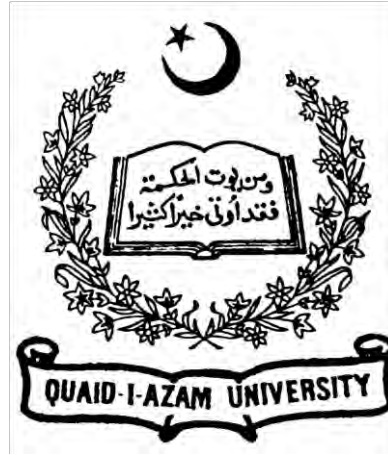


Master of Science in Public Health



*Parents' knowledge, Attitude, and Practices related to
Stimulation & Play for early child development in
Rawalpindi*

By

(Mah Jabeen)

**Al-Shifa School of Public Health, PIO, Al Shifa Trust Eye
Hospital
Quaid-I-Azam University
Islamabad, Pakistan
(2022)**

**(Parents' knowledge, Attitude, and Practices related to
Stimulation & Play for early child development in
Rawalpindi)**

(MAHJABEEN)

(3602786-PIO/MSPH-2020)

**Dissertation submitted in partial fulfilment of the
requirement for the degree of:**

MASTER OF SCIENCE IN PUBLIC HEALTH (2020-2022)

to

**Al-Shifa School of Public Health, PIO, Al Shifa Trust Eye
Hospital,
Faculty of Medicine
Quaid-I-Azam University, Islamabad**

Word Count:

10372

DECLARATION

In submitting this dissertation, I certify that I have read and understood the rules and regulations of DPH and QAU regarding assessment procedures and offences and formally declare that all work contained within this document is my own apart from properly referenced quotations.

I understand that plagiarism is the use or presentation of any work by others, whether published or not, and can include the work of other candidates. I also understand that any quotation from the published or unpublished works of other persons, including other candidates, must be clearly identified as such by being placed inside quotation marks and a full reference to their source must be provided in proper form.

This dissertation is the result of an independent investigation. Where my work is indebted to others, I have made acknowledgments.

I declare that this work has not been accepted in substance for any other degree, nor is it currently being submitted in candidature for any other degree.

(Ms. Hina Sharif)

Date: 17th June,2022

Al-Shifa School of Public
Health,

PIO, Al Shifa Trust Eye Hospital

(Mahjabeen)

(362786-PIO/MSPH-2022)

Date: 17th June,2022

ABSTRACT

Background: Parenting plays a key role in development of children. The way parents treat children in their early years matter a lot in their later years. If parents engage with their children in such a way that they often play and stimulate with them, there are better chances that such a child will develop better cognitive and motor functions. Given this importance, it is imperative to understand current levels of knowledge, attitude and practices among parents about early childhood development and especially stimulation & play.

Objective: The objectives of this study was to assess knowledge, attitude & Practices regarding stimulation & play among parents of children aged 0-5 years and also to determine the association between socio-demographic factors and level of “KAPs”

Methodology: A quantitative survey with mothers and fathers of children less than the age of five, sample size n=401, was done following computer assisted personal interviewing methodology at street intercept in Rawalpindi Pakistan. Data analysis was done using SPSS, significance tests were applied to check association of demographic variables with outcome variables.

Results: 52.1% of the respondents had Poor knowledge whereas 47.9% had good knowledge, attitude on the other hand is opposite i.e., 48.1% with Poor attitude and 51.9% with good attitude, whereas the maximum variation was seen in the practices with 58.1% having Poor practices and 41.9% showing good practices. The overall knowledge regarding stimulation & play was found moderate. Similarly, parents had a moderate level of attitude towards the issue. On the other hand, However, practices regarding stimulation and play were significantly Poor.

Conclusion: it is suggested that there are some gaps between knowledge, attitude, and practices, especially practices need special attention. In addition to that, while knowledge and attitude were primarily better in people with high exposure to the outside world (education, working outside), practices were significantly better in case of those who had the privilege of time available to them.

Keywords: Stimulation and Play, Parenting, Early Childhood development

ACKNOWLEDGEMENTS

In the name of Allah, the most Merciful and Beneficent First of all, I am thankful to Allah Almighty, the most merciful and beneficent, for making the journey of my life till this point, including the completion of my thesis, which is a blessing indeed. I am Dedicating my research to my better half ABDULLAH UMAR KHALID and my beloved daughter Haneen abdullah.

My utmost gratitude to my thesis supervisor Ms. Hina Sharif without your expertise and guidance this would not have been possible. In spite of your busiest and tiring routine you have provided us with your agile guidance and worthy suggestions throughout this time.

I would like to thank all my teachers Dr, *Ayesha Kawish*, Dr, *Khizar*, Dr, *Tahir*, Dr *Sughra*, Dr, *Saman Waqar*, Dr, *Qurat-ul-ain* and Dr, *Qandeel* they helped me in my professional development during my education life.

I would like to thank my father-in-law *Khalid Rahman* and mother-in-law Dr, *Shaista khalid* they have provided me this opportunity to fulfill my educational goal. I owe my supreme gratitude towards my husband for his support, love and guidance.

My father Muhammad Farooq khan and mother Khadija Farooq they both have always supported me in each and every phase of life. I'm very thankful Whatever I am and wherever I am is just because of the altruistic love of my parents. Their prayers have made me strong enough to face every problem and difficulty of life. I would like to thank my beloved *brother Simab Farooq*, *Rizwan Farooq* for always supporting and believing in me.

I humbly thanks to all the persons who have supported me in this regard.

Table of content

DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENTS	vi
List Of Tables.....	ix
List Of Figures	x
List Of Abbreviations.....	xi
CHAPTER I: Introduction	1
1.1. Rationale of the study	3
1.2. Objectives.....	4
CHAPTER: II Literature review	5
2.1 Operational definitions.....	5
2.1.1 Stimulation and play	5
2.1.2 Knowledge	5
2.1.3 Attitude.....	5
2.1.4 Practices	5
CHAPTER: III Methodology.....	14
3.1. Study setting.....	14
3.2. Study design.....	14
3.3. Study duration	14
3.4. Study population	14
3.5. Sampling technique.....	15
3.6. Sample size determination	15
3.7. Eligibility criteria	16
3.7.1. Inclusion criteria	16
3.7.2. Exclusion criteria	16
3.8. Data collection procedure	16
3.8.1. Data collection tool	16
3.8.2. Demographics	17
3.8.3. Knowledge, attitude and practices tool	17

3.10. Study variables.....	18
3.10.1. Independent variables	18
3.10.2. Dependent variable	18
3.11. Data Collection Procedure	18
3.12. Pilot testing	19
3.13. Validity.....	19
3.14. Reliability.....	19
3.15. Data Management	19
3.16. Data analysis	20
3.16.1. Descriptive statistics	20
3.16.2 Inferential statistics	21
3.17. Ethical considerations	21
CHAPTER: IV Results	22
4.1 Demographic characteristics.....	22
4.2. Descriptive for outcome variables	24
4.2.1 Description of Knowledge.....	25
4.2.2 Description of Attitudes.....	25
4.2.3 Description of Practices	25
4.4. Inferential Results of knowledge	27
4.5 Inferential Results of Attitude.....	29
4.6 Inferential Results of Practice	32
4.7 Sources of information.....	35
4.8 Barriers in stimulation and play	35
CHAPTER: V Discussion.....	37
Strengths.....	39
Limitations	40
Conclusion	40
Recommendations	41
References	42
APPENDIX A Questionnaire.....	45
APPENDIX B INFORMED CONSENT FORM.....	51

List Of Tables

Table 1: Demographic representation of respondent	23
Table 2: Categorization of parents' knowledge, attitude and practices level	26
Table 3: Descriptive of outcome variables	26
Table 4: Association of knowledge of stimulation and play with socio demographic variables....	27
Table 5: Association of attitude of stimulation and play with socio demographic variables	30
Table 6: Association of practice of stimulation and play with socio demographic variables.....	32
Table 7: Sources of information	35
Table 8: Barriers of stimulation and play	35

List Of Figures

Figure 1:Sample Size determination.....	15
---	----

List Of Abbreviations

ECD	Early child development
UNICEF	United Nations International Children's Emergency Fund,
BCC	Behavior changes communications
KAP	Knowledge, attitude, practice
WHO	World health organization

CHAPTER I: Introduction

Parenting plays a key role in development of children. The way parents treat children in their early years matter a lot in their later years. If parents engage with their children in such a way that they often play and stimulate with them, there are better chances that such a child will develop better cognitive and motor functions.(*Early Childhood Development* | UNICEF, n.d.) However, on the other hand if a child misses such stimulation & play, there are high chances that such a child may experience developmental delays which can affect his/her education, productivity and overall wellbeing in the later years. (Bradley et al., 2001)

This concept of stimulation and play alongside various other concepts of childhood care and children' wellbeing is collectively known as 'early childhood development' (ECD). Globally, early ECD is considered an important investment as it is not only beneficial for children and their families rather it helps in overall economic and social wellbeing at national and global levels. Lack of early childhood development may lead to poor health conditions, poor educational uptake, economic slow-down, more violence and crime, and more abuse and depression, all of these are factors that affect the social and economic wellbeing of a society. Infancy and Early Childhood Development Paper Free Essay Example, n.d.

