

## **Maternal Perception Regarding Routine Vaccination of their Children:**

By

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### **Abstract:**

*Routine vaccination is the best and accentuation tool for children's health. It prevents infectious diseases of under 5 years of children. Many communities are seemed unwilling for childhood vaccination. A vital wall in pediatric immunization is the lack of maternal education, awareness of vaccination and immunization. The study aimed to evaluate the vaccines and diseases education and awareness about the EPI vaccinations and its impact on childhood vaccination coverage in Karachi, Pakistan. This study measured the exposure of vaccine protection connected education, awareness and practices about vaccination associated information, and the practices of the mother. This study covered Mother of children aged 0 to 05 years selected through the purposive sampling from the Gadap town, Karachi -Pakistan. The total sample was 60 mothers. A tailor made Questionnaire was used collect data. It composed of children's vaccination coverage, maternal education and awareness about VPDs and vaccination practices related questions. The level of maternal education and childhood vaccination practices were scored according to mothers' answers. The findings of the research showed that approximately 70% of children were unvaccinated immunized against 10 preventable childhood diseases in Gadap, Karachi, Pakistan. Non-immunization was significantly associated with maternal education was 23.33%, vaccine-preventable disease awareness only 30%. While Pakistan vaccine-preventable disease education was only 20%. Low vaccination coverage was associated with maternal education and practices of vaccination. Results show that maternal education, awareness, and practice should be increased.*

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**Introduction:**

World Health Organization (1974) claimed that Child health means the child should be fit physically, mentally, strong socially and especially stable in the nonappearance of diseases. Children are the future of every nation and the main concern of all the constituencies, society and humanities. Children should be safeguarded in their healthy growth and physical improvement (Tomes). Children infections bring diseases with themselves and bacteria, viruses caused due to infection (Holdsworth & Robinson, 2008). It is noticed that under one year of the children get affected faster. The deaths in the neonatal period are usually caused by diseases, mother's malnutrition, lack of mother education and awareness, Maternal wrong perception, complications of delivery and tetanus, child low immune system, low birth weight and because of infectious diseases (The Gale Group, 2018). Article 27 Right to a standard of living adequate for the child's physical, mental, spiritual, moral and social development<sup>5</sup> Worldwide, every year approximately more than ten million under five years of children's have been dyeing as well as 42 countries in the world are facing under five years of mortality. Specifically, South Asia and Sub-Saharan Africa met very much variance in the death rate of under 5 years of children and these rates are increasing year by year (Unicef, 2006). Worldwide, the under five years of children's mortality frequency is 41 deaths per 1,000 live births in 2016 (Black, Morris & Bryce, 2003). Pakistan is part of low-income counties, it is passing from poverty and illiteracy ([www.who.int](http://www.who.int), 2018) while its health care system is a total failure, especially in under 5 years of children health (Afzal & Yusuf, 2013) moreover it has failed to achieve two key targets sets with all South Asian countries, which were "Health for all" (HFA) in the year of 2000 and MDG "Millennium Development Goals" in the year of 201, the data has proved that the high children deaths statistics are due to childhood vaccine-preventable diseases (Islam, 2002).

The children deaths statistics were

1. EURO (European region) 33%.
2. WPRO (Western Pacific) 34%.
3. AMRO (American region) 38%.
4. EMRO (Eastern Mediterranean region) 62%.
5. SEARO (South East Asia region) 56%.
6. AFRO (African region) 73%.

