



The role of tonsillectomy for recurrent sore throats in children: A qualitative study



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ABSTRACT

Introduction: Decisions regarding tonsillectomy for children with recurrent sore throats are mainly based on guidelines that take the number of sore throat episodes into consideration. Anecdotally, parents report a number of additional factors that change after the operation. With this in mind, the first follow up tonsillectomy qualitative study was undertaken to identify what the operation truly offers this group of children.

Materials and methods: Ten families were interviewed between 3 and 14 months after their child's operation. A narrative method was utilised. Interviews with families were transcribed and analysed to identify key themes that had changed due to the operation.

Results: Themes identified included an improvement in general and specific symptoms. Psychosocial aspects such as education, socialising, family consequences and psychological consequences were also important factors that families noticed.

Conclusion: Tonsillectomy has much more to offer families and children than an improvement in the numbers of episodes of sore throats and this study could form the basis of a specific quality of life assessment tool.

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1. Introduction

In the UK, approximately 75% of tonsillectomies are currently performed for recurrent sore throats (RSTs) [1]. There has been a dramatic decline in the rates of tonsillectomy in the UK in the last 20 years and this is likely to be due to a better understanding of the indications, outcomes and efficacy of the operation [2]. However, a number of randomised controlled trials (RCTs) have failed to provide robust evidence for its clinical efficacy [3]. In contrast to this, there is evidence from a number of sources indicating that a high proportion of parents are satisfied with the outcomes of the procedure [4–8].

Guidelines for the management of RSTs have been produced and these are based on a RCT by Paradise et al. which is now 30 years old [9,10]. Even though RCTs can provide a good indication of the efficacy of an intervention, the strict inclusion criteria and outcome measures required are not readily applicable to real life

clinical dilemmas. A more parent/patient centred quantitative approach could be to utilise quality of life (QoL) assessment tools. These tools have been designed for evaluation of children undergoing tonsillectomy but, so far, none exist that are specific for children undergoing tonsillectomy for RSTs [11,12].

In addition to this absence, no qualitative explorative study exists in the current literature that explores the opinions of families and children undergoing the procedure. Over the past 20 years there has been growing awareness of the contribution qualitative research methods can make to a systematic understanding of health and illness, and to supporting evidence-based practice. This increasing awareness is based on the acceptance that, whilst quantitative methods such as clinical trials have contributed to saving the lives of many individuals, they tell us little about what it is like to live with a life threatening illness or with a chronic, debilitating condition. It is qualitative methods that allow us to explore how and why people experience and understand their lives, and their health, in the ways they do. They also give us a means of exploring the clinical aspects of medicine with a focus on disease and healthcare as experienced by the patient [13]. As Sweeney and colleagues argue in the Lancet “unless the characteristics of this level of [personal] significance

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are clearly understood the implementation of new clinical findings will continue to falter at the critical delivery point—the sharing of the medical message between the doctor and an individual patient during the consultation” [14].

This study has been designed to better understand what families and the child experience when undergoing a tonsillectomy for RSTs. The aim is to extract and explore the key themes that parents and children report to provide an insight into the complex interactions at play. The intention is to identify parental motivations for requesting the procedure and allow a better understanding as to why the majority of parents are satisfied with the outcomes despite a lack of robust clinical evidence from randomised controlled trials (RCTs) for its efficacy.

2. Materials and methods

A qualitative study utilising a narrative design for data collection and analysis was undertaken [15]. This involved single interviews with a series of families of children who had gone through the process of having a tonsillectomy for RSTs to search for key themes reflecting what the families had experienced. The interviews were semi-structured with an emphasis on keeping the questions open-ended so that the families could describe their experiences with as much detail as possible. The interview direction was determined by the family's answers. This led to an emphasis on the issues important to them, even if these issues were not initially anticipated before the interview. A narrative method of qualitative analysis takes the story that is reported as the object of study; this is their personal interpretation of events. The purpose is to understand how the respondents in the interviews impose order on the flow of experience to make sense of the events and actions on their lives.

