) Six weeks old.
e) Unnecessary.

21. Prolonged jaundice is important,

- a) Because it may be caused by certain conditions which may require surgery.
b) Unimportant as it will resolve by itself eventually.
c) Unsure about seriousness.

22. Are you aware that there is a set of vaccinations, which are non-standard, and hence optional, in Singapore?

- a) Yes.
b) No.

23. Have you heard of the following vaccines, which are non-standard? [Choose more than one option, if applicable.]

- a) Pneumococcal vaccine (e.g., Prevenar).
b) 5-in-1 vaccine.
c) 6-in-1 vaccine.
d) Flu vaccine.
e) Chickenpox vaccine.

24. Do you intend to let your child have any of the above non-standard vaccines?

- a) Yes.
b) No.

If you intend to let your child go for non-standard vaccine, please skip Q25.

25. What are your reason(s) for not agreeing to non-standard vaccines? [Choose more than one option, if applicable.]

- a) Unnecessary.
b) Too expensive.
c) Too many injections.
d) Worried about side effects of the vaccine.
e) All of the above.
f) Others: please specify _____

26. When your child has diarrhoea, is it necessary to change to a lactose-free formula?

- a) Yes.
b) No.
c) Unsure.

27. The following measures help to relieve constipation for infants:

- a) Diluting the milk.
b) Giving small amounts of water in between milk feeds.
c) Changing the milk formula.
d) All of the above.
e) None of the above.

28. I believe certain types of milk formula can help to improve my full-term baby's IQ.

- a) Yes.
b) No.
c) Unsure.

29. Carrying my infant every time he/she cries will result in overpampering.

- a) Yes.
b) No.
c) Unsure.

30. I am usually able to console my baby when he/she cries.

- a) Yes.
b) No.
c) Unsure.

31. If my child's development is slower than that of other children, I feel that I will have the ability to notice the problem.

- a) Yes.
b) No.

32. If my child does not speak by _____ (months), I will bring him/her to a doctor for assessment.

- a) 10 months.
b) 12 months.
c) 18 months.
d) 24 months.
e) Don't know.

33. If my child does not start walking by _____ (months), I will bring him/her to see a doctor for assessment.

- a) 10 months.
b) 12 months.
c) 18 months.
d) 24 months.
e) Don't know.

34. Before attending this talk, I have heard of infant massage.

- a) Yes.
b) No.

35. I am interested to learn more about infant massage.

- a) Yes.
b) No.

36. The benefit(s) of infant massage include:

- a) Improve bonding with child.
b) Calm down the child and parents.
c) Relieve infant colic.
d) Improve baby's sleep.
e) All of the above.
f) None of the above.

37. I can start infant massage at:

- a) Three days after birth.
b) One week after birth.
c) One month after birth.
d) Anytime.