

CERTIFICATION

This is to certify that the dissertation entitled
**“INTERACTING BEHAVIOURS THAT MOTHER’S EXHIBIT DURING MOTHER-
CHILD INTERACTION BETWEEN HEARING-IMPAIRED AND NORMAL-HEARING
CHILDREN”**


is the bonafide record of research work done by

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during the period from July 2010 to May 2011

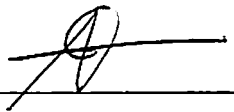
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ABBREVIATIONS

%	percentage
D'KECEK	Deaf Kids Excellence Centre Kelantan
e.g.	<i>(exempligratia)</i> : for example
et. al.	<i>(et alia)</i> : and others
HUSM	Hospital Universiti Sains Malaysia
IB	interacting behaviours
i.e.	that is to say; in other words (Latin <i>idest</i>)
M	mean
MCI	mother-child interaction
SD	standard deviation
USM	Universiti Sains Malaysia

ENGLISH – MALAY TERMS

Teacher	-	Guru
Manager	-	Pengurus
Helper	-	Pembantu
Observer	-	Pemerhati
Exhortation	-	Penggesa
Positive Verbalization	-	Pertuturan Positif
Negative Verbalization	-	Pertuturan Negatif
Nonverbal Reinforcer	-	Penggalak Tidak Verbal
Positive Facial Expression	-	Ekspresi Wajah Positif
Negative Facial Expression	-	Ekspresi Wajah Negatif

ABSTRACT

The aim of this study was to compare and determine the interacting behaviours of Malay Kelantanese speaking of hearing mothers to their hearing-impaired or normal-hearing children during mother-child interaction. Each group consisted of six mother-child dyads and ten categories of interacting behaviours were analyzed. The results indicated that the interacting behaviours of the mothers of the two groups varied within groups. However, on comparison, the two groups; mothers of hearing-impaired children and mothers of normal-hearing children showed no statistically significant difference ($p > 0.05$). Results revealed that the mothers of hearing-impaired children portrayed more of teacher and manager behaviour style but less exhortation, helper, positive and negative verbalization, nonverbal reinforcer, and positive and negative facial expression in the context of free play. The clinical implications of these findings are associated with the culture, education, and experience of the mother.

ABSTRAK

Tujuan kajian ini ialah untuk membuat perbandingan dan menentukan interaksi tingkahlaku bagi ibu-ibu berpendengaran normal yang bertutur bahasa Melayu Kelantan dengan anak mereka yang mempunyai masalah pendengaran ataupun pendengaran normal semasa interaksi antara ibu dan anak. Setiap kumpulan mempunyai enam pasangan ibu dan anak, dan sepuluh jenis interaksi tingkahlaku dianalisis. Keputusan menunjukkan bahawa interaksi tingkahlaku ibu dalam dua kumpulan tersebut mempunyai perbezaan. Walau bagaimanapun, dalam perbandingan statistik, kedua kumpulan tersebut; ibu-ibu dengan anak yang mempunyai masalah pendengaran dan ibu-ibu dengan anak yang mempunyai pendengaran normal menunjukkan tiada perbezaan yang signifikan secara statistik ($p > 0.05$). Keputusan menunjukkan bahawa ibu dengan anak bermasalah pendengaran menggunakan jenis interaksi tingkahlaku yang lebih menggambarkan sifat seorang guru dan pengurus tetapi kurang menunjukkan jenis penggesa, pembantu, pertuturan positif dan negative, penggalak tidak verbal, serta ekspresi wajah positif dan negative dalam konteks permainan bebas. Implikasi klinikal daripada maklumat ini menunjukkan interaksi tingkahlaku berkait rapat dengan budaya setempat, pendidikan, serta pengalaman ibu.