After each interview was conducted, transcription and analysis were undertaken. The method utilised for this was based on Labov's structural approach to narrative method [16]. This takes the view that an interviewee constructs a story from a primary experience and interprets the significance of the events in clauses and embedded evaluation. To theorise the key themes that the families reported, the analysis involved specific stages of interpretation; identification of key topics, creating an index of the topics and re-analysing the transcripts to add data to the topic index. The key topics were then refined, collapsed or expanded, depending on the interpretation of the transcripts. The report presented here is the final narrative produced as an interpretation of the data as a whole. Further details of this process follows in the analysis of the data.

The project was given approval by the National Research and Ethics Service and a number of ethical issues were agreed before it commenced. There was an aim for no coercion during the process for all parties and participation was entirely voluntary. All family members were interviewed together and there were multiple opportunities for the families to decline involvement at any time.

2.1. Inclusion/exclusion criteria

The aim was to interview families of children who had undergone a tonsillectomy for recurrent sore throats and fulfil the Scottish Intercollegiate Guidelines Network (SIGN) criteria to have their tonsils removed [9]. This reflects most UK departments' practice. The children were to have had their operation before their seventeenth birthday. This would provide experiences of those who we already know are likely to benefit from the procedure based on studies such as the Paradise RCT [10].

Families of children that were operated on by the author were excluded so that the interview was not influenced by this fact.

Families in whom the primary carer/guardian could not be present for the interviews were also excluded.

2.2. Recruitment

All children were recruited from Worcester Royal Hospital, UK. Children were identified on the hospital records system who fulfilled the inclusion criteria. The aim was to interview approximately 10 families or more depending on the data 'saturation point' when no significantly new information was being obtained. The children themselves were encouraged to attend but were not absolutely necessary.

2.3. Data collection and analysis

A series of demographic details for each family was taken. The aim was to conduct an open, semi-structured interview of approximately 30 minutes or more for each of the families.

The interviews always began with open ended statements such as 'Tell me about your experiences before the operation'. As the each interview progressed, subjects were explored in depth. There was an attempt to include all the family members to gain an overview of how the RSTs and the operation influenced the whole family and its dynamics.

An emphasis was made to tease out and gain details about what had changed as a consequence of the operation.

Each of the interviews was transcribed as soon as possible afterwards by the author so that any missing or inaudible data could be more easily determined. The process of analysis began as the interviews were conducted so that the interviews could be adjusted appropriately to tease out information that appeared to be important and for recurring themes.

3. Results

Table 1 provides the details of each of the families. There were 201 tonsillectomies performed at the study site in the year of 2012. Seventeen males and 54 females (ratio 1 to 3.2) with an average age of 9.4 underwent a tonsillectomy for RSTs meeting the inclusion criteria. It is unclear why so many females underwent the operation compared to males during this period as this is not reflected in the national statistics [1]. Invitations were sent out to all of these families. Ten families responded by post consisting of two male and eight female children (ratio 1 to 4 as reflected in the eligible population) with an age range 4–16 years old (average 7.6). The average times between operation and interview for the eligible population was 11.7 months and that of the sample population was 11.6 months. Data saturation point was felt to have been achieved by the tenth family as much of the key data was being repeated by the latter few families.

3.1. Symptoms associated with the sore throats

Families were very specific about the symptoms that the individuals were suffering from before the operation. These have been subdivided into symptoms related to the throat and more generalised symptoms.

3.1.1. Throat symptoms

The range of throat symptoms fell into a small number of categories (please see Table 2).

Soreness or burning of the throat was mentioned first in the majority of cases as one of the main symptoms that changed even though swallowing difficulty was mentioned by more families. Families discussed the absence of sore throats and the consequences of this.

Table 1
Family demographics.