Contrary to above, above adversaries can be avoided by enhancing caregiving practices at the family level. Family being the unit of society, if managed well, can lead to a better society. This is such that, if parents' knowledge, attitude and practices regarding childhood and childhood development are improved, this can lead to better cognitive development and school readiness of children, in turn making them productive human resource of future, contributing towards global wellbeing and sustainable development goals at multiple levels. (Grantham-McGregor et al., 2007)

Given this importance, it is imperative to understand current levels of knowledge, attitude and practices among parents about early childhood development and especially stimulation & play, once current levels are understood, it is also important to understand the reasons behind good and bad behaviors, enabling the researcher and the public health landscape of the society to suggest interventions and behavior change communications (BCC) that are relevant towards betterment of childhood development. Moreover, understanding current levels, and reasons behind those levels will also help at policy level – helping the stakeholders guide what policy level interventions are required at state level to facilitate parenting practices. (Jeong et al., 2021)

In developing countries, like that of ours, there is very little research done on the subject, whereas anecdotal evidence suggest that current levels are very Poor. Parenting is considered a strict and harsh way of controlling young children, children are not appreciated often and are often mistreated through violence and strict behavior. Studies show that Poor socio-economic segments especially in rural areas are particularly involved in ill parenting practices primarily because of lack of knowledge about how parenting affects cognitive and motor development in a child and also because poverty and lack of resources lead to lifestyle where children are considered an additional burden on the household and parents becoming too busy to enjoy the happier moments with children. This gives rise to further curiosity that which demographic segments should be targeted first and what are the immediate steps that are needed to improve the situation. (Bradley et al., 2001)

Another important factor is the role of fathers in childhood development, generally it is considered that childhood development is a mother's job and headache, whereas studies elsewhere in the world suggest that fathers, if involved in stimulation and play with children alongside his female

counterpart, help them grow into much better human beings. Therefore, it is important to understand males' engagement in childhood development and their levels of knowledge, attitudes and practices regarding parenting, child care, and stimulation & play. (Leech et al., 2022)

To summarize, The overarching goal of the research is to assess the level of knowledge, the prevailing attitudes and current practices of parents related to stimulation and play, More specifically, the study has the following specific objectives: to assess parent's current existing knowledge related to stimulation and play with children, to assess parent's prevailing attitude regarding stimulation and play with children, to identify a level of knowledge, attitude and practices, to identify the extent and quantity of stimulation and play with children in the home and parental behaviors related to stimulation and play with children, to identify underlying socio-demographic factor related to level of knowledge, attitude and practices. The hypothesis of the study was existing knowledge, attitudes and practice related to stimulation and play with children are poor among parents.

1.1. Rationale of the study

Playful behavior appears to have positive effects on the brain and on a child's ability to learn such as talking helps in early language development, Singing helps in responsiveness and capturing attention, Interactive play helps in better cognitive development. In Pakistan Earlier studies done on similar topics such as effect of maternal depression on early child development, but does not correlate stimulation & play with child development. Due to lack of focus on this side it felt very important to assess the knowledge, attitude and practice of parents about stimulation and play as

it plays a vital role in development of child i.e., Stimulation & play helps in physical and mental development, as it contributes to cognitive development

1.2. Objectives

- To assess knowledge, attitude & Practices regarding stimulation & play among parents of children aged 0-5 years
- To determine the association between socio-demographic factors and level of “KAPs”

CHAPTER: II Literature review

2.1 Operational definitions

2.1.1 Stimulation and play

Promote children's mental and social development by responding to the child's need for care and by stimulating the child through talking, playing and other appropriate physical and affective interactions.(ECD Manual, n.d.)

2.1.2 Knowledge

Knowledge measures the extent to which parents/caregivers give importance to early childhood development and stimulation and play best practices.(*ECD Manual*, n.d.-b)

2.1.3 Attitude

Attitude is used to assess the set of beliefs regarding stimulation and play with young children. Agreement/disagreement to a set of statements is utilized to gauge attitude. (*ECD Manual*, n.d.-b)

2.1.4 Practices

Practices refer to what target group actually does regarding our topic i.e., stimulation and play. (*ECD Manual*, n.d.-b)

Young children need care and attention without which they simply cannot grow. There is no such thing as an independent baby, especially in-case of humans, where young children need a lot of attention and caregiving before they grow up into independent human beings at the age of approximately 18 years. This caregiving requires an understanding of what a particular age group demands and then a customized understanding of the particular child – his or her needs and wants at a specific time. This way, how a personality is formed depends largely on the quantity and quality of caregiving and attention given to the child at certain ages. (Jeong et al., 2018)

The first five years of child's life is when the growth process has the maximum rate. It is the first five years when child's brain creates 700+ neural connections every second. This is why responsive caregiving and parenting in the first five years is of utmost importance. Each time an adult connects with a young child aged between 0-5 years, the child's brain activates and develops new fruitful connections. Hence, Development sector professionals, educationists and scientists have combined many such important caregiving practices to form an 'early child development' parenting/caregiving package. (Beligere & Rao, 2008)

This early childhood development package basically originates from the concept of sensitive and responsive parenting. Sensitivity refers to being mindful of each and every act and signal that the child is communicating whether verbally or through body language, whereas responsiveness refers to responding to that need as and when understood. These two concepts go hand in hand to make child development an enjoyable process. This way, over time – the caregiver understands when the child needs to eat, sleep, urinate or pass stool. And by understanding these signals they are able to train their children accordingly. Such caregivers carefully monitor child's expressions, movements, color, temperature and other biological changes. Such sensitive and responsive parenting/caregiving is fruitful for both parents/caregivers and children. On one hand, a sensitive

and responsive parenting helps optimize the parenting experience and make parenting an enjoyable activity, on the other hand it has a lot of positives for the child as well. To include some examples, such a caregiver can easily respond to child's illness, and help them feed even when they have lost appetite. Moreover, there are many benefits of sensitive and responsive parenting on the personality development of children. This include but not limited to; (Ginsburg et al., 2007)

- **Better immunity**

One of the most direct impact of early childhood development through responsive and sensitive parenting is that the child gets better survival abilities and immunity. Adverse conditions such as Poor birth weight and illness are better survived by a child who experiences ECD based responsive and sensitive parenting. This is because caregivers to such a child know child's signals and respond accordingly. Such caregivers understand how child's behavior has changed because of illness and how to respond to it.

Moreover, a study conducted in Pakistan suggests that parental stimulation practices enhance the general child health conditions in hospitalized children. It was reported that Poorer engagement results in poor health status while higher engagement resulted in better health status of hospitalized children. The same study also suggests that parenting practices can be included in in-patient pediatric assessment to inform hospitalization processes

- **Better acquisition of skills**

Other than survival, sensitive and responsive caregiving helps cognitive functioning, and also enhances the child's ability to understand the world, hence child's psychosocial development is the highest beneficiary, including the ability to acquire language and culture. Such caregiving,

helps caregiver understand and appreciate child's experiences long before the he or she learns to speak hence lays the foundation for language and communication skills.

Stimulation and play practices as per early childhood development package help enhances physical/motor skills especially fine and gross motor skills in children. This includes cognitive development, speech and language development and social development and emotional development as described above. According to ECD Manual by UNICEF, stimulation and play with young children between the age of 0-5 years is one of the 22 key family care practices that help better families and better child development.