CHAPTER 1.0

INTRODUCTION

1.1 Mother-child interaction

Parent-child interaction is the way how parents spend time and communicate with their child during any time of the day. Interacting behaviour in mother-child interaction are ways mother exhibit their behaviour when engage in an interaction with their children. According to Skinner (1953), behaviour is defined as ideas of stimulus and response. These are sets of circumstances or individual events (stimuli) which cause people to act or react (response) to them. Children do not learn to talk all by themselves but they learn to communicate gradually as they spend time with the important people in their lives, especially their parents (Jan Pepper & Elaine Weitzman, 2004). It is further stated that the parent and the child have been communicating since birth. It is through this communication that they developed a strong connection with each other. Communication happens in the child's daily activities; from waking up in the morning, having a meal, going to school, getting dressed and even playing together.

Pepper & Weitzman (2004) made a statement that communication isn't just about talking. Whenever two people send messages of any kind to each other – even without words – they are communicating. Babies communicate long before they start to talk – by crying, making sounds, moving their bodies or reaching for something. According to them still, as children grow, they will let their parents (or to the person they wish to communicate) know what's on their minds in other ways, such as through gestures, speech and signs. Children communicate for many different reasons: to tell what they want or don't want, to get attention, to ask questions or to make comments. Linwood (2003) stated that the parent-child relationship consists of a combination of behaviors, feelings, and expectations that are unique to a particular

parent and a particular child. The relationship involves the full extent of a child's development. Of the many different relationships people develop over the course of the life span, the relationship between mother and child is among the most important.

In a statement made by the World Health Organization (WHO) Geneva (1997), it is very important for children to have stable and loving relationships with their parents usually their mother. Because of the love and affection they received, they learn to rely on the mother and to trust her. As they grow they learn by watching and imitating her, as well as by getting instructions and guidance from her. When they manage to do something, their learning is reinforced by her praise and approval. This is a normal scenario. For this the mother does not need any special training, this kind of care-giving comes naturally and instinctively to her. This is the ideal environment for a child to develop his / her potential to the maximum.

Linwood (2003) also confirms this by stating in their research that when children spend more time with their mother, their speech and language development will be within the normal developing milestone; provided that the child has no cognitive deficits or impairment. Furthermore, their social, emotional, and cognitive growth will develop age appropriately.

1.2 Parenting style

In a research conducted by Keshavarz & Baharudin (2009) on the parenting style in Malaysia, they found that in the Malaysian family culture, most of them tend to use authoritarian parenting as normative for rearing their children and to promote optimal development. Authoritarian parents are defined as highly controlling and demanding

but affectively cold, requiring children to be responsive to parental demands. Children are discouraged to negotiate over the family rules. These parents expect their children to obey explicit standards and rules, and disobedience is dealt with by forceful and punitive discipline. Authoritarian parents also are less likely than others to use more gentle methods of persuasion; it means that they tend to be low in affection, praise and rewards with their children to motivate the child (Keshavarz & Baharudin, 2009). In their research, it is also noted that in the Malay culture, parents have very important roles in directing the children toward the right behaviour and attitude. Parents are also responsible for transmitting the teachings of religion and culture to their children. Malay parents are regarded as clear authority figures and are obeyed without question. They pay attention to the spiritual growth in the development of the children. However, it does not imply to all Malay parents in Malaysia, even in Kelantan, for each cultural factor, such as race, ethnicity, and socioeconomic status may affect parenting styles (Baumrind, 1972).

1.3 Prevalence of hearing impairment children

Over the years, research has been conducted to measure the number of prevalence and incidence of children congenital hearing impaired. In Malaysia, it is noted that early detection of hearing impairment among newborn babies is delayed. According to Al-Khamesy (2002), majority of cases were diagnosed at the age of 3 to 5 years. In the remaining cases, hearing impairment was diagnosed after 7 years of age. Only about 25% of cases had been confirmed before the age of 2 years.

1.4 Speech and language acquisition of hearing impairment children

In one research by Nowakowski et. al. (2009), it is estimated that ninety percent of all children are born deaf to hearing parents. They stated that because of the mismatched modes of communication between hearing mothers and deaf children and the lack of responsiveness of deaf children with hearing mothers, these dyads often struggle to achieve the same levels of mother-child interaction as those experienced by hearing mother-hearing child dyads. Further stating in their research, it is shown that as deaf children get older and expectations for language comprehension increase, interactions between hearing mothers and deaf children break down. The mutual comprehension required between hearing mothers and deaf children for successful mother-child interactions decreases, with the result that deaf children do not comprehend their mothers' initiation acts and thus do not respond to them. Furthermore, hearing mothers of deaf children tend to be more controlling in their interactions than hearing mothers of hearing children.