Family number	M/F	Age (years) at operation	Complications	Time (months) between op and interview	Members at interview	Interview length (min)	Child contribution (min)
1	F	4	No	18	M, D, child	29	0
2	M	16	Yes—post-op pain admission	12	M, child	25	6
3	M	5	No	4	M	16	–
4	F	6	No	11	M, D, brother (18)	25	–
5	F	7	No	8	M, child	19	0
6	F	11	No	10	M, D, sister (18), child	18	3
7	F	10	Yes—post-op pain clinic review	4	M, D, brother (9), child	39	16
8	F	5	No	8	M, child	23	3
9	F	5	Yes—bleeding but not admitted	11	M, D, child	14	1
10	F	7	No	10	M, D, child	22	1

(6, Dad) She was suffering a lot of discomfort over it, after the operation it was like someone switched a light off, it just stopped.

The children themselves also seemed to appreciate this fact

(6, child) I've never had another sore throat since.

Some mentioned that sore throats may still occur but with less severity.

(2, child) I tend to get sort of a bit of a cold and kind of a gravelly voice just for like a day or so and I recover much quicker than I used to.

Some mentioned sore throats but a general improvement still

(9, Mum) she gets throat infections but no where near as bad because she can still eat, she can still drink, she can still go to school so there's been a big improvement.

Some families were specific about the improvement of swallowing and weight gain.

(9, Mum) Eating, she likes eating now ... She's put weight on since she's had her tonsils out.

It is interesting to note that many of the families looked at their child's tonsils to confirm the diagnosis of tonsillitis and their appearance was a strong influencing factor to visit the doctors to request antibiotics, which was also an observation from a pre-operative qualitative study by Lock et al. [17] A wide range of reported appearances was apparent. Cough was more rarely reported and in one case was the main reason for requesting the operation. This symptom appears to not be influenced by the operation in this case and lead to disappointment with regards to the operative outcome.

3.1.2. General symptoms

The symptoms associated with the systemic illness were wider ranging and less universal (Table 3).

Table 2
Throat symptoms.

Symptom	Family numbers	Total families
Sore/burning throat	2, 3, 4, 5, 6, 7, 8, 10	8
Swallowing difficulty	1, 2, 3, 4, 5, 6, 7, 8, 9	9
White spots on tonsils	1, 2, 6, 7, 8, 10	6
Swollen tonsils	1, 2, 3, 6, 8	5
Blistered/mucky/red tonsils/throat	1, 2, 5, 8	4
Cough	1, 3, 6, 7	4
Speech problems	6, 7	2
Bad breath	1, 2	2
Snoring	1, 8	2

High temperatures and a lack of energy were reported to have improved in the majority of cases. Many families reported that before the operation, energy levels remained low even between episodes suggesting that recurrent tonsillitis is more of a chronic disease. Weight gain post-operatively was mentioned by some families. This may have been due to a combination of improved eating, absence of systemic disease or age of the child and their growth potential.

(4, brother) Soon after the operation, we noticed the growth spurts, they weren't very frequent before but afterwards she was growing very rapidly. So she got right back on track with her growth.

One aspect that was mentioned by many families related to the change in the child's general wellbeing after the operation. This was a key factor that was not anticipated by families but was certainly observed by the majority post-operatively.

(7, Mum) She just doesn't get tonsillitis anymore, actually she hasn't been ill at all, not even a cold or anything and I think she was very quick to pick up other things, she was picking up any kind of bug because her immune system was quite low.

She hasn't had anything since.

The family that experienced problems with pain post-operatively still remained with a positive overall viewpoint.

(9, child) I'm glad now that she's had them out but I wasn't straight after.

The children also provided an insight into how the operation made them feel generally.

(6, Mum) - Would you recommend your friends to have it done?

(6, Child) - If they were suffering as much as I did, I would say you got to have it done.

Table 3
General symptoms.

Symptom	Family numbers	Total families
Temperature	1, 3, 5, 7, 8, 9	6
No energy/stay in bed	2, 3, 4, 7, 9, 10	6
Enlarged neck glands	1, 2, 6	3
Weight loss/growth issues	1, 4	2
Sleeping issues	4, 6	2
Rash	1	1
Looked yellow	2	1
Red face	5	1
Nausea/sickness	10	1
Headaches	10	1

3.2. Psychosocial consequences of the illness

There were a number of psychosocial factors that families discussed that were a direct consequence of the child having RSTs. These strongly influenced parents when requesting referral for tonsillectomy and were also discussed as factors that improved after the operation. The themes that the responses have been divided into were education, extra-curricular activities, consequences for the family and psychological aspects.

