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# ATTITUDES AND KNOWLEDGE OF PARENTS ON VACCINATION

## ABSTRACT

Despite vaccinations being a breakthrough in preventive care, parents' decisions on vaccination programmes may be difficult. This study investigated parents' attitudes and knowledge on vaccines and vaccine-preventable illnesses. This was done with a view to identify discrepancies between the perceived and actual knowledge on vaccination schedules as well as to determine the main reasons for missing vaccinations. Following a review of the needs and concerns of parents, an information resource which best meets those needs was compiled.

## INTRODUCTION

Vaccinations are a vital element in preventive healthcare programmes since they reduce the associated morbidity and mortality of illnesses.<sup>1</sup> Vaccinations have brought a decrease in the burden of infectious disease and are considered as the greatest success of public health in the last century.<sup>2</sup> Apart from protecting vaccinated individuals, successful vaccination programmes benefit society in general as the incidence of disease in the unvaccinated population is indirectly reduced.<sup>2</sup>

In Malta, vaccination against diphtheria, tetanus and polio is obligatory for all children and the rubella vaccine is obligatory for females. In addition, parents have to decide which other vaccines to give to their children. This involves an important but challenging decision. Unfortunately, even though the benefits of vaccination are undeniable, vaccines are sometimes considered as 'victims of their own success'. The reason for this is that their success in preventing certain illnesses has resulted in generations of parents who never experienced the vaccine preventable illnesses. This gives the perception that vaccination is futile and more attention is thus given to the perceived risks of vaccines rather than to the diseases they prevent.<sup>3</sup> For this reason a need was felt to assess the knowledge, perception and attitudes of Maltese parents on vaccines and vaccine-preventable illnesses, as well as the factors which affect parents' decisions to this regard.

## METHODOLOGY

Data was collected by means of a validated questionnaire which was compiled by 270 parents in different settings. Stratified random sampling was used to identify representative

settings - community pharmacies, clinics and other places with a high parent attendance.

The questionnaire consisted of three sections. The first section consisted of questions on the decision-making process, sources of information used by parents and parents' perception of the need for more information. The second section collected information on the children's vaccination status and reasons why specific vaccinations were not given while the third section looked at parents opinions on vaccinations not offered for free by the NHS and on the parents' willingness to pay for these vaccinations.

## RESULTS

The questionnaire was compiled by 270 participants. Most respondents were between 30 and 45 years of age (71.3%), 12.3% of parents were over 45 years while 16.4% were younger than 30 years. The average age of the parents' children was 7.7 years.

## SOURCES OF INFORMATION

81.2% of parents stated that they search for information when deciding on their children's vaccination programmes. The three main sources of information chosen by parents were the paediatrician (35.2%), the family doctor (20.9%) and the internet (19.8%). Unfortunately the pharmacist is the source of information parents refer to the least (3%).

## PARENTS' PERCEIVED AND ACTUAL KNOWLEDGE AND FAMILIARITY WITH VACCINATION SCHEDULES

When asked to rate how familiar they feel with recommended vaccination schedules and vaccine-preventable illnesses, almost 90% claimed that they feel very familiar, familiar or moderately familiar. Only 10% of the 259 parents who answered this question stated that they feel slightly or not familiar with the recommended vaccination schedules. However, when in another section parents were presented with a list of vaccine preventable illnesses and asked to rate their knowledge about the illnesses, their perceived susceptibility for an unvaccinated individual and the risk of the illness having permanent consequences, the questions had a high non-response rate as well as well as a big number of parents who expressed their lack of knowledge and familiarity. This may suggest that parents feel more familiar than they actually are and that they are making less informed decisions than perceived.



**Table 1. Reasons for not giving a vaccination**

Reason for not vaccinating	No. of participants
I do not feel my child is at risk of being infected with such a disease	80
The disease is not serious enough so as to justify vaccination	10
I am not aware that this vaccine exists	145
The vaccine is too expensive	15
I am concerned about safety and side-effects of this vaccine	86
I heard the vaccine can have harmful effects	30
I do not believe in vaccines	12
I forgot	5
I want to give my children the least possible number of vaccines	19
I feel that there are too many vaccinations required	16
I feel that vaccines other than those given for free by the government are not necessary	20

## DECISIONS NOT TO VACCINATE

Parents were presented with a list of non-obligatory vaccinations and asked to mark whether they have either have given or plan to give the particular vaccine to their children or did not give and do not plan to give it. Parents were further asked to select reasons why they chose not to give the particular vaccines. From the given options, the option that parents did not know that the vaccine exists was by far the most selected one. As shown in Table 1, this reason was selected by 145 parents, far more than the second most cited reason, i.e. safety and side effects of vaccines.

## ATTITUDES TOWARDS VACCINATIONS NOT PROVIDED FOR FREE

When asked to rank their agreement with the statement 'I am willing to consult my trusted healthcare professional and pay for the recommended vaccines', 92% of responding parents claimed that they agree or strongly agree with the statement. Furthermore, when presented with the statement, 'I will wait until it is free' only 6% of responding parents answered that they agree or strongly agree with the statement.

## DEVELOPMENT OF TILQIM.INFO

The findings of the research were used to develop **tilqim.info**, a website aimed to provide parents with necessary information to support them in making an informed decision. The website content was validated by a seven-member validation panel including professionals qualified and experienced in the subject as well as people who are not in the medical field. This ensured that all content is correct, concise and also understandable to the target audience. The website

includes information on vaccine-preventable illnesses including risks and sequelae. It also illustrates the vaccination schedule including vaccines offered through the NHS as well as vaccines available in the private market. Other sections in the website contain information on the project and its findings as well as useful contacts. **Tilqim.info** was launched in July 2015 and has been very well received by healthcare professionals and parents alike.

## DISCUSSION

The study found that the lack of awareness of the availability of vaccines, and lack of knowledge about preventable illnesses are principal reasons for missed vaccinations. However, encouragingly, the findings show that parents are interested and willing to obtain more information by discussing with their trusted healthcare professionals.

Being one of the most accessible healthcare professionals, the pharmacist is in the ideal position to build a relationship of trust and support parents in the process of making informed decisions. Unfortunately, the study identified the pharmacist as the healthcare professional parents refer to the least. This should motivate pharmacists to seek ways of increasing their role in this sector. Apart from being open to discussion with parents, it is recommended that pharmacists participate in initiatives such as education campaigns. Furthermore, pharmacists may promote robust information resources which are specifically targeted to parents with a view to disseminate evidence-based information and decrease the number of vaccinations missed simply due to lack of awareness. **Tilqim.info** is the ideal tool to optimise the role of pharmacists and healthcare professionals in this field. 🦋