- **More engaged children**

Play is the most interesting way of child learning, it activates brain activity alongside physical development, we all understand how children love to play and hence stimulating and playing with children not only helps in skill development, better immunity and better cognitive development it makes life enjoyable for both care giver and care receiver.

- **Reduced behavior disorders, anxiety, and depression**

According to a study by WHO, the benefits of ECD based responsive and sensitive parenting advances through later life stages as well, for example it helps reduce the risk of behavior disorders, anxiety, and depression. Such relationship between the caregiver and child can reduce the risk of the child feeling deprived and disadvantaged. This is why in our daily life we experience some children grow well despite poor conditions while some children unproductive at work & school despite belonging from wealthy families. (*ECD Manual*, n.d.-a)

Therefore, sensitive and responsive parenting/caregiving not only results in a healthier and happier family, rather it has macro effects on societal and national development. ECD manual on family

care practices suggest that stimulation and play practices with young children between the age of 0-5 years helps in better future and better economy at a more macro level. (*ECD Manual*, n.d.-a)

Having explained the importance and benefits, The next question that arises is that what exactly is meant by stimulation and play according to early childhood development package and what are the effective activities that can be done to strengthen children's cognitive abilities. Few examples are as below from the UNICEF ECD Manual.

Playing with them through hands is the most simple and fruitful way to stimulate and play with them, it not only helps them enjoy but also helps them learn interaction and communication. Simple games can be played in this regard that engage the child's hands and brain. As these grab their attention, help them learn how to interact with the world physically.

In addition to playing with the children at home, studies suggest that outdoor activities can be another effective way of child brain development. Studies suggest that parents and caregivers should plan excursions or trips with their children, an easy way is to take children to nearby park in the mornings or evenings. Similarly, taking them to zoo, playgrounds, and lakes/rivers can also help as these places have a lot of movement, these movements help the child register and comprehend new experiences. (Baker-Henningham & Lopez Boo, 2010)

Another way of engaging and playing with children is reading them stories and books. Similarly, singing them poems or reading/reciting the holy books is another way of engaging and playing with children. Reading helps children engage proactively, while children like to sing and hear singing as it is a fun and amusing activity for them, all these activities help children grow their vocabulary as well. Moreover, these activities enhance their attention span as well.(Ginsburg et al., 2007)

Another way of engaging with children is counting stairs or naming everything that you together see. For example, naming eyes, nose, lips, cheeks and chins and naming the furniture or the products available at home. Counting steps and stairs is another way to help them understand that numbers are not just words rather numbers open another world of mathematics.

Another interesting way of engaging with children is teaching them a new language. Studies show that often parents find it difficult to engage with children as they don't know what to talk to them. Hence, reading, learning and teaching them a new language can be a very easy and fun to do activity together. It's not only fun to learn, it helps make children smarter as various research show that children who can read and learn multiple languages are smarter than others as during the process the child uses multiple parts of the brain. It also helps in communication skills enhancement. (Ahmadzadeh et al., n.d.)

Another question that may arise here is all these activities are for children that can at-least communicate or understand, how about children under the age of 6 months? Studies have shortlisted various activities that can be performed with children under the age of 6 months as well, for example skin to skin contact, introducing various textures, introducing rattles, and calling his/her name etc. (Begum, 2019)

An important perspective with which this topic should be seen is from the gender perspective. While traditionally, child rearing and development has always been considered mother's job, latest studies suggest that involvement of both parents in child development helps child in multiple ways This gives a stronger association to the child. Majority studies in Pakistan were also based on mothers reporting measures parenting practices. However, A recent study conducted in rural Pakistan assessed the agreement between fathers' and mothers' reports of their own and their partner's engagement in stimulation and assess the degree to which parents' reported stimulation

correlated with their observed responsive caregiving behaviors. The study showed moderate results showing a gendered response to this area is still needed. Furthermore, it's not just fathers, grandparents and other family members are also required to contribute this. not only others' contributing towards stimulation and play helps the child, it also helps the mother relax and ease from one of the biggest barriers to parenting i.e., maternal depression. (Jeong et al., 2019)

Sources of information of parents and caregivers play a critical role in how they understand their role and perform parenting. A Study conducted in rural areas of China examined parenting attitudes and its correlation with their sources of information about the subject, the study also focused on how different generations interacted with children and how the parenting practices are evolving over time. Due to various barriers, majority were not able to have ECD based child engagement activities. They rarely played, told stories, or sang to children and also didn't properly utilize good sources of information or books available on parenting. Only 12% of caregivers sought information from reliable sources related to parenting. Similarly, only 12.6% reported having told stories to their child, 37.5% sang, and 39.2% played with toys. The study also showed that there were developmental delays in the children and the reason behind was the less caregiver engagement. The barriers were both social and economic, on one hand, child development is becoming a rather less preferred and un-important subject, on the other side, increased economic activity by both parents and in-turn stressful lives of both the parents have resulted into this less engagement with children, (Yue et al., 2019)

Developing countries have further worsened situation, according to research conducted in Bangladesh which aimed to understand parents Knowledge Attitude and Practices related to early childhood development, showed that parents give a lot of importance to child development and have sufficient traditional knowledge on the subject but there are gaps among knowledge attitude

and practices. The study showed that 54% households engaged in school readiness activities, very Poor i.e., one fourth (25%) households reported that their children go to kindergarten, majority parents i.e., 94% did not consult children related matters with any other reliable source. Moreover, developing countries have a tradition of negative disciplinary techniques as opposed to positive disciplinary techniques of loving and guiding the children. (Yue et al., 2019)

There are several barriers associated with the ideal behavior of stimulation and play based on the concept of sensitive and responsive parenting. These include;

- Economic barriers
- Polygamy and lack of family planning
- Mood swings and emotional instability of caregivers
- Lack of awareness/ resources
- Unhealthy environment
- Tense relationships/ No family support
- No family planning

(Raikes et al., 2006)

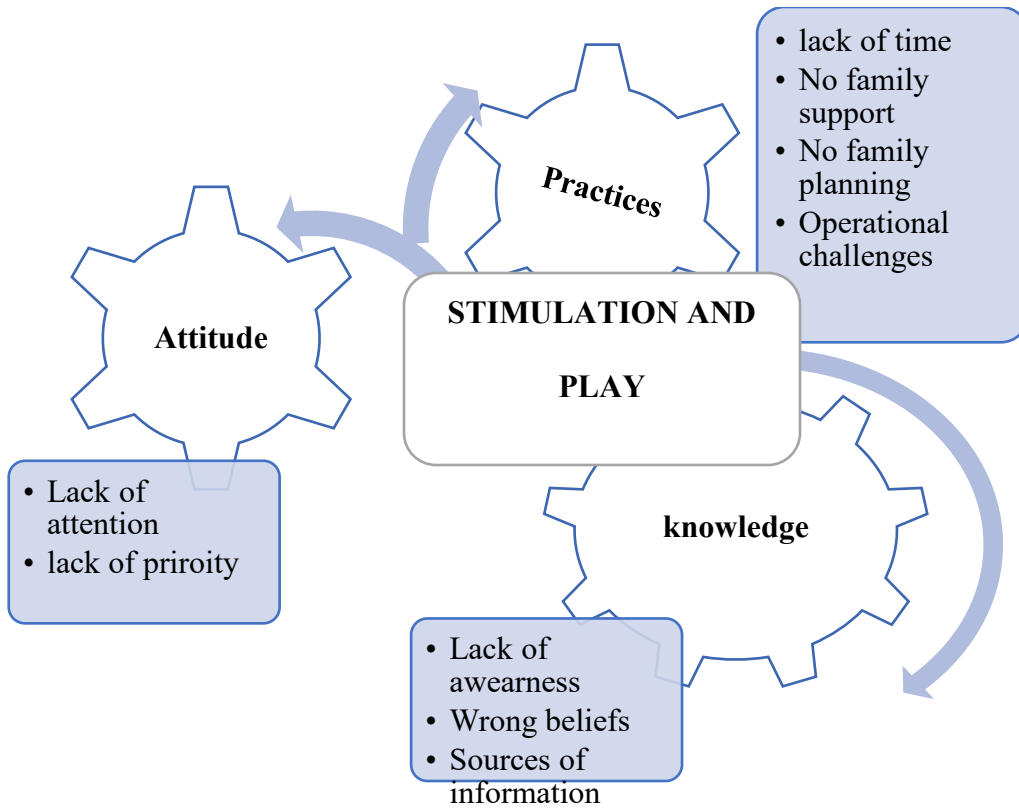


Figure:1 Conceptual framework for Stimulation and Play

CHAPTER: III Methodology

3.1. Study setting

The study setting adopted for this study was markets and Streets of Rawalpindi. Here, since our audience was parents of young children who can easily be found in streets, market etc. they were contacted there and then and the interviews were taken.