This can be supported with the research done by Ineke & Jeannette (2001) which states that already very early in the child's development there are differences in the interaction between hearing mothers with hearing children and hearing mothers with deaf children. In terms of modality used during communication, the dyads of hearing mother and hearing children uses more verbal utterance (and thus less nonverbal utterances) as compare to dyads of hearing mother and deaf children who uses more nonverbal utterance (and thus less verbal utterances) in their interaction. The interaction between hearing mothers and deaf children probably proceeds less smoothly than with hearing children. The problems in the communication between hearing parents and deaf children have their influence on more aspects than only the

child's language development. Also the coordination and timing of interactions is influenced by the deafness of the child.

Findings by Nowakowski et. al., (2009) further suggest that hearing mothers make more demands and are less likely to respond to and expand on their deaf children's initiations, communicative acts, and foci of interest. In these situations, deaf children of hearing mothers become more passive, and are less likely to initiate interactions and to ask questions to gain more information about their world. This pattern of behaviour may result in a reduction of joint attention between hearing mothers and their deaf children, which in turn may result in mother-child interactions that are less frequent, shorter, and of poorer quality.

1.5 Research statement

Mothers of deaf children are unaware of the weakness in their interacting behaviour skill during mother-child interaction, to the speech and language development of their deaf children. There is a lack of awareness for mothers with deaf children in the way how they should interact with their children. Several researches have conducted studies between these dyads and concluded that hearing mothers make more demands and are less likely to respond to and expand on their deaf children's initiations, communicative acts, and foci of interest (Nowakowski et. al, 2009). In these situations, deaf children of hearing mothers become more passive, and are less likely to initiate interactions and to ask questions to gain more information about their world.

Other researchers also shared the same result in their study where in comparison with hearing mothers–hearing children pairs, hearing mothers of deaf children were more dominant, less responsive and not tuned to their child’s cognitive ability. On the other hand, deaf children were less responsive, less compliant and participated less when interacting with their hearing mothers. As a dyad, hearing mother–deaf child pairs established much less complex interaction, spent less time in joint activities and seemed to show less enjoyment (Janjua et al., 2002).

In the Malaysian family culture, most of them tend to use authoritarian parenting as normative for rearing their children and to promote optimal development. Taking into account the Malaysian family culture is more of authoritarian parenting style as normative for rearing their children and to promote optimal development, Keshavarz and Baharudin (2009) stated that in the Malay culture, parents have very important roles in directing the children toward the right behaviour and attitude. Furthermore stating, Malay parents are regarded as clear authority figures and are obeyed without question. According to Yahya (2006) authoritarian is define as parenting style with a high level of demanding but a low level of responsiveness, and is generally associated with poorer developmental outcomes for the child. The authoritarian parent values tradition and order, thus viewing obedience and conformity as virtues.

Since there is no investigation conducted in Malaysia, to determine the interacting behaviours favoured by most Malay Kelantanese hearing mothers of hearing impaired children while interacting with their children. The proposed study aims to address this issue by analyzing the interacting behaviour of Malay

Kelantanese mothers with hearing-impaired children and normal-hearing children to determine if there is a significant difference. Besides, this study also intends to compare and identify differences between interacting behaviours manifested by mothers with their hearing-impaired child and normal-hearing child.

1.6 Significance of the study

This research is conducted in order to obtain the favoured interacting behaviours of Malay Kelantanese mothers during mother-child interaction between hearing-impaired and normal-hearing children. To date, there are no such study been conducted in Kelantan. The outcome from this study will give some perspective on the interacting behaviour of Kelantanese Malay mothers of deaf children and typically developing children in Kelantan.

