1.1 Background of the problem

Traditionally, the study of Child Development had considered "birth" as its starting point. In-depth study of various factors influencing the child development and behavior has been done but less focus had been given on the prenatal factors which influence the child. However, current insight suggests that prenatal influences explain a significant part of variation in later behavior and development. Small variations in the fetal physiological environment induced by internal or external factors can be of critical and long-lasting importance given as increased sensitivity of the rapidly developing brain. This calls for the need of a shift in a paradigm in infant studies from postnatal to prenatal determinants of development.

Post Natal study begins with the neonatal Stage. A neonate is very much a whole organism and person. The most valuable asset of a neonate is its potentiality for continued growth and development. Behaviour of the human infant at the time of birth is far more complex than cursory
observations might lead one to believe. Many of the neonatal behavior patterns are integrated and purposeful.

The prenatal and early postnatal movements represent a generalized type of activity under sub cortical control that is the brain stem, lying under the cortex is responsible for the involuntary primitive reflexes of infants. Neonates are reacting involuntarily through reflex behaviour. The presence or absence of reflexes is a guide to evaluating neurological development, since there is a definite timetable for the development and dropping out of most reflexes (Taw 1990)

For a Neonate the conditions in which he had been living change dramatically and he is exposed to a climatically, physiologically and nutritionally novel environment. He is now fully exposed to gravity against which he must achieve at least rudimentary postural adjustment. Moreover he is exposed to a whole range of novel sensory stimuli. Reflexes are primitive reaction to the stimuli. Study of reflexes gives the state of the nerves system.

A large number of pre and postnatal factors can affect the reflexes of a neonate. The manifestation and development of the neonate's repertoires is
affected by a large number of factors (Menten 1976). Pregnancy complication, Maternal factors, obstetric complication during delivery, the postnatal adaptation syndrome and later the physiological disturbances of the gastrointestinal tract. All these factors may affect the general well being of the neonates and some at least are directly correlated with the State of the infant’s nervous system (Beintema 1968, Menten 1976).

In ancient times, it was already a common belief that the emotional State of a mother may effect the child (Ferreira 1965) Prospective studies have substantiated this belief by reporting that maternal stress or anxiety in pregnancy is associated with an adverse obstetric outcome. This is reflected in increased risk for premature delivery, or low birth weight for gestational age (Page et al. 1990 Hedeguard et al., 1993, Copper et al 1996, Tan et al 1994). Prenatal Stress, such as maternal stress significantly worsened the scores on the neonatal neurological examination. Certain personality factors of the mothers may influence the mother-neonate interactions after birth, which could in turn affect the infants’ behavioral development. For instance post nataally depressed women are less responsive and sensitive to the Children (Cohn and Tronick, 1989; Field 1992) which has an effect on the behavioral of the child as well. Moreover women with high stress have a
tendency to have high overall level of distress also after birth, which could alter their perception and acceptance of their infant. Maternal stress, and expectations which is prenatal its relation to the postnatal state, such as maternal acceptance for the child and the situation and its effect on the neonatal reflexes is a line of study which offers a challenge for research.

Other factors like gestation period, mode of delivery, birth weight and gender also are areas where study with regard to neonatal reflexes is not much attended. Though these factors have been taken into consideration by the researchers on the impact of child development, but the neonatal stage is been untouched.

Harmful events during delivery and mode of delivery explain only small proportions of disorders in child behaviour and development (Goodman and Stevenson 1989; Taylor et al. 2000). Prenatal factors and their presumed programming effects on the fetal brain have been incriminated to play a role in developmental psychology (Vam and Selten 1998; Selten et al 1999). However prospective studies on the possible involvement of maternal stress and expectation on neonatal reflexes are almost lacking in the fields of child psychiatry and developmental psychology.
Neonatal reflexes exhibited by the neonates are surprising when they differ from one individual to the other and this area is not much explored. Reflexes more accurately described as unconditioned reflexes are not learned or developed through experience. It is therefore to be considered as a prominent area for an in-depth study to understand all the possible prenatal, perinatal and postnatal factors influencing the reflexes.

