

Knowledge and Risk Perception of Measles

ZAINAB AYUB¹, ISMA HALEEM², SYED MUHAMMAD JAVED IQBAL³

ABSTRACT

Background: Punjab faced an adverse measles outbreak that highlights the significance of strengthening the need for routine and mass vaccination for all children. The mortality and complications associated with measles can be significantly reduced by inculcating the knowledge of measles consequences and risk perception among parents.

Aim: To assess the knowledge and risk perception of measles among mothers of children under 5 years of age.

Methods: This cross sectional survey was undertaken in the Paediatrics department of King Edward Medical University/Mayo Hospital, Lahore and Allama Iqbal Medical College/Jinnah Hospital, Lahore from October 2017 to March 2018. The institutional review board authenticated and approved the survey. A questionnaire was used for that. It was containing questions that were required to have an outlook at the basic knowledge of parents and their risk perception of measles. A total of 300 mothers were interviewed by means of non-probability convenient sampling. The SPSS 20 version for statistical analysis was used for purpose of data entry and the representation of domains was done in the form of frequency tables.

Results: An interview of 300 mothers was done. The median age of their children was 3±2.2 years. Majority (43.7%) of mothers were illiterate. Out of 300, 260 (87%) mothers had heard about measles. Out of 260, 42% had heard it through Medical personal. Majority (78%) knew that vaccine against measles is preventable if proper measures are taken. Most of the mothers (66%) were unaware of the fact that measles can cause complications. Only 25% mothers perceived measles as severe disease. 30% mothers were aware that measles disease has the tendency to get the patient admitted to hospital.

Conclusion: The awareness and perception of danger and risk of measles in mothers of children below 5 years of age was quite below optimal.

Keywords: Knowledge, Risk Perception, Measles, Mothers, Children

INTRODUCTION

Measles a highly contagious disease caused by Paramyxovirus family that spreads through air born droplets or by direct contact. The virus at first resides and infects the respiratory tract and later on spreads throughout body causing systemic complications.¹ Before the advent and introduction of vaccine preventive against measles which was introduced for first time in 1963, measles disease occurred as an epidemic every 2 or 3 year interval and led to significant mortality among children particularly below 5 years of age².

Despite the fact that there is an availability of safe vaccine which is readily available, the mortality among young children remains significantly greater³. Approximately 89 780 people died from measles in 2016 – mostly children under the age of 5 years. The risk of measles and its complications are significantly greater in children who are not vaccinated and are malnourished. Measles is still quite prevalent in under developed countries like Pakistan. The alarmingly vast majority (more than 95%) of this disease occurs among those residing in areas of the under developed world⁴.

In Pakistan Punjab faced the epidemic of measles and its adverse effects which signified that our knowledge of disease and its risk perception is very confined and there is a real need to widen our outlook and increase the awareness of our masses. The incidence and prevalence of disease throughout the world is dependent on various

factors which include social norms ,beliefs and practices and a very little understanding of the disease process, its means of transmission, the risk factors associated with disease and misconception regarding vaccination and protection inferred by vaccination and post measles complications and consequences.⁵ The objective of this study was to assess knowledge and risk perception of measles among mothers in a single centre.

MATERIAL & METHODS

This cross sectional survey was undertaken in the Paediatrics department of King Edward Medical University/Mayo Hospital, Lahore and Allama Iqbal Medical College/Jinnah Hospital, Lahore from October 2017 to March 2018. The institutional review board authenticated and approved the survey. As a study instrument a validated questionnaire was used. A total of 300 mothers were interviewed by non-probability convenient technique of sampling. Those participating in the study were given a briefing about the study and its purpose and were requested to fill the questionnaire and answer them without revealing their identities. In situations, where more than three questions were unanswered, the responses were not included in the study. The SPSS 22 version for statistical analysis was used for the purpose of entry of data. The representation of domains was done in the form of frequency tables.

RESULTS

Total 300 mothers were interviewed. The median age of their children was 3±2.2 years. Majority (43.7%) of mothers were illiterate (Table I). Out of 300, 260(87%) mothers had

^{1,2}HO, Mayo Hospital, Lahore

³Associate Professor, Paediatrics, Allama Iqbal Medical College, Lahore.