3.2. Study design

The design of the study was cross sectional and it was quantitative in nature.

3.3. Study duration

Study was conducted from June 2021 to October 2021. Study was conducted from June 2021 to May 2022, whereas data was collected in the month of March 2022, exact dates were 7th March 2022 to 20th March 2022.

3.4. Study population

Considering the objective of the study i.e., understanding KAP relate to stimulation and play with young children; the Study population was parents (both mothers and fathers) of children aged between 0-5.

3.5. Sampling technique

Sampling technique was Consecutive non-probability sampling in which every subject who fulfilled the inclusion criteria was selected until the required sample was achieved. Sampling unit was markets and streets of Rawalpindi. Observational unit was parents who have children under the age of five year.

3.6. Sample size determination

Sample size was calculated by using open epi software as shown in figure 3. Since no earlier study conducted to gauge KAPs on stimulation and play, standard prevalence of 50% was used. By using 5% margin of error, 384 sample size was calculated. (*OpenEpi Menu*, n.d.)

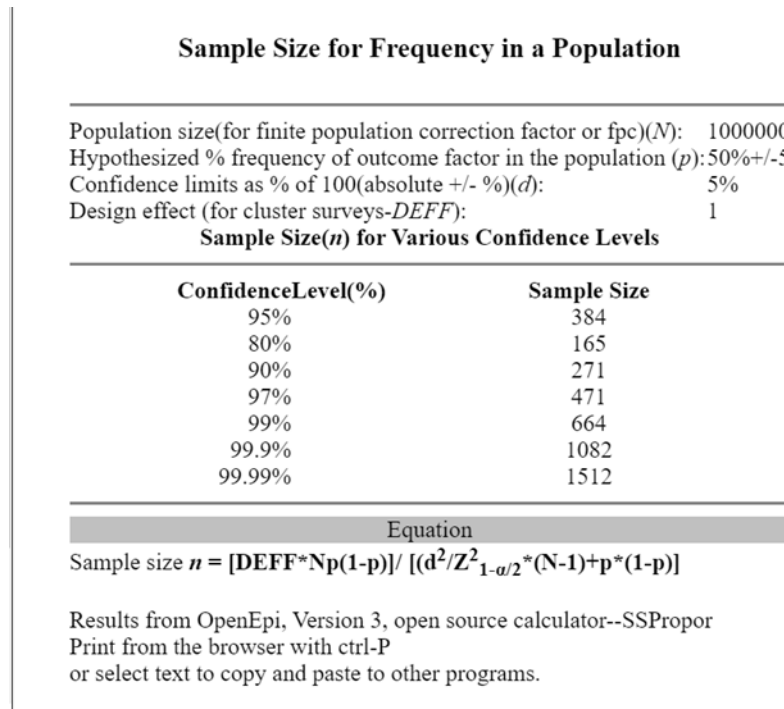


Figure 1: Sample Size determination

3.7. Eligibility criteria

3.7.1. Inclusion criteria

- Both genders (male and female) residing in Rawalpindi city of Pakistan, having alive children between the age of 0 and 5 years.

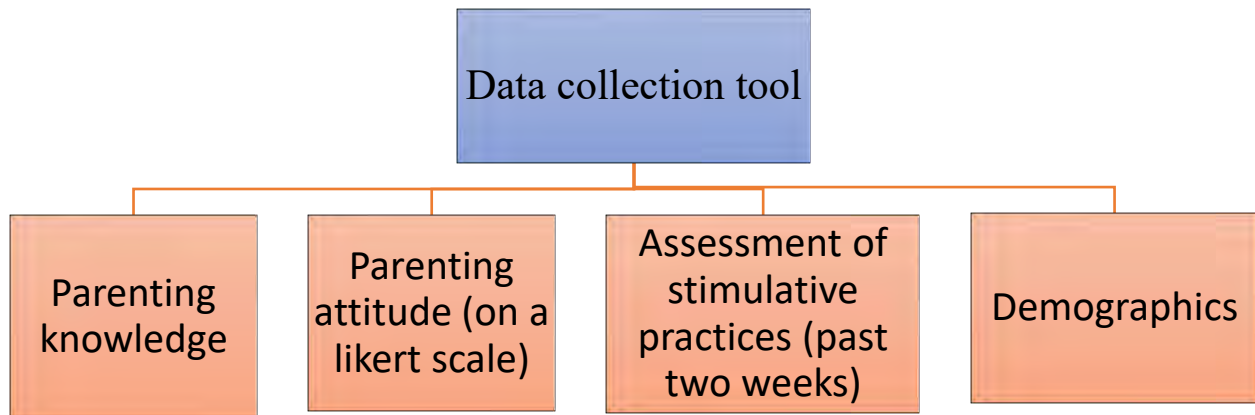
3.7.2. Exclusion criteria

- Participants who were critically ill. Suffering from major psychiatric disorders like schizophrenia, bipolar disorders, etc. were excluded.
- Those who refused to participate will be excluded.

3.8. Data collection procedure

3.8.1. Data collection tool

In this study pre tested questionnaire was used for collection of data validated on the basis of UNICEF KAP questionnaire and literature review. Interview administrated questionnaire was used for data collection. Questionnaire was comprised of two sections, section A (socio-demographic variables) and section B (outcome variables). Code book was created for Section A (socio-demographic variables) section B (Knowledge, attitude and practices).



3.8.2. Demographics

The first section had the information about the socio-demographic variables of the respondents. It comprised of variables like age, gender, level of education, no of kids, no of kids under the age of 5-year, family setup marital status, occupation was collected from parents.

3.8.3. Knowledge, attitude and practices tool.

This tool was constructed in URDU and English language which includes knowledge, attitude and practices regarding stimulation and play questions. All questions were close ended however knowledge part comprises of some statements on which respondent gave importance score to each statement. Attitudes related to stimulation and play were gauged by asking agreement to 13 statements on a 5-point Likert scale. Practices questions were asked by keeping in mind last one week of practices with child.

3.10. Study variables

3.10.1. Independent variables

The independent variables were “socio-demographic variables” including gender, age, marital status, no of children, age of children, education level, family set-up.

3.10.2. Dependent variable

The outcome variable of the study was “KAP of stimulation and play”. This was assessed through asking

- Importance of ECD practices (5-point importance Likert scale)
- Indexing parent involvement, enjoyment, and structure (5-point agreement Likert scale)
- Incidence of stimulation & play activities in last two weeks.

3.11. Data Collection Procedure

Data collection was started after getting ethical approval from Institutional Review board (IRB) committee of Al-Shifa School of Public Health, Al-Shifa Trust Eye Hospital Rawalpindi. The formal letter was used to get permission. The letter included the required information e.g., name of researcher, institute, topic name etc. once permission was granted personal visits were made for data collection. First of all, the brief introduction of the researcher was given to the participants for the sake of rapport building. The purpose of the study and basic required information was given to the participants the consent from each participant. Questionnaire was filled by the mean of interview after taking the consent from each participant. Data was collected from only those participants who agreed to participate.

3.12. Pilot testing

The questionnaire was pretested on 10 participants at the study site to assess acceptability, feasibility and validity. On the basis of response of pilot testing minor amendments were made to text and questions. After that the questionnaire was finally modified and ready for collecting data. One of the problems that were observed during pilot testing was that respondents were complaining of too much repetition in the questionnaire. Hence, few questions were removed which were similar.

3.13. Validity

The content validity of the instrument was checked by developing the instrument on the basis of UNICEF KAP (Knowledge, Attitude and Practice) Questionnaire and literature review regarding ECD.