The EMRO, SEARO, and AFRO are the three constituencies among the world who shares the highest rates of child mortality (Black, Cousens, Johnson & et al., 2010). Pakistan is the county who has the uppermost under five year's children mortality statistics in the EMRO region and in the South Asian nations, 79 per 1,000 live births (Sultana, Jahan & Ahmad, 2001)) Kabir, Illiyasu & Gajida (2005) marked that Childhood vaccination coverage in developing countries are very low. It is valued 54.5 million children die per year and 1 among 8 of these expires followed in the age of 05 ([www.who.int](http://www.who.int), 2017). WHO admissions up to 2.5 million deaths of under-five years of children globally while immunization rate getting higher against infectious diseases (Heininger, 2006). It demonstrated the children who get properly vaccinated in initial 9<sup>th</sup> months are safer than those children who don't vaccinate in that period (Benin, Wisler-Scher, Colson E & Shapiro, 2006). World's 1/5<sup>th</sup> of newborn children, an estimated 19.5 million is not vaccinated. Yearly approximately 1.5 million children expired from these vaccination-preventable diseases (Payne, Townend, Jasseh & et. al, 2014). In 2016 (75%) 4.2 million, children have died within the 1 year of life (Wiysonge, Uthman, Ndumbe and Hussey, 2012). Moreover, childhood immunization status is improving day by day. Worldwide correspondingly the under-five mortality rates are getting a decrease. 1990 the under 30 days of children mortality rate was the 37 in the per 1,000 live births, in 2016 this has cut-rated 19 in the per 1,000 live births globally (WHO, 2010) and in 1990, the under 1 year of mortality rate was 64.8, in the per 1,000 live births, but reduced to 30.5 in the per 1,000 live births in 2016 globally (Rutherford, Dockerty & Jasseh, et al., 2009). Likewise, according to WHO (2010) during the year of 1990, furthermore globally the under-five mortality rate was 93 per in 1,000 live births that reduced in 2016 41 in per 1,000 live births. Though in the year 1990 infant death rate was 8.8 million but in 2016 globally and reduced to 4.2 million.

Karachi is the largest city of Pakistan and part of Sindh province. The population of Karachi is 14,910,352 according to the 2017 census of Pakistan ([www.who.int](http://www.who.int), 2019). Approximately 50% population of the city lives in rural ([www.unicef.org](http://www.unicef.org), 2017). The U5 years of children death rate

in the slum areas are 2.5 times more than other cities rates ([www.who.int](http://www.who.int)). People living in rural usually live lacking with basic accommodations, substructure, and community amenities, lack of maternal health practice, lack of awareness, low education level. Usually, maternal perception and attitudes about vaccination are wrong, distance from EPI office, lack of EPI delivery services, poverty, over-crowding, quackery, illiteracy and strong cultural beliefs. All of these factors add to high childhood morbidity and mortality rate ([www.endpolio.com](http://www.endpolio.com)).

The rate and coverage of child vaccination have increased globally, but it has constantly kept on low in Pakistan (Black, Cousens, Johnson & et al, 2010). In slum areas of Karachi, the health condition of children and morbidity and mortality got high (Afzal & Yusuf, 2013).

### **Literature Review:**

A study results showed that there was a big gap in the mother education and awareness and the practice of childhood vaccination (Payne, Townend, Jasseh & et al., 2014). The CDC conducted a study on the National Immunization Safety it has shown that educated mother who thought children vaccines was safe more possible to get their children immunized as associated to those mothers who were neutral and who perceived that vaccines were dangerous (Wiysonge, Uthman, Ndumbe and Hussey, 2012). A WHO (2010) research explored in Pakistan & India there was a big misconception that the people were afraid of these children vaccinations and suspicious about the ingredients.

Child health is a Factor that can increase acceptance of childhood vaccination for preventing disease, even though serving the communal by increasing immunity (Rutherford, Dockerty, Jasseh M, et al., 2009). Likely influences dropping acceptance are the terror of hurting their children, Maternal confident that children are not in danger because other children were safely immunized, as results the perceptions give the child weakness and the result get diseases, usually in parent's opinion the natural immunity and recovery after diseases are healthier than the vaccination, worries on vaccination reliability of knowledge of immunization, moreover mothers don't trust on vaccine protection and life risk like death and disability (WHO, 2010).