3.2.1. Education

This was the biggest factor influenced by the disease process. Interestingly, this was mentioned by every family, which was more than any of the symptom categories. Most families mentioned a reduction in attendance at school as a consequence of the disease.

(10, Mum) . . . it kind of got to the point when school wouldn't let her take medicine at school so if she was feeling ill with it then you wouldn't be able to take her to school.

The amount of time taken off school improved in all cases.

(3, Mum) He hasn't been off school once, he hasn't missed a day.

Children also appreciated this.

(7, child) I don't think I've been off (school) since my tonsillectomy.

The most concerning result of reduced attendance could be assumed to be a fall in potential for education. This was confirmed by parents as many noticed a real and significant reduction in education and consequent grades in their children before the operation which in turn created a great deal of anxiety.

(2, Mum) . . . it affected his GCSE's . . . he didn't do as well as he should have done.

(5, Mum) I'd got the school on my back all the time . . . I know it (his education) suffered and they said it suffered as well and it has.

In one family, their daughter suffered so much educationally that she needed to change schools.

(7, Mum) That's why she's at this school now because she lost so much of year 1.

The other consequences of the improved attendance post-operatively were also discussed.

(3, Mum) He's just come along in all aspects of school. In sport, running about and his reading and his writing, where he was missing bits, he's doing a lot better now. He's caught up and they are quite pleased that he is where he should be now.

(9, Mum) She's come on at school, she got to the top of the class. The teacher said she's like the most improved student, considering she was behind, she is now above what she should be at the moment.

One family did mention reduced attendance but mentioned that this did not effect the child's education.

(10, Dad) . . . it didn't impact that much, she missed a few days.

Some families adopted ways to improve the situation so that the impact on education was minimised.

(1, Dad) (The teacher) would send work home for her and, when she was feeling up to it she was doing it at home.

(2, Mum) (He was) going in even when he wasn't right, because he didn't want to miss out on his school work.

3.2.2. Extra-curricular activities

Many of the children appear to have lost out on activities that they would otherwise participate in. The main types of past-times that were effected included physical activities, social activities and other extra-curricular activities. Children stated that some physical activities were not possible.

(6, child) Well if I went running, I didn't want to run too much in school, in PE because my throat would start hurting then, it would get worse.

(7, child) I think I did maybe swimming a few times when I shouldn't have and I think I got more poorly.

Parents tended to mention the improvement in physical activity post-operatively whereas children described how they missed out on physical activities pre-operatively.

(3, Mum) . . . he's just playing more, . . . I wouldn't say he's got more energy, but he's just normal and running about more.

(9, Mum) She now wants to go out and kick a football around, before she'd rather just sit around and watch telly.

Some children also suffered socially.

(4, Mum) Because they all go to the same school, and they'd go to the same parties and she was unable to go with them, that upset her a lot.

(4, brother) I just felt sorry for her because even though she was young she was missing out socially.

One family noticed that both daughters with RSTs missed out socially.

(9, child) . . . I've missed out on a few parties, I've missed out on going round to people's houses.

One individual child was very descriptive regarding the improvement in these factors.

(7, child) I get to do more stuff and I don't have to worry about going to bed really really early and I can go to friends parties and stuff and I can spend more time with mummy and daddy and I don't have to be poorly.

Other extra-curricular activities also suffered as a consequence of the RSTs.

(2, child) I think my singing, acting, course work, I missed quite a few key days . . . I think I could've done better if I had not had those days off.

In some cases it was felt that preventing the child from participating may actually lessen the impact of the illness.

(2, child) And acting at every performance, he got ill. I guess the stress and the build up and a lot of rehearsals, you would always get ill wouldn't you?

Post-operatively, parents noticed an improvement in these aspects.

(8, Mum) She's engaging more with her social stuff and she's not worried that she's not going to go because she's not feeling well.

Specific activities were also described.