The rationale of conducting this research is to provide related health professionals information regarding the favoured interacting behaviours manifested by mothers of hearing-impaired children and normal-hearing children while interacting with their children and how the different interacting behaviours may affect the child's speech and language development.

This study can serve as a good starting point to increase awareness of public on the importance of interacting with their children and as well as encouraging clinicians to expand their role in providing appropriate counselling and managements to the patient's caregiver. Hence, if this study is not carried out, the implications illustrated above will not be able to achieve and many parents will not understand the

importance of a good communication skill in encouraging their children to acquire speech and language.

Furthermore, this study can be use as a guideline for other future research to be conducted in Malaysia to see the different mother interacting behaviours from other ethnics and cultures.

1.7 Research questions

- 1) Is there any different with the interacting behaviours manifested by the Malay Kelantanese hearing mothers of hearing-impaired children compared with hearing mothers of normal-hearing children?
- 2) What are the interacting behaviours that Malay Kelantanese hearing mothers tend to exhibit during mother-child interaction with their hearing-impaired children and normal-hearing children?

1.8 Objectives

- 1) To compare the interacting behaviours of Malay Kelantanese speaking of hearing mothers to their hearing-impaired or normal-hearing children during mother child interaction.
- 2) To determine the specific interacting behaviours shown by Malay Kelantanese hearing mothers with their hearing-impaired children or normal-hearing children.

1.9 Hypothesis

- **H₀: There is no significant difference between interacting behaviours exhibited by the hearing mothers of hearing-impaired children and normal-hearing children.**
- **H_A: There is significant difference between interacting behaviours exhibited by the hearing mothers of hearing-impaired and normal-hearing children.**

CHAPTER 2.0
LITERATURE REVIEW

Already very early in the child's development there are differences in the interaction between hearing mothers with hearing children and hearing mothers with deaf children. The interaction between hearing mothers and deaf children probably proceeds less smoothly than with hearing children (Gallaway & Woll, 1994). The problems in the communication between hearing parents and deaf children have their influence on more aspects than only the child's language development. Also the coordination and timing of interactions is influenced by the deafness of the child (Koester, 1994).

There have been a number of researches carried out in the Western countries that examined and compared the interactions of normal-hearing mothers with their hearing-impaired children and normal-hearing mothers with their normal-hearing children. Earlier studies focused on comparing the mother-child interaction of hearing-impaired children with that of age-matched normal-hearing children (e.g. Brinich, 1980; Goss, 1970; Wedell-Monnig and Lumley, 1980). It was found from these studies that mothers of hearing-impaired children were less likely to use verbal praise than mothers of the hearing, more likely to show verbal antagonism, and exert greater control over the conversation in a mother-child dyad by using attention-related behaviours, questions and instructions. These findings gave rise to the notion that hearing-impaired children might suffer the secondary handicap of controlling, discouraging, and negative interactions with their mothers which would provide a less facilitative environment for language acquisition and for social and cognitive development (Gallaway and Woll, 1994).

Nicholas & Geers (1997) focused on the communicative behaviour of 18 deaf and hearing children aged 36 months old. They used video recordings of mother-child interaction and coded it for modality and communicative function. They distinguished 10 types of intentionally communicative acts and 3 types of modality use. Results showed that hearing children used significantly more speech than deaf children did and that they used speech significantly more than the other modalities and for most communicative function types. Deaf children showed no significant difference in their use of the different modalities and they also had no uniform method of communication and no equal distribution of the use of the different modalities across the communicative function types.

Koester (1994) performed a longitudinal study to investigate the impact of early deafness on the cognitive, social, and communicative development of deaf infants with normally hearing mothers in the first 18 months of the child's life. He used video recordings between mother-child interactions during the face-to-face interaction. From his findings, he found that the deaf infants display more repetitious physical activity (including that involving the hands and arms), but also use fewer social signals or attempts to re-engage the mother during the still-face episode. Whereas for the hearing infants, they engage in more frequent looks to their mother, as well as more frequent gaze averts or looks away. He concluded that although mothers of deaf infants appeared to compensate by increasing their reliance on visual interaction strategies, the deaf infants used fewer overt signalling behaviours such as smiling, greeting, or reaching toward the mother and resorted more readily to self-comforting behaviours than did the hearing infants. However, the deaf infants also

engaged in higher levels of repetitious motor activity, which could be interpreted by the partner as another form of eliciting behaviour.