1.2 Scope and Purpose of the Study

Neonates vary from one another in both their mass activity and specific activity. Neonatal reflexes are the reflexes that are present at birth. They are believed to be inborn and have predictable action patterns. Since these reflexes are purely innate and not learned or conditioned it can be considered as the first possible ability of the human to react to a stimulus. Normally developing neonates are expected to respond to specific stimuli with a specific, predictable behavior or action. Any variation in or absence of response may be a sign of abnormality in development. Understanding the importance of the neonatal stage and the reflexes the purpose of knowing the factors which influence the neonatal reflexes is considered to be an essential effort in research.
Regarding the reflexes in neonates only very few studies have been conducted abroad but there are a good number of studies in other countries regarding the early capabilities of neonates. Yet they are found to vary with regard to the type of research, type of sample, method of collection, scoring and analysis of data.

There is also no evidence of the effect of mothers experiencing stress in pregnancy on the reflexes of the neonates, when it is understood that the reflexes exhibited is a sign of the neurological state of the neonate. However Dodge (1992) states that mothers experiencing stress during their pregnancy stage have effect on the later development and it is also related to behavioural problems in children. But there is no evidence on that of mothers experiencing stress in the last trimester of pregnancy affects the early response of the neonates. Studies have shown that children of depressed pregnant mother showed brain wave activity that was unusual (Felsin 1989), these results are steps in studying the relationship between the prenatal state of the mother and its influence on the child.

Expectations of the pregnant mothers, reaction towards delivery or childbirth and the acceptance towards the child and the situation are areas where much research evidence is not obtained. There is no evidence linking
maternal expectation or acceptance to neonatal responses. This area of research is a neglected one and hence calls for special emphasis and effort. No studies with respect to mode of delivery and its effect on reflexes have so far been done as far as the investigator’s knowledge goes. Hence an in-depth study has been made by the investigator in this area among caesarean section delivered and normal delivered neonates with regard to gestation period, the effect of birth weight and sex of reflexes of neonate.

Studies of different human societies show that despite a variety of cultures there is a core in behaviour that is constant (Sonde 1982). Very few cross-cultural studies on neonatal responses are conducted, hence this study will explore in two different society and culture that is in Kerala and Bahrain.

So this area of study is likely to generate a great deal of debate and further research and as it is an untouched field and therefore it will be challenging for the investigator. It is absolutely an area of research which can bring out novel information because there is still a long way to go before arriving at final conclusion with regard to the reflexes of neonates and the influence of gestation period, mode of delivery, Maternal factors like stress, expectation and acceptance, birth weight and gender.
Maternal stress and its relation to neonates is an area, which can help the parents to be. Maternal expectation and acceptance is influenced by the culture, tradition and social expectation. The relationship between the neonates and maternal factor can bring out more information for the counselors, parents and all those who deal with children. The effect of mode of delivery and gestation period in neonatal responses can help the pediatrics, neonatologist and mothers to know more about the influences of the same. It is important for health care providers to better understand the impact of stress on health outcomes.

1.3 Aim of the Present Study

The present study is undertaken with the aim of finding the relationship of Maternal factors like Maternal Stress, Expectation and Acceptance with Neonatal reflexes and also to study the Neonates reflex with respect to Gestation period, Mode of delivery, Gender, Birth weight of Kerala and Bahrain Neonates.

1.4 Objectives of the present study

The objectives of the present study are as follows.
1.4.1 To find out the relationship between maternal stress and reflexes of neonates born in Kerala and Bahrain and to make comparison between two.

1.4.2 To find out the relationship between maternal expectation and reflexes of neonates born in Kerala and Bahrain and to make a comparison between the two.

1.4.3 To find out the relationship between maternal acceptance and reflexes of neonates born in Kerala and Bahrain and to make comparison between the two.

1.4.4 To compare neonatal reflexes born in Kerala and Bahrain with reference to mode of delivery, gestation period and gender.

1.4.5 To compare the maternal factors like Maternal Stress, Maternal Expectation and Maternal Acceptance between the Kerala and Bahrain mothers.

1.4.6 To find out the relationship between Maternal stress and expectation.

1.4.7 To find out the relationship between Maternal expectation and acceptance.
1.5 Definitions of Concepts used in the study

Concepts used in the study are explained as follows.