(4, Mum) She has been a in few productions with the school which involves a few relatively late nights 2 or 3 times a week which is something she wouldn't have been able to do before the operation.

3.2.3. Consequences for the family

There were a number of issues discussed that were consequences for the families and their dynamics. The main problem reported by parents regarding their own suffering related to the need for them to take time off work. If both parents worked this factor was mentioned as a major issue.

(8, Dad) We were off work more than we were at work and it was becoming quite a struggle to manage that . . . because one of us had to have time off.

For one family, neither parent was able to take time off work easily and so their son needed to take time off his studies and extra-curricular activities to help with family life such as transporting the children to and from school. For other parents where one could take time off or if there was someone who could easily look after the child when they were ill, this was not an issue.

(10, Dad) Its like I'll take time off and I'll make up the hours further down the line so they're like a bit more flexible.

Having the operation clearly improved this situation for those that were effected.

(9, Mum) It doesn't effect her life any more and someone doesn't need to stay at home and look after her.

Other consequences for the siblings of the child were also mentioned including sleeping arrangements and passing on the illness.

(4, Mum) When she was poorly, she kept her sisters up sometimes in the night because they slept in the same room.

(9, Dad) Every time (she) got ill then one of us or her sister would as well. And then by the time (she) had got better then . . . was in the full through of it and as . . . was getting better (her sister) would get it back. It was a never ending cycle wasn't it.

Some families discussed other worries and anxieties that the sore throat episodes would create.

(8, Mum) Family things we had to put on hold . . . social occasions, it would stop us from going places . . . It was miserable for her and miserable for us.

One family mentioned the ability of extended family members being able to help.

(8, child) . . .granny and granddad helped out as well.

3.2.4. Psychological aspects

Both parents and children discussed some of the psychological consequences of having recurrent sore throats. Parental observations and descriptions were often detailed and provided an insight into the emotional impact of the disease.

(4, Mum) Towards the latter stages, each day, you might find her crying because she was feeling quite negative about herself, her thoughts, her feelings she was really quite devastated.

(6, Dad) - They used to feel quite low didn't they with it . . .

(6, Mum) - Yeah really low, their self esteem was low, they didn't want to participate in anything.

(7, Mum) . . .you weren't part of family life for those few days.

These changed for the better post-operatively for those families that discussed this as an issue.

(9, Mum) She's a lot more bubbly and chatty.

Children's observations were equally as descriptive.

(7, child) I wasn't happy because I was getting annoyed that I had to miss school all the time because I like school a lot and just missing all the other stuff that's planned.

One child in particular often mentioned the guilt that she felt due to her illness and its effect on the family.

JB—Did you miss any stuff with the family?

(7, child) - yeah and if they had something to do then they might not be able to do it because of me.

JB—how did that make you feel

(7, child) - I felt a bit guilty because. . . it was my, its not actually my fault but. . . (long pause)

The children did not discuss the specific improvements made in the psychological aspects after the operation but many parents stated that their child was generally happier. This may have been because they felt 'normal' post-operatively whereas they only appreciated feeling 'low' before the operation.

3.3. Negative consequences of the operation

There were some negative comments made regarding aspects noticed after the operation. Three children experienced pain in the first two weeks after the operation much more than the family expected. Two families sought medical advice for this and one teenager was admitted to hospital for management of this problem. In the other family the mother stated.

(7, Mum) There was a real mismatch between expectation and reality as far as the pain went.

The three families that mentioned this as a problem said that this did not effect their overall positive view of the operation and they would still go through the process again.

(2, Mum) - obviously we had those bad couple of weeks afterwards which wasn't great. But it was worth it. I would still go through it all again to get how he is now.

(2, child) - Mum was quite upset when I went back into hospital.

(2, Mum) - But it was still worth it.

(2, child) - Yeah it was worth it yeah.

One family mentioned some specific problems post-operatively including occasional sore throats, persistent cough and smelly breath. Other families mentioned some specific throat related symptoms.

(8, Mum) . . . she wakes up with a drier throat in the mornings, . . . but nothing a good drink wouldn't cure.