3.14. Reliability

Reliability of the data was checked by pre testing on 10 participants and after entering the data into SPSS. The value of the Cronbach's alpha of knowledge's part was 0.79, attitude's part 0.86 and practice was 0.93.

3.15. Data Management

Data was entered and recorded into statistical package for social sciences (SPSS) version 26.0. Code book was generated for all the variables in the questionnaire. Data was rechecked for any error, discrepancies or completeness by spot checking method. Data was stored in a separate storage device to avoid any loss in future.

3.16. Data analysis

Data was analyzed in SPSS version 26.0. Reliability and quality of data was cross checked by using range and frequency tables to find out the missing values if any. After that the data was arranged according to requirement for analysis. The continuous variables e.g., age was summarized into categories. All the outcome variables were computed and then summarized into different categories for further analysis. Descriptive statistics were done for running frequency tabulation, moreover, after checking the assumptions chi square were applied for significance testing among demographic variables.

3.16.1. Descriptive statistics

Codes were assigned for knowledge, attitude and practices section. In attitude scale 0 for strongly disagree and 5 for strongly agree. Few questions were reversed code in attitude section.

knowledge scale was gauged on 5-point Likert scale, where 1 considered as not important, 2: less important, 3: moderately important, 4: important, 5: very important. Practices scale was gauged on 4-point Likert 1: Never, 2: Less than once a week, 3: Once or twice a week, 4: Several times a week scale.

- In first phase descriptive was run for socio-demographic variables that were age, gender, marital status, occupation, total no of kids, education level, family setup and no of kids under the age of 5. All the socio-demographic factors were computed for frequency and percentages.
- In second round, descriptive analysis was run for outcome variables. KAP tool was a 40 item. All items were computed and presented into frequency and percentages.

3.16.2 Inferential statistics

In third step after checking normality of data and other assumption chi square is used for association of demographic variables and computed score for KAP. A significant value of $p \leq 0.05$ was used for all statistical analysis.

3.17. Ethical considerations

IRB approval was taken from the ethical committee of Al Shifa School of public health after synopsis presentation. Before the start of data collection purpose of the research was explained to the participants and asked for their voluntary participation. They were informed that in case of participation no any incentive was provided to them, there was no any physical harm or risk associated with this research and they were free to withdraw at any time. Participants were assured that the collected information would keep confidential and used only for research purpose. Confidentiality was ensuring by putting number or code instead of their names on the data form.

CHAPTER: IV Results

4.1 Demographic characteristics.

Total 400 interviews were conducted with parents (both fathers and mothers) of children aged between 0-5 years. 10% were males (n=40) while an overwhelming majority i.e., 90% (n=360) were females i.e., Mothers. In terms of age, majority i.e., 55% were between 25 to 34 years of age, while 0.7% in the age group of 16 to 19 years, 31.2% in the age group of 19 to 24 years, whereas 13.2% belonged to the highest age group i.e., 35 to 40 years.

Since the target respondents were parents, all interviewees were married, however 3 (0.7%) were widowed as well. In terms of number of children under the age of 5, highest share (64%) was of parents who had only one child (n=255) followed by parents who had two children (31.4%, n=126) while a minority of parents (5%, n=20) had 3 children under the age of 5. In terms of education of the parents, 7% were illiterate (n=27), 41% were primary educated (n=166), 35% were secondary or higher secondary educated (n=142), while 16% were had received higher education (n=66), In terms of occupation, only 2 respondents (0.5%) were students, 17% worked outside home (n=68), while a majority i.e., 82.5% (n=331) were housewives or homemakers. In terms of family type, there was an equal split between joint and nuclear family, 202 respondents (50.4%) were living in a joint family set-up while 199 respondents lived in a nuclear family (49.6%).

Table 1: Demographic representation of respondent

Sr.	Variable	Frequency(N)	Percentage (%)
1	Gender	Male	40 10.0%
		Female	361 90.0%
2	Age	16– 19 years	3 0.7%
		20 – 24 years	125 31.2%
		25 – 34 years	220 54.9%
		35 – 40 years	53 13.2%
3	Marital status	Married	398 99.3%
		Widowed	3 0.7%
4	No of kids under 5 years	Single child	255 63.6%
		Two children	126 31.4%
		More than two	20 5.0%
5	Education	Illiterate	27 6.7%
		Primary (1to7 grade)	166 41.4%

		Secondary (8 to 12)	142	35.4%
		Higher education	66	16.5%
6	Occupation	Student	2	0.5%
		Working outside home	68	17.0%
		Housewife/homemaker	331	82.5%
7	Family setup	Joint family	202	50.4%
		Nuclear	199	49.6%

4.2. Descriptive for outcome variables

Our study on Knowledge, Attitude and Practices related to Stimulation and Play had three outcome variables:

- Knowledge
- Attitude
- Practice

All three outcome variables were computed utilizing the three questions in the questionnaire, each question has multiple sub-questions, each sub-question was gauging importance, agreement or frequency on a Likert scale. Let us first examine our outcome variables one by one.

4.2.1 Description of Knowledge.

Knowledge was gauged by asking importance of certain parenting practices and attitudes on a 5-point Likert scale. Where 5 meant very important and 1 meant least important. All these parenting practices and attitudes were asking in the form of unilateral statements. Computed variable in order to simplify the analysis variable was computed in SPSS, given bePoo are the frequency tabulation o of knowledge outcome variable. To determine the of parent's knowledge, attitude and practices the total score was categorized as POOR and GOOD. Categorization done on the basis of median. In case of knowledge median was 70

Results show that majority i.e., 52.1% of the respondents had Poor knowledge of positive, sensitive and responsive parenting, whereas 47.9% were good knowledgeable i.e.

4.2.2 Description of Attitudes

Attitudes related to stimulation and play were gauged by asking agreement to 13 statements on a 5-point Likert scale, where 5 meant strongly disagree and 1 meant strongly agree. Higher score on majority questions meant positive parenting attitude, however, there were 4 statements that had natural positive connotation; therefore, they were reverse coded for the purpose of generating the outcome variable. Results shows that 51.9% of the respondent had good attitude towards stimulation and play while 48.1% respondent had Poor attitude. Categorization of attitude is done on the basis of median which was 48.

4.2.3 Description of Practices

Practices were gauged by asking frequency of playing with child over the past two weeks, 8 stimulation & play related practices were asked. The results were coded from 1 to 4 where 1 meant

Never, and 4 meant several times a week. Result shows 58.1% had Poor practice level while just 41.9% had good practice. Categorization of practice variable is done on the basis of median which was 17.

Table 2: Categorization of parents' knowledge, attitude and practices level

Variables	Item no	Total score	Median	Score
Knowledge	18	90	70	Poor knowledge = <70 Good knowledge = >70
Attitude	13	65	48	Poor attitude: <48 Good attitude: >48
Practice	8	32	17	Poor practice: <17 Good practice: >17

Table 3: Descriptive of outcome variables

Sr.	Variables	KAP level	Frequency (N)	Percentage (%)
1.	Knowledge about stimulation and play	Poor knowledge	209	52.1%
		Good knowledge	192	47.9%
2	Attitude regarding stimulation and play	Poor attitude	193	48.1%

		Good attitude	208	51.9%
3	Practice regarding stimulation and play	Poor practice	233	58.1%
		Good practice	168	41.9%

4.4. Inferential Results of knowledge

Chi- square test of association was run for demographic variables with computed score for knowledge of stimulation and play. Result of Pearson's chi square showed non-significant association between gender $X^2= 0.080(1)$ $p=0.77$, Marital status $X^2= 0.25(1)$ $P= 0.61$ No of kids under the age of 5-year $X^2= 1.13(2)$ $P=0.56$ Occupation $X^2= 0.84(2)$ $P=0.65$ and family system $X^2= 3.77(1)$ $P=0.05$, significant association between Age $X^2= 23.66(3)$ $P=0.0001$ and Education $X^2= 35.9(3)$ $P=0.0001$.