Mother education is one of the main factors behind the childhood vaccination "Chinese study "The education increasing level of parents", results show that those mothers who improved the full immunization of

migrant children's they were educated. Also, there was a study conducted in the USA which shows that those children's parents were low educated or who belong to the low socioeconomic background were not sufficiently & properly vaccinated their children ([www.unicef.org](http://www.unicef.org), 2017).

A study conducted in two neighbour's countries in Pakistan & India, people who were living in villages were mostly uneducated, the mothers were very uneducated compared to the big cities, and also the father (head of the family) were not interested in immunizing their children because of illiteracy (Nizar & Changani, 2016).

A Nigerian study in 2013, 15 to 49 years of age group women were uneducated in Bauchi city. During Measles vaccination there were some significant factors associated found with educated parents, mothers' education level were good, they discussed the immunization importance in the family and vaccination were good in their opinion (Cockcroft, Usman & Nyamucherera, 2014).

In the city area of Northern Pakistan, a study (KAP) conducted; the results showed that there was a big gap in the awareness and the practice of childhood vaccination. In that study, eighty-eight per cent of the parents were well-informed regarding the EPI program, and the seventy- seven per cent of the mothers have the perception that vaccination was beneficial for their children, more than ninety-nine per cent have the positive attitudes but only seventy-one per cent have immunized for children. Parent's laziness was the Reasons for not immunizing their children (Sultana, Jahan & Ahmad, 2001).

The Expanded Programme on Immunizations was launched in 1978 in Pakistan. The Federal Ministry of Health supported the programme for the period 2004-2005 to 2008-2009 with a total cost of 11.5 billion PKR. The Federal Government is also responsible for the provision of vaccines, syringes, cold chain equipment, transport, printed material and launching of health education and awareness campaigns (Sultana, Jahan & Ahmad, 2001). EPI PVDs are one of the primary reasons for high childhood morbidity and mortality rates. According to evidence high Infant Mortality Rates in low-income countries. In Pakistan, the stated EPI childhood vaccines coverage is still below against child immunity. The Health Department of Pakistan provides the immunization and vaccination schedule for the Pakistan national EPI according to the WHO procedures. The EPI is funded by the United Nations International Children's Fund (UNICEF). It is provided free of charge at all state-run health facilities which present in every district across Pakistan. ([www.who.int](http://www.who.int)).

**Scope:**

This study identified the maternal perception and awareness regarding the childhood vaccination in the rural areas of Gadap town, Karachi, Pakistan.

**Justification:**

Pakistan is still among those few countries which are not polio-free. This study was to evaluate the maternal Perception about EPI vaccinations and its effect on child's vaccination coverage, in Karachi specifically in Gadap town. There are nearly 1400 Goths in the Gadap town of Karachi. This town is the least developed part of the Karachi, poverty and literacy are rampant and state services and health facilities are not-existent ([www.dawn.com](http://www.dawn.com), 2005).

The target population of current study was Mothers having children of age 0 to 05 years residing in Gadap town. The Vaccines stated comprised on the current routine vaccination schedule recommended for Pakistan from EPI: diphtheria, tetanus pertussis DTP, polio (OPV) injectable polio vaccine IPV, Haemophilus influenza type b (Hib), hepatitis b, measles, meningitis, TB vaccination schedule was defined as having received 3 DTP doses, 3 Hib doses, 3 OPV doses, 3 panta, 3Pcv doses and 2 measles (Ministry of Health, 2010).

Pakistan is among those countries of the world where the under 5 years of childhood mortality rate are very high. Karachi is one of the metropolitan cities of Pakistan but facing low standard of health care system. The Gadap town is the largest town of Karachi, the healthcare facilities of the Gadap town is not good (Encyclopedia of Nations, 2007). Gadap town is globally recognized because of extremely bad healthcare structure. It is confirmed via current polio incidents which found in the Gadap town's union council # 4. It also has very low awareness regarding vaccine prevented diseases; children are not getting routine vaccines as childhood vaccination centres are not still enough to facilitate the population ([www.tribune.com.pk](http://www.tribune.com.pk))

**Objectives:**

- To study maternal awareness about the vaccines prevented diseases.
- To evaluate the maternal practices of vaccination of their children aged 0-5 years.
- To explore the education level of mothers plays any role in practicing routine vaccination of their children of age 0-5 years.