1.5.1 Neonate

Neonate refers to the period from birth to four weeks of age. (Hurlock 1972). The new born babies of one to three days old are termed as neonate in the present study.

1.5.2 Neonatal Reflexes

The behaviour patterns and responses of neonates that are well integrated and which are elicited by a specific stimulus are called Neonatal Reflexes (Hurlock 1972).

The neonatal response to specific stimuli are the neonatal reflexes and in the present study includes grasping, Babinski and rooting reflexes.

1.5.2.1 Babinski reflex

The babinski reflex is characterized by fanning out of all five toes and the stretching forward of the big toe when the bottom of the foot is stroked or tickled (Leijon 1982).
1.5.2.2 **Grasping Reflex**

The grasping reflex is characterized by the grasping of an object that is placed crosswise on the palm of a newborn infant or neonate. It is a sign of normal neurological development (Jhonson1976).

1.5.2.3 **Rooting Reflex**

When a neonate’s cheek is touched or stroked it will respond automatically by turning head toward that side. (Illengworth1976).

1.5.3 **Maternal stress**

The term stress has been used in different ways by different theorists. Themes and variation (1992) define stress as any circumstances that thereafter or are perceived to threaten one’s well being and that there by tax one’s coping abilities.

In the present study the maternal stress is the body’s response to stimuli or anything that disturbs its natural physical, emotional or mental balance by the pregnant mothers.
1.5.4 Maternal Expectations

Lersch (1972) has defined expectation as the anticipation and actualization in the imagination of connecting events in their relation to the objectives of our aspiration.

The Expectant mother’s prediction and expectation of the child to be born is termed as Maternal Expectation in the present study. The psychological prediction, strictly speaking means forecasting the probability of the personality intelligence, affection and mother child relationship of the expectant mothers.

1.5.5 Maternal Acceptance

Acceptance is defined as one’s ability to adapt to the changed situations or conditions in ones life. It is a positive take in of the existing events to one’s behaviors. Kelly (1965) has suggested that acceptance functions as cognitive guidelines to one’s behaviour.

Maternal Acceptance in the present study is considered as the positive take in of the mothers after the childbirth to the existing situation, adapting
to the change occurred in the life with the birth of the child and adapting the child as itself.

1.5.6 Gestation Period

Gestation period is the period from the day of the mother’s conception to the birth of the baby. The normal Gestation Period is Nine months and nine days. (Dewayne 1983)

In the present study term neonates are referred to the neonates those who are born after nine months and nine days. Preterm neonates refers to those who have less gestation period than the term neonates or born between eight and nine months.

1.5.7 Mode of delivery

Mode of delivery is the means or the method of delivery by which the baby is born. (Brown 1987). In the present study normal delivery referred is through the vaginal path and caesarean delivery referred is through the surgical method.

1.5.8 Birth weight

Weight of the child within first 15 minutes after birth is referred as birth weight (Herozog 1989)
1.6 Hypotheses

The following hypotheses are formulated to conduct the study.

1.6.1 There will be significant correlation between Neonatal reflexes with

(i) Maternal Stress
(ii) Maternal Expectation
(iii) Maternal Acceptance
(iv) Birth Weight of the Neonates

1.6.2 There will be significant correlation between Maternal stress with

(i) Maternal Expectation
(ii) Maternal Acceptance
(iii) Birth Weight of the Neonates

1.6.3 There will be significant correlation between Maternal expectation with

(i) Maternal Acceptance
(ii) Birth weight of the Neonates
1.6.4 There will be significant correlation between Birth weight of the Neonates and Maternal Acceptance

1.6.5 There will be significant difference with regard to the neonatal reflexes of

(i) Preterm and term neonate

(ii) Male and Female Neonate

(iii) Kerala and Bahrain Caesarean delivered neonates.

(iv) Kerala and Bahrain Normal delivered neonates

(v) Cesarean and Normal delivered Neonates.

1.6.6 There will be significant difference in Maternal Stress of Kerala and Bahrain expectant mothers.

1.6.7 There will be significant difference in Maternal Expectation of Kerala and Bahrain expectant mothers.

1.6.8 There will be significant difference in Maternal Acceptance of the Kerala and Bahrain mothers.