Correspondence to Dr. Zainab Ayub,
Email: ayubzainab880@gmail.com

heard about measles. Out of 260, 42% had heard it through Medical personal. Majority (78%) knew that vaccine against measles is preventable. Most of the mothers (66%) were unaware of the fact that measles can cause complications. (Table II). Only 25% mothers perceived measles as severe disease. Only 30% mothers were aware that measles can lead to hospitalization. (Table III).

Table I: Demography of children (n=300)

Age of child 3±2.2 years	
Variable	n (%)
Education status of mother	
Illiterate	131(43.7)
Primary	98(32.7)
Secondary	50(16.7)
Bachelor	50(16.7)
Professional	21(7)
Profession of mother	
Employed	90(30)
House Wife	210(70)
Total	330

Table II: Knowledge of measles (n=260)

Heard of measles n(%)	
Yes	260(87)
No	40(13)
Source of knowledge	
TV	80(31)
Newspaper	52(20)
Medical personal	110(42)
Social media	18(7)
Is vaccine preventive against measles	
Yes	203(78)
No	57(22)
Susceptibility to measles with malnourishment	
Yes	117(45)
No	143(55)
Can any complication occur with measles	
Yes	88(34)
No	172(66)

Table III: Perception of measles (n=260)

How severe is the measles	
Low	70(27)
Moderate	124(48)
Severe	66(25)
What may be the consequences of measles	
School Absence	74(28)
Hospitalization	77(30)
Sequalae	41(16)
Death	68(26)

DISCUSSION

Recent measles outbreak in many areas of Pakistan is a serious public health concern. As evident by the figures and researches conducted in order to have an insight of the causes and reasons behind the epidemic, while a vast majority of parents are aware of preventive effects of measles vaccine and damaging effects of disease on their children, there still are reservations of many parents belonging to tribal belts that vaccine would inflict more harm than doing good. In our study, majority (43.7%) of mothers was illiterate, and 87% mothers had heard about measles and measles vaccination, while 78% knew that

vaccine against measles is preventable. These results are in contrast to the research results from Switzerland⁶ where majority mothers were convinced that vaccine would prevent their children against measles and hence had every strong and forceful reason to get their children vaccinated. The individuals perception of disease and its severity and complications associated with disease are direct determinants of attitude of parents about the need to vaccinate their children. In our study about 87% of respondents had heard of measles but 66% among them were unaware of the fact that measles can cause complications. Only 25% mothers perceived measles as severe disease, while 30% mothers were aware that measles can lead to hospitalization. These results are comparable to Toure et al² where few of mothers participating in study perceived the disease to be harmful. Similar findings have been published in a systematic review⁷ that assessed factors underlying parental decisions relating to childhood vaccination. Smith et al⁸ has described that very few parents were of belief that vaccination could prevent disease but thought that vaccine has more of injurious profile rather than having a safety profile.

The health care workers in particular the lady health workers have a pivotal role in vaccination of our children. In present study, 42% had heard about measles through Medical personal. In the studies done on general population previously, the family doctors and physicians were quoted as most authentic source of information of general public regarding measles awareness and its preventive vaccine^{9,10}.

The findings from present study suggest that there is a vital need that all media of information and technology should be used for the education of masses. Our policy makers should keep this vital thing in their mind that a combination of old and golden ways of creating awareness in public like newspaper and the newer and more organized media like social media would play a really useful role in the educating and provoking our parents to vaccinate their children. The target group that could make a remarkable impact on the vaccination status and immunization of our children is parents whom awareness of disease and consequences would lead to protection of our children from the harmful effects of measles.

This study has particular limitations. The study was conducted in only one center. The study did not consider patients who were admitted in hospitals or other health care set ups or less severe cases who were consulting their doctors on outdoor basis.

CONCLUSION

The awareness and risk and danger perception of measles among mothers of children under 5 years of age in our setup was sub-optimal and needs to be increased.

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Conflict of interest: The authors declare that there is no conflict of interests.

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