Research of Kaye & Charney (1980) focused on the conversational asymmetry in mother-child dialogues at 26 and 30 months of age. In their opinion the asymmetry exists because of the leadership role of the mother in creating and maintaining the interaction. They looked at the behaviour of mothers and children in general and also searched for variables in the early mother-child communication that will predict the individual child's progress as a language learner and conversation partner. They found that mothers used mostly TurnAbouts (a combination of a response and a command or question) to maintain the conversation. The children used mostly Mands (sort command or question) and Responses (a certain reaction) and less TurnAbouts. Mothers use TurnAbouts since the child's birth as a way to communicate with the child. On one hand, the TurnAbouts are a basic part of adult language too. Mothers treat their child as if they were a full communication partner and at the same time they model a role for them. On the other hand, TurnAbouts are a basic aspect of (non-) verbal mother-child interaction as well.

In another study by Ineke & Jeannette (2001), they focused on the verbal and non-verbal pragmatic aspects in mother-child interaction of 5 deaf and hearing 24-months-old children. Video recordings of mother-child interaction were made in free play and instructed situations at home. They analyze on the types of modality used by both mother and child, and as well as 3 types of communicative turn used. For the modality used, they found that both deaf and hearing mother-child pairs use much the NV+V (non-verbal and verbal utterances) modality in their communication. As

expected, deaf pairs use more non-verbal turns and hearing pairs use more verbal turns. For the types of communicative turn used, they found that Deaf children use mostly Responses (a certain reaction) and TurnAbouts (a combination of a response and a command or question) in their communication, respectively. Mothers of deaf children use mostly TurnAbouts and Responses in theirs, respectively. It seems that deaf mothers take care of the continuation of the communication with their TurnAbouts, but otherwise they follow their child in the communication with their Responses. The communication seems to be rather balanced. Hearing children use mostly Responses in their communication and their mothers use mostly TurnAbouts and Responses. In the hearing pairs it seems that the mothers maintains the communication with the TurnAbouts and have dominantly the initiative. The children follow their mother with their Responses. However, the percentage of Mands (sort command or question) differed not so much from that of TurnAbouts. Hearing children used slightly more Mands than TurnAbouts, while deaf children used slightly more TurnAbouts than Mands.

Research of Nowakowski et. al. (2009) focused on the joint attention and its relation to adaptive social behaviour involving mother-child interaction of 56 mother-child interactions at 18 to 36 months of age. They used video recordings between mother-child interactions and coded for maternally initiated and child-initiated success rates in establishing joint attention. Their findings show that the HD (hearing mother – deaf child) dyads were significantly less successful than the HH (hearing mother – hearing child) dyads in regard to maternal initiation of EJA (establishment of joint attention). For child-initiated success rates in EJA, they found no differences between the two groups. They concluded their findings are consistent with the finding

that hearing mothers rated their deaf children significantly lower on adaptive social behaviour than their hearing children. Furthermore stating, they found that lower ratings of children's adaptive social behaviour were related to lower maternally initiated and child-initiated success rates in EJA. They further concluded that their results provided further evidence for the idea that HD dyads are less successful in EJA and that deaf children exhibit less adaptive social behaviour than hearing children. However, it appears that HD dyads are not just less successful in EJA in general but that the breakdown is specific to particular behaviours and responses, particularly when joint attention is initiated by the mother.