Table 4: Association of knowledge of stimulation and play with socio demographic variables

Sr.	Variable		Poor knowledge N (%)	Good knowledge N (%)	Chi square(df)	P-value
1	Gender	Male	20(50%)	20(50%)	0.080(1)	0.77

		Female	189(52.4%)	172(47.6%)		
2	Age	16– 19 years	3(100%%)	0(0.0%)	23.66(3)	0.0001
		20 – 24 years	85(66.9%)	42(33.1%)		
		25 – 34 years	104(47.5%)	115(52.5%)		
		35 – 40 years	17(32.7%)	35(67.3%)		
3	Marital status	Married	207(52.0%)	191(48.0%)	0.25(1)	0.61
		Widowed	2(66.7%)	1(33.3%)		
4	No of kids under 5 years	Single child	138(54.1%)	117(45.9%)	1.13(2)	0.56
		Two children	61(48.4%)	65(51.6%)		
		More than two	10(100%)	10(100%)		
3 5	Education	Illiterate	10 (37.0%)	17 (63.0%)	35.9(3)	0.0001
		Primary (1to7 grade)	116 (69.9%)	50 (30.1%)		
		Secondary (8 to 12)	56 (39.4%)	86 (60.6%)		

		Higher education	27(40.9%)	39(59.1)		
6	Occupation	Student	1(50%)	1(50%)	0.84(2)	0.65
		Working outside home	32(47.1%)	36(52.9%)		
		Housewife/homemaker	176(53.2%)	155(46.8%)		
7	Family setup	Joint family	115(56.9%)	87(43.1%)	3.77(1)	0.05
		Nuclear	94(47.2%)	105(%)		

4.5 Inferential Results of Attitude

Chi- square test of association was run for demographic variables with computed score for attitude regarding stimulation and play. Result of Pearson's chi square showed highly significant association between gender $X^2= 19.53(1)$ $p=0.0001$, Age $X^2= 52.13(3)$ $P=0.0001$, family setup $X^2= 3.77(1)$ $P=0.0001$ and Education $X^2= 57.69(3)$ $P=0.0001$. on the other hand, non-significant association between Marital status $X^2= 2.80(1)$ $P= 0.094$ No of kids under the age of 5-year $X^2= 1.13(2)$ $P=0.56$ Occupation $X^2= 0.84(2)$ $P=0.65$.

Table 5: Association of attitude of stimulation and play with socio demographic variables

Sr.	Variable		Poor Attitude N (%)	Good Attitude N (%)	Chi square(df)	P- value
1	Gender	Male	6(15.0%)	34(85.0%)	19.53(1)	0.0001
		Female	187(51.8%)	174(48.2%)		
2	Age	16– 19 years	0(0.0%%)	3(100%)	52.13(3)	0.0001
		20 – 24 years	30(23.6%)	97(76.4%)		
		25 – 34 years	126(57.5%)	93(42.5%)		
		35 – 40 years	37(71%)	15(28.8%)		
3	Marital status	Married	193(48.5%)	205(51.5%)	2.80(1)	0.094
		Widowed	0(0.0%)	3(100%)		

4	No of kids under 5 years	Single child	112(43.9%)	143(56.1%)	5.98 (2)	0.50
		Two children	72(57.1%)	54(42.9%)		
		More than two	9(45.0%)	11(55.0%)		
5	Education	Illiterate	11 (40.7%)	16 (59.3%)	57.69(3)	0.0001
		Primary (1to7 grade)	49 (29.5%)	117 (70.5%)		
		Secondary (8 to 12)	103 (72.5%)	39 (27.5%)		
		Higher education	30(45.5%)	36(54.5%)		
6	Occupation	Student	0(0.0%)	2(100%)	8.81(2)	0.012
		Working outside home	23(33.8%)	45(66.2%)		
		Housewife/homemaker	170(51.4%)	161(48.6%)		

7	Family setup	Joint family	81(40.1%)	121(59.9%)	10.51(1)	0.001
		Nuclear	112(56.3%)	87(43.7%)		

4.6 Inferential Results of Practice

Chi-square test of association was run for demographic variables with computed score for practice regarding stimulation and play. Result of Pearson's chi square showed non-significant association between gender $X^2= 0.007(1)$ $p=0.93$, Marital status $X^2= 2.17(1)$ $P= 0.14$ and, significant association between Age $X^2= 46.61(3)$ $P=0.0001$, Education $X^2= 36.88(3)$ $P=0.0001$, family setup $X^2= 10.98(1)$ $P=0.001$, No of kids under the age of 5-year $X^2= 29.78(2)$ $P=0.001$ and Occupation $X^2= 13.78(2)$ $P=0.001$

Table 6: Association of practice of stimulation and play with socio demographic variables

Sr.	Variable	Poor Practice N (%)	Good Practice N (%)	Chi square(df)	P-value
1	Male	23(57.5%)	17(42.5%)	0.007 (1)	0.93
	Female	210(58.2%)	151(41.8%)		

2	Age	16– 19 years	0(0.0%)	3(100%)	46.61(3)	0.0001
		20 – 24 years	45(35.4%)	82(64.6%)		
		25 – 34 years	148(67.6%)	71(32.4%)		
		35 – 40 years	40(76.9%)	12(23.1%)		
3	Marital status	Married	230(57.8%)	168(42.2%)	2.17(1)	0.14
		Widowed	3(100%)	0(0.0%)		
4	No of kids under 5 years	Single child	124 (48.6%)	131 (51.4%)	29.78(2)	0.0001
		Two children	90 (71.4%)	36 (28.6%)		
		More than two	19 (95.0%)	1(5.0%)		
5	Education	Illiterate	19 (70.4%)	8 (29.6%)		

		Primary (1to7 grade)	67 (40.4%)	99 (59.6%)	36.88(3)	0.0001
		Secondary (8 to 12)	102 (71.8%)	40 (28.2%)		
		Higher education	45 (68.2%)	21 (31.8%)		
6	Occupation	Student	0(0.0%)	2(100.0%)	13.78(2)	0.001
		Working outside home	52 (76.5%)	16(23.5%)		
		Housewife/homemaker	181(53.2%)	150(45.3%)		
7	Family setup	Joint family	101(50.0%)	101(50.0%)	10.98(1)	0.001
		Nuclear	132(66.3%)	67(33.7%)		

4.7 Sources of information

Majority relied on word of mouth from family members as their source of information (50.6%), 30% relied on TV as their source of information, 14.2% relied on friends, while only 5.7% relied on social media platforms.

Table 7: Sources of information

Sources of information	Frequency	Percentages
Family members	203	50.6
Friends	57	14.2
TV	118	29.4
Social media platforms	23	5.7

4.8 Barriers in stimulation and play

Majority i.e., 67.1% reported not facing any particular barriers to stimulation and play with their children, however, the biggest barrier quoted was No family support mentioned by 16.5% of respondents, wrong beliefs were by mentioned by 6.2% respondents while 4.2% reported lack of knowledge as the barrier to stimulation and play with children under the age of 5.

Table 8: Barriers of stimulation and play

Barriers	Frequency	Percentages
Lack of knowledge	17	4.2

Wrong beliefs	25	6.2
Operational challenges	24	6.0
No family support	66	16.5
Not facing any barriers	269	67.1

CHAPTER: V Discussion

The study aimed to understand the current levels of knowledge, attitude, and practices among parents of children between the age of 0- and 5-years regarding stimulation and play with their children as a standard practice of sensitive and responsive parenting according to the early childhood development package.

Extensive literature review suggested that in developing countries like that of ours, children are immensely loved and emotionally cared, however, certain attitudes and practices are against the recommended approach. Moreover, due to ever increasing busy lifestyles especially in urban centers, parents and caregivers have become too busy stimulate and play with children. Moreover, literature also suggested that it is important to gauge gender differences among fathers and mothers in their respective knowledge, attitude and practices related to stimulation and play with children.(Shonkoff et al., 2012)

Therefore, the hypothesis of the study was existing knowledge, attitudes and practice related to stimulation and play with children are poor among parents.

Study investigated the current levels of knowledge, attitude and practices through 3 questions that asked the 3 outcomes on Likert scales, which were later analyzed to categorize knowledge, attitude and practices into two categories each i.e. Poor knowledge, and good knowledge, Poor attitude and good attitude, and Poor practices versus good practices.

