

## Parents'/Carers' Expectations and Perceptions of Structured Aquatic taught baby Programmes: an Online Survey

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### Abstract

Although structured taught aquatic baby programmes (STABPs) are one of the earliest forms of physical activity, the possible impacts of structured taught aquatic baby programmes are unknown. This study aims to understand the perceived impact that attending STABPs has on parents/carers, their baby/child and their family. An online survey was completed by 2854 parents/carers. It was advertised via numerous online advertisements. Of the respondents, 89% had attended STABPs. 'Attendees' were significantly older and were less likely to live in a more deprived area compared to 'non-attendees'. STABPs are perceived to be beneficial in terms of water safety, confidence, benefits to parent-child relationships and interaction with other children but cost affects attendance. The evidence-base regarding the benefits of STABPs should be established to further understand their impact on parents/carers and babies. Further research should focus on understanding barriers to attendance and ways to facilitate attendance. The need to understand the 'key ingredients' of structured taught aquatic baby programmes was highlighted.

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## Introduction

Swimming is one of the earliest forms of physical activity that babies can participate in. One such public health benefit may be the prevention of childhood obesity. As learning to swim must be achieved before the benefits of swimming as a form of physical activity are felt, structured taught aquatic baby programme (STABPs) aim to do this. There are several STABPs, for example, Water Babies teaches more than 19,000 babies/children a week to swim in the United Kingdom, Ireland and Australia<sup>1</sup>. Although a programme of work is currently ongoing in Australia exploring the impact of early swimming on children's development<sup>2</sup>, the possible benefits on parents/carers or on the relationship between parent/carer and baby remain under-researched. This short paper reports the findings from a study that aimed to understand the expectations that parents/carers had about STABPs and their perceptions regarding the possible impacts of attending. Views were sought from both those who had attended and those who have not attended.

## Method

A cross-sectional study of parents/carers who had either attended or had not attended STABPs completed an online survey exploring their views and experiences of these programmes. As no previous studies have been conducted, this exploratory survey was designed for the purpose of this study. The web-link to the online survey was distributed to parent/carers through parenting websites and mailing lists. The survey was split into two sections. The first section featured demographic questions including their experience of attendance at STABPs and the second section focused on the expectations and perceptions of STABPs. Ethical approval was granted by the University of Manchester Ethics' committee. Whilst the study had the full support of one UK-based STABPs, it remained researcher-led throughout.

The qualitative data presented in the open questions were quantified by one researcher using the three levels of content analysis<sup>3</sup>. Descriptive statistics and chi-squared tests are presented.

## Results

A total of 2854 parents/carers completed the online survey over a two-month-period. Not all questions in the survey were completed by each participant so the number of respondents is given for each question. Of these, 89% attended a STABP and 11% reported never attending. In 96% of cases, mothers completed the survey. Table 1 shows the demographic details of the sample. The three most frequently reported ethnic groups were: White British (81%), White European (6%) and White Irish (7% for attendees and 5% for non-attendees). The number of participants that attended a STABP significantly differed by age,  $\chi^2(5, N = 2840) = 304.55, p < .001$ . Fewer women in the youngest age category (16-24 years) were in the attendees group compared with the non-attendees group (2% compared to 21%). The percentage of participants that attended STABPs significantly differed by area of deprivation? (according to the index of multiple deprivation),  $\chi^2(3, N = 1637) = 46.98, p < .001$ . A smaller percentage of attendees were from the most deprived quintile than non-attendees (5% compared to 17%).

### ***Summary of Findings From Attendees:***

In the majority of cases, mothers took their child to the STABPs (69%). Of these 2540 participants, 903 reported not attending STABPs currently. For the 903 respondents who were no longer attending, the most frequently reported reason for not attending STABPs were cost (n=192), timing of sessions (n=107), work commitments (n=99) and the needs of the other children (n=94). The benefits of attending STABPs for them, their children and their families were reported by the attendees are summarised in Table 2. For all, increased water safety and increased confidence in the water were the most frequently reported benefits. Other benefits included psychological improvements, such as increased attachment between parent and child and increased interaction with the whole family.

### ***Summary of Research Findings From Non-Attendees:***

Table 1. The demographics of the respondents of the online survey (n=2854)

	Attendees (n=2547)	Non-attendees (n=307)
Who completed the online survey		
-Mother	2421 (95%)	295 (96%)
-Father	114 (4%)	6 (2%)
-Grandparent	5 (1%)	3 (1%)
-Still pregnant	-	2 (1%)
-Foster carer	1 (1%)	-
-Swimming teacher	-	1 (1%)
-Missing data	6	-
Age		
-16-24	50 (2%)	64 (21%)
-25-34	1348 (53%)	177 (58%)
-35-44	1094 (43%)	58 (19%)
-45-54	41 (2%)	4 (1%)
-55-64	-	2 (1%)
-65-74	1 (1%)	1 (1%)
Ethnicity		
-White British	2067 (81%)	250 (81%)
- White European	144 (6%)	19 (6%)
-White Irish	173 (7%)	14 (5%)
Area deprivation		
-Quintile 1 (most deprived)	134 (5%)	51 (17%)
-Quintile 2	294 (12%)	43 (14%)
-Quintile 3	463 (18%)	50 (16%)
-Quintile 4	544 (21%)	58 (19%)
-Quintile 5 (least deprived)	577 (23%)	36 (12%)
-Missing data	524 (21%)	69 (23%)

Non-attendees (n=307) were also asked a series of questions about their experience of STABPs. One hundred and seventy-three (56%) stated that they would like to attend STABPs, with the remaining 44% undecided or not wanting to attend. The most stated reason for non-attendance was cost (n=159). The perceived benefits of attending STABPs for them, their children and their families as reported by the non-attendees are summarised in Table 3. As above, increased water safety and increased confidence in the water were the most frequently reported benefits. Other benefits also endorsed the same psychological improvements such as the attendees reported.