Despite the fact that a number of studies concerning the interaction between hearing mothers and their hearing-impaired children have been conducted in Western countries, little has been done in addressing this issue in Malaysia, particularly Kelantan. Generalisation of the findings from studies conducted in Western countries to the Malaysian society was impeded by the differences existing between the Western culture and the Malaysian culture. For instance, Keshavarz and Baharudin (2009) found in their study that the parental style of Western and Asian cultures were many differences and may vary from one ethnic culture society to the other. Every culture and civilization develops a definite pattern for raising children and what counts as good or adoptive in one culture can be viewed as maladaptive in another society. For example, Asian culture is considered to be group-oriented as individuals are taught to cooperate with the larger unit (family, community, country). Therefore, encouragement of independence and pursuit of Western society would be seen as poor parenting in traditional Asian society like Malaysia. Hence, parenting styles may have different consequences for children's development across different cultures.

Malaysian parents are from the collectivist group and accept the collectivist values. Consequently, most of them tend to use authoritarian parenting as normative for rearing their children and to promote optimal development. It is also stated that in the Malay culture, parents have very important roles in directing the children toward the right behaviour and attitude. Malay parents are regarded as clear authority figures and are obeyed without question (Keshavarz and Baharudin, 2009).

These divergent values influence the ways mother interact with their children. In addition, it is difficult to make comparisons between the studies that have been done and draw conclusions on the mother-child interaction of hearing-impaired children because of a number of methodological problems (Price, 1997), including: (a) different populations used in different studies; (b) data collected in a variety of settings and using a variety of different methods; and (c) different matching procedures employed in different studies. Given the importance of the mother-child interaction in facilitating the language development in young children and the few studies that were conducted in Malaysia; particularly Kelantan, and also the fact that intervention is often considered necessary to assist oral language development in hearing-impaired children (Gallaway, Hostler & Reeves, 1990), it is worth investigating the nature of the mother-child interaction of hearing-impaired children in Kelantan.

CHAPTER 3.0
RESEARCH METHODOLOGY

3.1 Research design

The research design for this study is a quantitative and qualitative research using the MANOVA test to analyze the results of interacting behaviours portrayed by the mothers of both groups. Each session between the mother and child will be video recorded for about 25 minutes (only 5 middle minutes being utilized for data collection) because according to Pino (2000), this will allow more time for the mothers to begin interacting and to settle into the setting.

3.2 Population Study

Kelantanese Malay mothers-child dyads were employed in this study. The subjects were then divided equally into two groups of hearing mothers with hearing-impaired children and hearing mothers with normal-hearing children. The hearing-impaired children were recruited from the Audiology Clinic, Hospital Universiti Sains Malaysia and from Deaf Kids Excellence Centre Kelantan (D'KECEK), Pusat Pengajian Sains Kesihatan, USM. The duration for the data collection was 2 months, starting from January 2011 to February 2011. All hearing-impaired children were diagnosed by a certified audiologist as having severe to profound sensorineural hearing loss bilaterally. In the other sample, the children of normal-hearing were recruited from IQ Islam Tadika, Kubang Kerian. All normal-hearing children had no reports of visual and hearing disabilities. Please refer to Figure 3.1 for the flowchart of the study.