Table 2 shows that the total items in the questionnaire that gauged knowledge were 18, all were asked on a 5-point Likert scale, therefore, the maximum score was 90. The median score as per responses was 70. Similarly, the total items that gauged attitude were 13, hence because of a 5-point Likert scale, the maximum score was 65, whereas our median score is 48. Lastly, the

practices were asked on a 4-point Likert scale and it had 8 items; therefore, the maximum score was 32 while the median score achieved was 17.

Regarding knowledge, 52.1% of the respondents had Poor knowledge whereas 47.9% had good knowledge, attitude on the other hand is opposite i.e., 48.1% with Poor attitude and 51.9% with good attitude, whereas the maximum variation was seen in the practices with 58.1% having Poor practices and 41.9% showing good practices. This shows that while the target population is divided in terms of knowledge and attitude, being practicing is the most important area that needs to be addressed.

From a gender lens, females showed slightly less knowledge as compared to males. In terms of age, knowledge significantly increases with age, and it also gets better with number of children. In terms of education, the primary educated showed the Poorest levels of knowledge while secondary educated and higher educated showed significantly better knowledge. In terms of occupation, those working outside home showed the highest levels of knowledge while housewives and students showed Poorer levels. Also, nuclear family residents had better knowledge levels than those living in joint families. We can infer from this that higher education and exposure levels and more focus towards children yields better knowledge.

Regarding attitude, Males had significantly better attitude as compared to females. Contrary to what we observed in-case of knowledge, attitude gets significantly poorer with age. The results do not show any significant difference in attitude with respect to no. of children. Illiterate and Poor educated people showed significantly better attitude as compared secondary educated, whereas very highly educated also showed significantly better attitude. Also, working outside home showed significantly better attitude as compared those who work at home. Joint family residents showed significantly better attitude as compared to those living in nuclear families. This shows that

knowledge and attitude are not necessarily directly related. However, there are some similarities in demographic analysis which again shows that those highly educated and working outside home had better attitude as compared to other counterparts.

Regarding practices, there was no significant difference among the two genders as both showed Poorer levels of practices. The younger participants however showed significantly better practices as compared to older ones. Significantly poor practicing behavior was shown by those having more than one kids to look after. Highly educated showed significantly Poorer level of practices as compared to those who were Poor educated, on very similar lines, those working outside home showed Poorer practices as compared to housewives. Also, those living in joint family showed better practices as compared to those living in nuclear family system.

Study shows overall very interesting insights, while knowledge and attitude were primarily better in people with high exposure, practices were significantly better in case of those who had the privilege of time available to them. When asked about barriers, the highest re-called barrier to desired KAPs were lack of family support available, whereas wrong beliefs and lack of knowledge had significantly Poorer values. This shows that overall, knowledge and attitude are lesser problems as compared to practices, and practices are better where time is sufficient and responsibilities are shared and a support system is available. Policy level interventions to enable more time availability of both mothers and fathers for their children is the need of the time in an urban center like twin cities of Pakistan

Strengths

Our study was done on a relatively unique and new topic, very scarce data and research is available on this subject. Researchers could not find any specific study done on stimulation and play based

on ECD package anywhere in Pakistan available in public domain. Moreover, the research topic has recently been emphasized in various discussions because of family planning and caregiving related interventions done by the development sector. Furthermore, our methodology encouraged participation from various backgrounds, socio economic statuses, and educational backgrounds hence helped us achieve a diverse sample profile.

Limitations

The study could not adopt a systematic yet random respondent selection method at a household level which should have ideally been the case. Moreover, study could not capture in detail the barriers to KAP which is a potential area that should be worked upon in later studies on this subject.

Conclusion

As per the purpose and objectives of the KAP study, this study has shown a recent and candid picture of the target population. The current levels of parental knowledge, attitudes, and practices related to stimulation and play as per early childhood development package in twin cities (Islamabad and Rawalpindi), Pakistan. According to finding of this study, the overall knowledge regarding stimulation & play in specific and positive parenting in general among the parents was moderate. Similarly, parents had a moderate level of attitude toward the issue. On the other hand, However, practices regarding stimulation and play were significantly Poor. Therefore, it suggested that there was some gap between knowledge, attitude, and practices. In addition to that, while knowledge and attitude were primarily better in people with high exposure, practices were significantly better in case of those who had the privilege of time available to them. In context of these results, we give the following recommendations

Recommendations

- Parenting as a concept should be introduced in the curriculum. Media policy at national level for programs to promote the importance of sensitive and responsive parenting as per early childhood development package that should encourage parents to practice more activities that enhance their children's development.
- Policy level interventions to enable more time availability of both mothers and fathers like maternity and paternity leaves for their children is the need of the time in an urban center like twin cities of Pakistan
- More content and sources of information should be made available to parents/caregivers other than informal word of mouth from elders within the family to increase knowledge and attitude.

References

- Ahmadzadeh, Y. I., Lester, K. J., Oliver, B. R., & Mcadams, T. A. (n.d.). *The Parent Play Questionnaire (PPQ): development of a parent questionnaire to assess parent-child play and digital media use.*
- Baker-Henningham, H., & Lopez Boo, F. (2010). *Early Childhood Stimulation Interventions in Developing Countries: A Comprehensive Literature Review.*
- Begum, T. (2019). Parental Knowledge, Attitudes and Practices in Early Childhood Development among Low Income Urban Parents. *Universal Journal of Public Health*, 7(5), 214–226. <https://doi.org/10.13189/ujph.2019.070504>
- Beligere, N., & Rao, R. (2008). Neurodevelopmental outcome of infants with meconium aspiration syndrome: Report of a study and literature review. *Journal of Perinatology*, 28, S93–S101. <https://doi.org/10.1038/jp.2008.154>
- Bradley, R. H., Corwyn, R. F., McAdoo, H. P., & García Coll, C. (2001). The home environments of children in the United States part I: variations by age, ethnicity, and poverty status. *Child Development*, 72(6), 1844–1867. <https://doi.org/10.1111/1467-8624.T01-1-00382>
- Early childhood development | UNICEF.* (n.d.). Retrieved May 12, 2022, from <https://www.unicef.org/early-childhood-development>
- ECD Manual.* (n.d.-a).
- ECD Manual.* (n.d.-b).

Ginsburg, K. R., Shifrin, D. L., Broughton, D. D., Dreyer, B. P., Milteer, R. M., Mulligan, D. A., Nelson, K. G., Altmann, T. R., Brody, M., Shuffett, M. L., Wilcox, B., Kolbaba, C., Noland, V. L., Tharp, M., Coleman, W. L., Earls, M. F., Goldson, E., Hausman, C. L., Siegel, B. S., ... Smith, K. (2007). The importance of play in promoting healthy child development and maintaining strong parent-child bonds. *Pediatrics*, *119*(1), 182–191. <https://doi.org/10.1542/PEDS.2006-2697>

Grantham-McGregor, S., Cheung, Y. B., Cueto, S., Glewwe, P., Richter, L., & Strupp, B. (2007). Developmental potential in the first 5 years for children in developing countries. *Lancet*, *369*(9555), 60–70. [https://doi.org/10.1016/S0140-6736\(07\)60032-4/ATTACHMENT/2F933B60-1E68-4B3E-A529-97892C41953B/MMC2.PDF](https://doi.org/10.1016/S0140-6736(07)60032-4/ATTACHMENT/2F933B60-1E68-4B3E-A529-97892C41953B/MMC2.PDF)

Infancy and Early Childhood Development Paper Free Essay Example. (n.d.). Retrieved May 12, 2022, from <https://studymoose.com/infancy-and-early-childhood-development-paper-essay>

Jeong, J., Franchett, E. E., Ramos de Oliveira, C. v., Rehmani, K., & Yousafzai, A. K. (2021). Parenting interventions to promote early child development in the first three years of life: A global systematic review and meta-analysis. *PLoS Medicine*, *18*(5). <https://doi.org/10.1371/JOURNAL.PMED.1003602>

Jeong, J., Franchett, E., & Yousafzai, A. K. (2018). *World Health Organization Recommendations on Caregiving Interventions to Support Early Child Development in the First Three Years of Life: Report of the systematic review of evidence*.