4. Discussion

4.1. Changes observed before and after tonsillectomy—Symptoms

Swallowing difficulties and sore throats were the throat symptoms quoted the most to indicate the presence of disease and always improved or disappeared after the operation. A range of

other throat symptoms were described in addition to indicate tonsillitis including tonsil and throat appearance, cough and speech problems. These often prompted parents to seek antibiotics. There was also a marked improvement in symptoms relating to throat appearance but other symptoms, such as cough, were more variable after tonsillectomy.

There was a range of more generalised symptoms related to the RSTs that changed after the operation. One striking observation was that many of the families noticed a profound improvement in their child's overall wellbeing and health post-operatively. This was not an aspect discussed as an observation before the operation probably because this feature is not as easy to describe or visualise specifically. It was however, very much noticed as a feature post-operatively and was attributed to increased energy levels, less generalised illness and an ability to engage in normal activities.

The negative impacts of the operation such as excessive pain post-operatively do not appear to have had a lasting impact on the overall positive outcome. The timing of the interview did not seem particularly important as positive outcomes were noticed equally by families close to the operation and those far from the operation even when negative aspects such as excessive pain were a feature.

4.2. Changes observed before and after tonsillectomy—Psychosocial consequences

The impact of the operation on school attendance and in most cases education, was also striking. All families mentioned that school attendance suffered due to the RSTs and the problems this caused for the individuals and the families. Parents tried a number of strategies to improve the observed consequences of school absence. The fact that one family felt they need to re-school their daughter provides an insight into the profound effects of the RSTs. All parents observed greater attendance post-operatively and many have said that their children improved educationally. However, it is difficult to say what the lasting impact of the disease may have been and whether performing the operation sooner would have lessened this impact.

Extra-curricular activities such as sports, acting and social events all suffered as a consequence of the RSTs for many children. Of all the problems associated with RSTs before the operation, the children mentioned these factors the most. They often stated they felt like they were 'missing out' when compared to their friends and siblings. The children themselves noticed the improvement in these aspects post-operatively. The long term impact on the length of the RSTs and the timing of the operation did not come out in this study but it would stand to reason that the children regard these activities as important and an improvement in their ability to engage in extra-curricular activities should provide strong support for tonsillectomy.

One of the surprising consequences of the RSTs was that not only the parents suffered as a consequence but siblings and other family members were directly effected. The fact that one teenage brother missed out on his own educational and extra-curricular activities himself gives an insight into how much of a problem for the family the RSTs may become. There was a lack of discussion as to how these aspects improved, perhaps as parents did not wish to discuss how things had improved for themselves. We may be able to assume though that if the RSTs were not occurring post-operatively, then an improvement in these consequences would have been inevitable.

The emotional impact of the disease was also clearly apparent. Children were again, surprisingly insightful and descriptive regarding these aspects. The sense of guilt for one child was very apparent and was due to her insight into how the disease was effecting the other family members.

The contribution made by some of the children was invaluable. It provided an insight into the thoughts and beliefs of the individuals involved in the whole process. The girl who contributed to 20% of her family's interview provided a great deal of valuable data. This must be kept in mind for future studies relating to paediatric outcome studies as some children, despite their age, can provide important information that may otherwise have been missed.

(7, child) they count up how many weeks and stuff the whole class has been in and I was like the person who had missed the most. It was quite strange because some people had been there like every day and I'd only been there half the time and some people actually said, because they think its a competition between all the classes, they were all like ... 'you're always poorly' and that made me feel a bit upset and annoyed.

4.3. Critical reflection

The following is a critical appraisal of this qualitative study to more fully explore the characteristics of the study design and analysis.

4.3.1. Sampling

A purposive sample was obtained from all the children who had had a tonsillectomy, so that only those who met the 'SIGN guidelines' and 'Paradise criteria' were included [9,10]. These individuals and their families were most likely to provide the richest data. This is because we know from the Paradise RCT that these children are likely to benefit from tonsillectomy and also that these inclusion criteria reflect more extreme cases of RSTs.