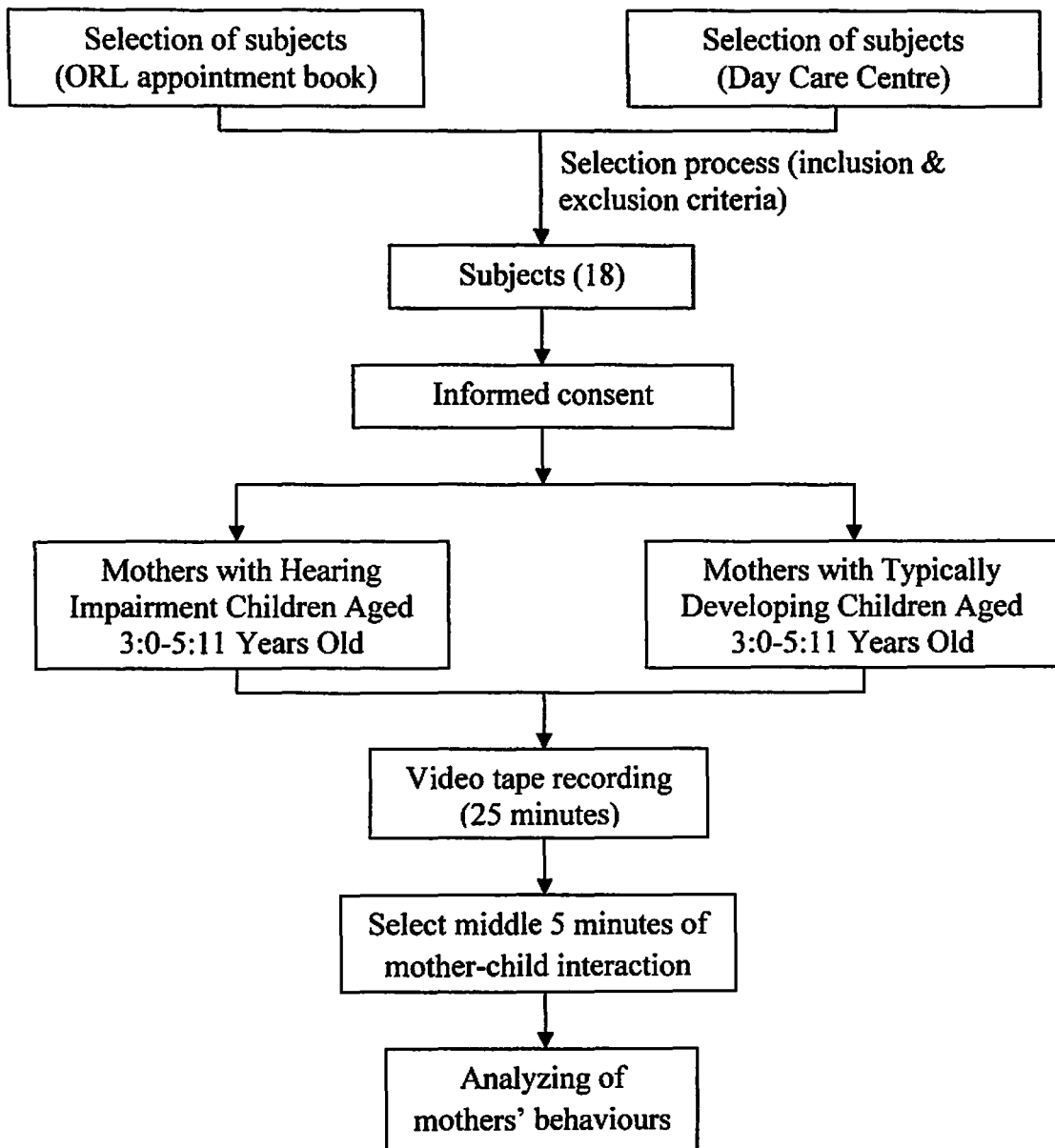


Figure 3.1: Flowchart of the research

3.3 Sample size

The age-range for the participants is from 3:0 to 5:11 years old. The sampling size of this research, it is based on the study of Pino (2000). The sample size was calculated based on the following information: significance level of 0.05, power of study of 0.8, mean difference of 2.83, standard deviation 1 of 2.45 and standard deviation 2 of 1.5. Using the "comparison of two means" option in Medcalc software (www.medcalc.be), the sample size required is 9 for each group (a total of 18 subjects).

3.4 Inclusion criteria

Participants will be chosen based on the inclusion criteria for this research which is Kelantanese Malay mothers raised and born in Kelantan with children aged 3:0 to 5:11 years old age born and raised in Kelantan. Child must have either normal-hearing or hearing-impaired (severe to profound sensorineural hearing loss bilaterally). The child must be having severe to profound hearing loss because according to Cross et. al. (1980), the child with only residual hearing will have a more significant effect on the mother's behaviour in responding during mother-child interaction because their child's hearing ability is not within the speech sounds frequencies. For the hearing impaired children, they must be wearing hearing aids bilaterally. Also both mother and child dyad must be healthy.