Jeong, J., Siyal, S., & Yousafzai, A. K. (2019). Agreement between Fathers' and Mothers' Reported Stimulation and Associations with Observed Responsive Parenting in Pakistan. *Children 2019*, Vol. 6, Page 114, 6(10), 114. <https://doi.org/10.3390/CHILDREN6100114>

Leech, K. A., McNally, S., Daly, M., & Corriveau, K. H. (2022). Unique effects of book-reading at 9-months on vocabulary development at 36-months: Insights from a nationally representative sample of Irish families. *Early Childhood Research Quarterly*, 58, 242–253. <https://doi.org/10.1016/J.ECRESQ.2021.09.009>

OpenEpi Menu. (n.d.). Retrieved May 12, 2022, from http://www.openepi.com/Menu/OE_Menu.htm

Raikes, H., Luze, G., Brooks-Gunn, J., Raikes, H. A., Pan, B. A., Tamis-LeMonda, C. S., Constantine, J., Tarullo, L. B., & Rodriguez, E. T. (2006). Mother-child bookreading in low-income families: correlates and outcomes during the first three years of life. *Child Development*, 77(4), 924–953. <https://doi.org/10.1111/J.1467-8624.2006.00911.X>

Shonkoff, J. P., Garner, A. S., Siegel, B. S., Dobbins, M. I., Earls, M. F., McGuinn, L., Pascoe, J., Wood, D. L., High, P. C., Donoghue, E., Fussell, J. J., Gleason, M. M., Jaudes, P. K., Jones, V. F., Rubin, D. M., Schulte, E. E., Macias, M. M., Bridgemohan, C., Fussell, J., ... Wegner, L. M. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1). <https://doi.org/10.1542/PEDS.2011-2663>

Yue, A., Shi, Y., Luo, R., Wang, B., Weber, A., Medina, A., Kotb, S., & Rozelle, S. (2019). *Stimulation and Early Child Development in China: Caregiving at Arm's Length*. www.jdbp.org

APPENDIX A

Questionnaire

Serial No. _____

Date _____

Parents' knowledge, Attitude, and Practices related to Stimulation & Play for early child
development in Rawalpindi

Informed consent:

Greetings! I am _____ (**interviewer's name**) I was talking to _____ (**Name of Contact person**). You have been chosen for an interview related to your children and your relationship with them. In terms of Stimulation & play that promote children's mental and social development by responding to the child's need for care and by stimulating the child through talking, playing, and other appropriate physical and affective interactions, as it contributes to cognitive development, it will require 15 minutes to complete this interview and expect your full cooperation. Should I start the interview?

1. Record the gender of the respondent:

1	Male
2	Female

2. Please tell me what is your age?

Age)in years(

Surveyor to tick the correct option from below

1	16– 19 years
2	20 – 24 years
3	25 – 34 years
4	35 – 40 years

3. What is your marital status? (Terminate if unmarried)

1	Married
2	Widowed
3	Divorced

4. How many kids do you have under the age of five years?

1	# Of kids
---	-----------

5. Could you please tell me about the level of education of your head of household?

- 1 Illiterate
- 2 Primary (1to7 grade)
- 3 Secondary (8 to 12)
- 4 Higher education

6. what is your family setup.

- 1 Joint family
- 2 Nuclear

Section B

1. On a scale of 1 to 5, where 1 is not important and 5 is very important, you can use any number in between, please indicate how important these activities are to the development of a child.

		(Importance)	
Age 0 – 6 Months			
1	Touch, skin to skin, or caress the child	1 2 3 4 5	
2	Talk and/or sing to the child	1 2 3 4 5	
3	Take children for immunization	1 2 3 4 5	
4	Breastfeed exclusively	1 2 3 4 5	
Age 6 – 12 Months			
1	Draw the child's attention to people, things, or animals in and around the home.	1 2 3 4 5	
2	Talk, read, tell a story, and/or sing to the child.	1 2 3 4 5	
3	Play simple games with the child (e.g., peek-a-boo)	1 2 3 4 5	
4	Take children for immunization	1 2 3 4 5	
Age 1 – 2 Years			
1	Encourage the child to learn language e.g., names of familiar people and objects, animal sounds, simple words, and phrases.	1 2 3 4 5	
2	Talk, read, tell a story, and/or sing to the child.	1 2 3 4 5	
3	Provide simple toys to the child (e.g., a spoon, a plate, sensory ball, – can be self-made or a household object)	1 2 3 4 5	
4	Provide learning toys to the child (e.g., cloth books, bath books, stackers, shape sorter)	1 2 3 4 5	
Age 2 – 4 Years			
1	Read or tell a story to the child.	1 2 3 4 5	
2	Encourage the child to play and interact with other children	1 2 3 4 5	
3	Help/ encourage the child to hold a pencil, draw, sort shapes, and things.	1 2 3 4 5	
4	Encourage the child to learn and use new words, expressions phrases	1 2 3 4 5	

5	Do simple games or creative activities with the child (e.g., ball games, building blocks, molding, coloring, etc.)	1 2 3 4 5	
6	Teach the child basic values e.g., sharing food, sharing toys, not hitting other children...	1 2 3 4 5	

2. Attitudes towards play (indexing parent involvement, enjoyment, and structure) a “Be Poor are several statements about how some parents play with their child. please indicate how often you have behaved in the same way in the past two weeks (with your youngest child)

No.	Question	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1	I am too busy to play with my child when he/she wants to play with me (involvement)					
2	When my child wants to play with me, I encourage him/her to play with toys alone so that I can get on with other jobs					
3	Some days go by without me having had any time to play with my child					
4	If my child wants to play with me, I stop what I’m doing right away and play with him/her					
5	I avoid playing with my child when I’ve had a long day					
6	Playing with my child can be a chore					
7	It is much more convenient when my child enjoys playing on his/her own, without needing me to join in					
8	I avoid playing with my child when I have other jobs that need					
9	I look forward to playing with my child					

10	When my child loses interest in a game we are playing, I try to engage him/her in a new game					
11	I decide what we play with / how we play					
12	I schedule a time to play with my child each day					
13	I let my child decide what we play with / how we play					

3. Thinking back over the past two weeks please indicate how often you have played with your child in the flooring ways.

No.	Question	Never	Less than once a week	Once or twice a week	Several times a week
1.	Active physical play – e.g., lifting or swinging your child, rough and tumble				
2.	Gentle physical play – e.g., tickling, moving child’s limbs, playing finger games such as ‘this little piggy’				
3.	Play with toys – e.g., grasping/holding/shaking toys, putting rings on a stack, building blocks				
4.	Pretend games – e.g., make a toy dog bark, talk on a toy telephone, move a wooden block as if it is a car				
5.	Turn-taking play without toys/other objects – e.g., peek-a-boo, pat-a-cake, “where are baby’s eyes?”, “I spy”				
6.	Play with books – e.g., pointing to pictures in books and magazines, reading to your child				

7.	Noisy play – e.g., banging saucepans, child instruments				
8.	Singing – e.g., singing nursery rhymes				

4. Would you please tell me the sources of information you have used to find out about parenting or child care?

1	Family members	
2	Friends	
3	TV	
4	Social media platforms	

5. What are the barriers you're facing in talking and playing with children?

Answer

Surveyor to tick any of the below option based on the above question:

1	Lack of knowledge
2	Wrong beliefs
3	Operational challenges
4	No family support
5	Not facing any barriers

APPENDIX B

INFORMED CONSENT FORM

I am Mahjabeen, student of MSPH- Final Semester, Alshifa School of Public Health, Alshifa Eye Hospital, Rawalpindi. I am doing research on Parents' knowledge, Attitude, and Practices related to Stimulation & Play for early child development in Rawalpindi/Islamabad.

PURPOSE OF THE RESEARCH

The purpose of this study is to assess level of Parents' knowledge, Attitude, and Practices related to Stimulation & Play for early child development in Rawalpindi/Islamabad

PARTICIPATION

I do not anticipate that taking this study will contain any risk or inconvenience to you. Your participation is strictly voluntary and you may withdraw your participation at any time without penalty. I request you to answer the questions as honestly as possible. It will take no longer than 20 minutes to complete a questionnaire. All information collected will be used only for my research and will be kept highly confidential. Your identity and your responses will not be identifiable; all data will be stored anonymously.

As this is solely a student project no incentive will be provided. Once study is completed, I would be happy to share the results with you if you desire.

Thank you for agreeing to participate in this study. Your feedback is important.

I have read and understand the information sheet and agree to take part in the study.

Signature _____

Date _____