It is possible that selection bias could have occurred as those families who agreed to participate may have over represented families with a positive experience. However, there is no reason to believe that this happened for a number of reasons. First, it was made clear in the study invitation letter that the aim of the study was to explore positive and negative aspects of families' experiences. Also, three families who had had a negative experience (two with post procedure pain and one with haemorrhage) did contribute data. In addition, during the interviews, a conscious effort was made to explore counter arguments in each case.

4.3.2. Reflexivity

The author's own clinical experience was taken into account when analysing and interpreting the data. This experience was utilised to help to extract the most meaningful data from the families but required 'active reflexivity' during the process of data analysis to reduce bias [18]. This is a process of constant checking so that all sides of the argument are represented. In addition, the 'narrative analysis' approach was chosen to allow for families to describe their experiences as they remembered them and, it was hoped, that their responses should not have been significantly influenced during the interview.

4.3.3. Validity

When performing a qualitative analysis, relaying the truth and avoiding anecdotalism is imperative [19]. There has therefore been an attempt to provide an opinion from a family that counters a view given by another to provide as balanced an overview as possible. For certain topics and themes, such as the direct effect on school attendance, there was no counter argument to present as all families mentioned an improvement after the operation.

A further method used to improve the overall validity was to adopt different methods and sources for data collection and

compare these as a form of triangulation [19]. The constant-comparative method described by Silverman was adopted for this study [20]. This uses theory developed from the initial interviews and apply them in subsequent interviews to validate the data and theories being produced. For example, the key themes of school loss became apparent early on in the series of interviews. However, the consequences on education and the reasons for this only came out later in these earlier interviews. In the latter interviews, therefore, the interview was changed so that education was asked about before school loss so as to determine whether this suffered for other reasons, not just school loss. This highlighted that parents sometimes adapted the way that their child could be educated even if they missed school. This leads to the overall conclusion that even though all parents noticed school loss, it was more likely that education would suffer if children were not offered alternative educational arrangements, such as teaching at home.

4.3.4. Reliability

A qualitative study performed by Lock et al. performed with patients before tonsillectomy discussed similar themes as this study such as symptoms, education, extra-curricular activities, family and psychological consequences [17]. These similar themes were borne out of the coding process and as such adds weight to the reliability of both studies. This currently presented study however, also tells us which of these themes change when a child undergoes a tonsillectomy.

4.3.5. Generalisability

Finally, it is recognised that ten families could not represent the entire population considering tonsillectomy for their children and this reflects poor empirical generalisation that is a quality of most qualitative studies [18]. Over-representation of females and those that had just had the operation may have influenced the results. However, there is good theoretical generalisation for a number of reasons. Firstly there was a large range of contexts in which similar data was extracted. The best example of this was to compare the experiences before and after the operation. In some cases the experiences before the operation were described first and then the experiences afterwards were compared but for other families the reverse occurred. This is a kind of strategic comparison used to check for cause and effect [19]. It was clear that by having the operation virtually all of the negative experiences disappeared in this group of children who represent a population who currently meet the guidelines for tonsillectomy. Also, it is hoped that by providing a large number of responses from the families that there is no reason to suspect atypicality in the sample. They could easily represent any family requesting the operation. Some also experienced the negative consequences of the operation which is not uncommonly seen in practice and this added to the generalisability of the results.

5. Conclusion

Outcomes for tonsillectomy for recurrent sore throats are not confined to numbers of sore throat episodes. This qualitative study demonstrates that there a number of definable but inter-related factors at play that a child and family experience when they undergo the operation. A number of key themes have emerged and these could be used to form a new quality of life (QoL) assessment tool for this specific but common problem. The tool could be

validated by first applying it to a population who are likely to benefit from the procedure (those who already meet the criteria for the operation). The new QoL tool could then be taken forward to assess whether children with less severe disease also benefit. The QoL tool is likely to produce a less restrictive and more patient/parent based assessment process and could form the basis for patient-reported outcome measures for tonsillectomy in the future.