**Methodology:**

In the present study Mothers of Children aged 0-05 years were selected through purposive sampling method from 8 union council of the Gadap town. The research sample was consisted on 60 mothers. After a thorough review of the relevant literature a comprehensive Questionnaire was constructed. The instrument had 60 items aimed to get in-depth information

of Mother's knowledge and awareness about VPDs and practice of their children's vaccination.

**Procedure of Data Collection:**

A team of well-trained investigators collected data from 8 union councils of Gadap town Karachi. All the team members met the respondents in person to facilitate them in understanding the questions and ensure complete return of research information.

**Findings:****Table # 1****Frequency Distribution of the Responses**

Sr. No.	Statements	Yes		No	
		F	%	F	%
1.	Do you know the childhood vaccination?	14	23.34%	46	76.66%
2.	Have your under-five year's children been vaccinated?	18	30%	42	70%
3.	Do you know the benefits of immunization?	16	26.67%	44	73.33%
4.	Do you think vaccination prevents diseases?	18	30%	42	70%
5.	Do you know what are the childhood vaccines prevented diseases?	12	20%	48	80%
6.	Have your child get ill this month?	45	75%	15	25%
7.	Are vaccination preventable diseases caused of your child morbidity?	43	71.66%	17	28.33%
8.	Are vaccines prevent diseases caused of your family child mortality?	03	5%	57	95%
9.	Do you know about the Pakistan Expanded Program on Immunization (EPI)?	9	15%	51	85%
10.	Does your area's children get timely vaccination by EPI?	13	21.66%	47	78.33%

The above table portrays an extremely grim picture of Mother's awareness regarding the routine childhood vaccinations, understanding of its importance for child's healthy future and their practices to safe guard their children against various vaccine prevented diseases.

Majority of Mothers (46%) are not properly aware about the routine childhood vaccination, 42% don't vaccinated their children timely and they



don't know that vaccination prevent diseases among children as well as they 48% are clueless about vaccine prevented diseases.

**Discussion:**

The importance of the education level, awareness of childhood vaccination coverages has been shown in numerous reports. Different researches carried out in many nations, those children hadn't vaccinated. In the current study reports that out of 60 mothers' children 42 mothers' children (70%) hadn't vaccinated. furthermore, the 70% of unvaccinated children against vaccine-preventable diseases which already included in the Pakistan childhood routine vaccines schedule was lower.

The study found that mothers with higher levels of education, awareness had higher coverages of their children vaccination. Two Studies done in the United States found that mothers with higher education, awareness levels are less concerned about vaccine safety (Vanderstoep & Johnston, 2009)

The main limitation of the study under review was that mothers who have awareness about children vaccination 23.33% were probably than the mothers who haven't educated, aware about vaccination 76.66% We consider that mother's education, awareness was not enough, their children hadn't been vaccinated.

As results have shown the lower vaccination coverage levels and negative approaches to the children health could have influenced changes in attitudes and education of the mothers.

**Conclusion:**

Results of the study emphasize the importance of maternal education level and awareness of the vaccination. Trust between epi vaccine and maternal, primary information should provide, it will help in understanding and integrate is important. Therefore, EPI workers should be more trained to remove negative perceptions about the vaccination. Health ministry should make additional efforts to promote the vaccination and underscore the difficulties of none or partially childhood immunization.

**Recommendations:**

In line with the conclusion written the recommendations are to develop children health condition, increase the childhood vaccination status, increase education and awareness level.

The per cent study variables of education and awareness were associated with the children's incomplete vaccination status. Hence, all government and private health providers have a duty to work together with NGO's on the maternal awareness for enhancement of their education and increase their vision and perception health prevention specifically on the vaccine-preventable diseases, and its efficiency and benefits.

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