## Discussion

The findings of this online survey show that non-attendees had a good understanding of the possible benefits of STABPs and the perceived benefits they reported were very similar to the benefits reported by the attendees. Before discussion of these, the limitations

of the sample and study design must be mentioned. The sample was predominantly from the UK, which is to be expected given that UK-based websites advertised this survey. Although the number of non-attendees was large, the majority of the sample was attending STABPs. Thus, future work should engage a greater sample of non-attendees to fully appreciate their reasons for non-attendance. Finally, the cross-sectional study design restricts interpretation of causal relationships and there may be confounding factors which were not measured (i.e., attendance at other baby-groups). However, this study is the first to give us some insight into parental views and experiences of STABPs and these findings demonstrate some perceived benefits and barriers to attendance for future examination.

Increased water safety and confidence in the water were reported as being the most important perceived benefits. In the UK in 2010, 28 children under 15 years of age died in water, a further 170 suffered lasting effects from nearly drowning<sup>4</sup>. In addition, over the last six years, 20 children under 15 years of age

Table 2. Reported benefits of attending structured taught aquatic baby programmes on parents, children and family by those who reported attending

Who benefits	Benefit	Number (%)
Parents	Increased water safety	1523 (60%)
	Increased attachment with child	1487 (58%)
	Increased ability to use verbal commands with child	1341 (53%)
	Increased understanding of child	1123 (44%)
	Increased confidence in caring for their child	1012 (40%)
Children	Increased confidence in the water	2265 (89%)
	Improved water safety	1884 (74%)
	Increased ability to follow verbal commands	1509 (59%)
	Increased physical development	1396 (55%)
	Increased physical activity	1298 (51%)
	Increased trust in parent's care	1298 (51%)
Family	Increased confidence in water	1825 (72%)
	Increased safety in the water	1719 (67%)
	Increased interaction with other children	1184 (46%)

Table 3. Perceived benefits of attending structured taught aquatic baby programmes on parents, children and family by those who reported not attending

Who benefits	Benefit	Number (%)
Parents	Increased water safety	173 (56%)
	Increased attachment with child	142 (46%)
	Increased ability to use verbal commands with child	120 (39%)
	Increased fitness levels	106 (35%)
	Increased confidence in caring for their child	106 (35%)
Children	Increased confidence in the water	248 (81%)
	Improved water safety	197 (64%)
	Increased physical development	185 (60%)
	Increased physical activity	174 (57%)
	Increased interaction with other children	157 (51%)
	Increased trust in parent's care	151 (49%)
	Increased verbal communication	137 (45%)
Family	Increased confidence in water	213 (69%)
	Increased safety in the water	209 (68%)
	Increased interaction with other children	172 (56%)
	increased engagement	129 (42%)

from the UK died overseas whilst on holiday. These deaths outline the importance of STABPs being open to all to learn vital parenting skills, such as water safety, and not just to those who can afford to attend.

Better attachment and increased use of verbal commands were reported as benefits. There are several suggested reasons for this: physical contact, face-to-face time in the water, talking to the baby may facilitate bonding with the baby and parents may generalise the idea of giving clear verbal commands to their infant from the pool to their home environment so that they may either be strengthened in their current parenting practice or learn a new skill.

Finally, increased physical development and physical activity were also reported as perceived benefits of attending STABPs for children. This is important as an independent report submitted to the United Kingdom Government aims to reduce childhood obesity rates<sup>5</sup> so engagement in early forms of physical activity as a family may be one way to reduce childhood obesity. As intention to behave is central to most social cognition models of behaviour, it could be argued that attendees and those who intend to attend STABPs are more likely to engage in other forms of physical activity but this would need further examination. Finally, ways to increase engagement of low-income families in these classes is important for public health as risk of childhood obesity at ages two and four is double that of other children<sup>6</sup>.

Finally, cost was reported as the main reason for not attending STABPs. It has been argued in previous research that the population who can afford these classes were amongst the most affluent in society and thus not a representative sample<sup>7</sup>. The same is true of the population in the current study as 'attendees' were significantly older and more likely to live in less deprived areas than the 'non-attendees'. Older mothers tend to invest a lot of effort into planning their pregnancy<sup>8</sup> and are likely to be in a financially stable situation to pay to attend such classes<sup>9</sup>. Early interventions have been suggested to have an important role in the prevention of social, emotional and physical problems<sup>10</sup>. If benefits are reaped for parent and child from attending STABPs as an early intervention, more must be done to ensure that health inequalities in access do not exist due to cost and that all are offered this opportunity. Finally, the sample

was predominantly white, so to examine possible cultural influences future research should recruit a sample with a greater ethnic variation.

In conclusion, this topic is one of interest to parents as demonstrated by the recruitment rate. Although attendees were significantly older and more affluent than non-attendees, the findings suggest that STABPs are beneficial and perceived to be beneficial in terms of water safety, confidence, benefits to parent-child relationships and interaction with other children. However, cost affects attendance. As yet, there is little research on this topic and more research is needed to explore what the 'key-ingredients' of structured taught aquatic baby programmes are. In particular, the processes through which the sessions impact on attachment and the impact of using verbal commands. In terms of early years public health interventions, our understanding of whether structural taught baby programmes differ depending on the taught environment (e.g., water versus land) needs to be increased. It would be of particular interest to follow families long-term who attend STABPs to establish if any developmental benefits are seen in the children and whether the child and/or the family engages in more physical activity.

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