3.5 Exclusion criteria

Participants will not be chosen if the hearing-impaired children are not wearing hearing aids bilaterally or if the child acquired hearing loss not due to congenital factor. For mothers who are not born and raised in Kelantan will be

excluded from the study. If the mother had moved or studied overseas for a period of time, they too will be excluded from the study. For the mothers who married with a non-Kelantanese husband will also be excluded from the study. If the child's aged is not within 3:0 to 5:11 years old, they will not be allowed to participate in this study. Any medical complications besides hearing loss in the child will be excluded from the study and any health problems in the mothers will also be excluded from the study.

3.6 Instrument

The research tools that will be used in this study are a Sony Camera Video Recorder to recorder the mother-child interaction for 25 minutes. A selection of toys for the session will be given to the mothers to play with their children and the same set of toys was used in all the session for all mother-child dyads. A list of the selected toys can be found in Table 3.1. A checklist will be used by the researcher during the mother-child interaction and its categories is based on Pino (2000) which were adopted and modified for this study (refer Table 3.2 or Appendix 1 and 2).

Table 3.1: List of selected toys for the mother-child interaction

Item	Type of toys
1. Cooking game set and toy fruits set.	Spoons, forks, knives, plates, cups, tea pot, cutting board, apple, banana, orange, grapes, and watermelon.
2. A baby doll that can be feed.	Baby doll and milk bottle.
3. Farm Animals with domestic animals.	Cows, chickens, ducks, and goats.
4. Toy cars.	Ben Ten cars.
5. Bubbles.	Able to be blown in different sizes.

3.7 Study location

All the sessions recorded will be conducted inside a room at the Tadika IQ Islam and in the Klinik Bahasa-Pertuturan, Pusat Pengajian Sains Kesihatan as the natural setting instead of at home. The main bias that will arise in this observation is that the room setting in the kindergarten and the clinic will not fully portray out the mother's and child's behaviour due to the different setting, where initially, they are used to their own home setting. However according to Beckwith (1996), it is stated that setting the clinic or any other place as the natural setting for the parent child observation perturb the ordinary routines in the belief that adapting to perturbations is more revealing of individual differences than reacting to familiarity. This condition suggests that the researcher will have a better observation of the behaviours exhibited during the mother child interaction as they will be more revealing in their behaviours during the session, in an outside environment from their home setting.

3.8 Study procedure

All subjects was selected base on the inclusion criteria and after that, consent will be taken from mothers for video recording of the session. Mothers will be asked to, "just play with your child the way you usually do". No further instruction will be given to the mothers throughout the video recording session. The mothers will be told to ignore the researcher as much as possible. The mothers are also required to maintain typical communication patterns with their child and conversation directed toward to researcher is discouraged. During the video recording, the dyads will be required to maintain their interaction within the scope of the camera. The video recording will last for 25 minutes and only the middle 5 minutes will be chosen for analyzing the mother's portrayed behaviours. Mother's behaviour will be analyzed

using the behaviour checklist through the video recording and also referring the transcribed data. Please refer to Appendix E for the definition to each type of interacting behaviours and Appendix F for the mother's interacting behaviour form.

3.9 Data transcription

For each video-recording of the mother-child dyads, the middle 5-minutes segment of mother-child interaction will be analysed. The mother-child interactions between each dyad will be transcribed orthographically. Each interaction will be transcribed in orthography along with a description of behavioural events and contextual notes. Mother's utterance boundaries were defined by intonation contour and pausing, and also with reference to the children's utterances which helped to ease the problem of contextual ambiguity.

3.10 Coding system

A coding system which composed of ten categories of interacting behaviours was used in coding the maternal behaviours. The ten categories used in the coding system were adopted and modified from the previous study of Pino (2000) and can be found in Table 3.2.

Considering the culture in Malaysia, the characteristics noticed with mothers who portrayed teacher-liked behaviours generally ask questions more to their children. The form of questions are more of "what" and "why" and they have the tendency to also give input to their child the purpose of a certain activity is carried out. For mothers who portrayed manager-liked behaviours, they are more persistent in repeating their statement and trying to influence the child to actually follow what they