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References

- [1] Department of Health U. Available at (www.hesonline.nhs.uk) (accessed April 30, 2014).
- [2] ENT UK, Indications for Tonsillectomy: Position Paper, 2009 Available at https://entuk.org/docs/prof/position_papers/tonsillectomy_position_paper (accessed April, 30 2014).
- [3] M.J. Burton, P.P. Glasziou, Tonsillectomy or adeno-tonsillectomy versus non-surgical treatment for chronic/recurrent acute tonsillitis, *Cochrane Database Syst. Rev.* (Jan (1)) (2009) CD001802.
- [4] P.J. Robb, K. Gowrinath, K. Agyeman, J. Joseph, Paediatric tonsillectomy: parental experience and outcomes, *J. Laryngol. Otol.* 123 (Jan (1)) (2009) 103–107.
- [5] R.V. Faulconbridge, S. Fowler, J. Horrocks, J.H. Topham, Comparative audit of tonsillectomy, *Clin. Otolaryngol. Allied Sci.* 25 (2) (2000) 110–117.
- [6] M. Wolfensberger, J.A. Haury, T. Linder, Parent satisfaction 1 year after adeno-tonsillectomy of their children, *Int. J. Pediatr. Otorhinolaryngol.* 56 (Dec (3)) (2000) 199–205.
- [7] J.T. Wilson, A. Murray, K. MacKenzie, Prospective study of morbidity after tonsillectomy in children, *Int. J. Pediatr. Otorhinolaryngol.* 58 (Apr (2)) (2001) 119–125.
- [8] R.L. Blair, W.S. McKerrow, N.W. Carter, A. Fenton, The Scottish tonsillectomy audit The Audit Sub-Committee of the Scottish Otolaryngological Society, *J. Laryngol. Otol. Suppl.* 20 (1996) 1–25.
- [9] Scottish International Guidelines Network, Guideline 117; Management of Sore Throat and Indications for Tonsillectomy, 2010 Available at www.sign.ac.uk/pdf/sign117.pdf (accessed April 30, 2014).
- [10] J.L. Paradise, C.D. Bluestone, R.Z. Bachman, Efficacy of tonsillectomy for recurrent throat infection in severely affected children results of parallel randomized and nonrandomized clinical trials, *N. Engl. J. Med.* 310 (11) (1984) 674–683.
- [11] C. Hopkins, J. Fairley, M. Yung, I. Hore, S. Balasubramaniam, M. Haggard, The 14-item Paediatric Throat Disorders Outcome Test: a valid, sensitive, reliable, parent-reported outcome measure for paediatric throat disorders, *J. Laryngol. Otol.* 124 (Mar (3)) (2010) 306–314.
- [12] J. Barraclough, S. Anari, Tonsillectomy for recurrent sore throats in children: indications, outcomes and efficacy, *Otolaryngol. Head Neck Surg.* 150 (May (5)) (2014) 722–729.
- [13] M. Bunne, Qualitative research methods in otorhinolaryngology, *Int. J. Pediatr. Otorhinolaryngol.* 51 (Nov (1)) (1999) 1–10.
- [14] K.G. Sweeney, D. MacAuley, D.P. Gray, Personal significance: the third dimension, *Lancet* 351 (Jan (9096)) (1998) 134–136.
- [15] C.K. Reissman, *Narrative Analysis*, Sage Publications, Newbury Park, UK, 1993.
- [16] W. Labov, Some principles of linguistic methodology, in: *Language in Society*, first ed., Cambridge University Press, Cambridge, UK, 1972, pp. 97–120.
- [17] C. Lock, R. Baker, K. Brittain, 'I've just taken you to see the man with the CD on his head': the experience and management of recurrent sore throat in children, *J. Child Health Care* 14 (Mar (1)) (2010) 95–110.
- [18] J. Mason, Finding a focus and knowing where you stand, in: *Qualitative Researching*, first ed., Sage, London, UK, 2002, pp. 13–23.
- [19] J. Mason, Observing and participating, in: *Qualitative Researching*, first ed., Sage, London, UK, 2002, pp. 84–102.
- [20] D. Silverman, Quality in qualitative research, in: *Doing Qualitative Research*, third ed., Sage, London, UK, 2010, pp. 268–291.