

Effects on the fetus during pregnancy



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This essay will describe prenatal development, labour and birth. Before getting pregnant women take folic acid, this helps prevent birth defects that can affect the brain and spinal cord. Women wanting to get pregnant will also ensure that they eat healthily and drink less alcohol.

Prenatal development is the period from conception to birth, it has three periods within the nine-month period; the start of life occurs when the sperm and ovum unite, this is the germinal stage and lasts between 8 and 10 days. The fertilised egg is called a zygote, the zygote will divide itself again and again, after approximately a week it will implant itself into the wall of the uterus, by two weeks this will be completed and is now an embryo, the embryo is protected by the amniotic sac, it is made of two membrane sheets the outer sheet is the chorion and the inner layer the amnion The embryonic stage lasts until the end of the second month, the embryo begins to take on the look of a baby with a body, head, arms and legs. The final stage is the foetal stage, the foetus will begin to develop fingernails and eyelids as well as begin to move, by the seventh month the foetus can breathe and cry; the last two months is when the foetus grows and puts on weight. (Thomas Keenan and Subhadra Evans, 2010)

During pregnancy, the mother will be monitored by the doctor and midwife to check for blood type, anaemia, urine tests, glucose testing and blood pressure. Ultra sounds will take place at 12 weeks and 20 weeks, this is to check the baby's heart rate and growth. The bump will also be regularly measured.

The first stage of labour begins with contractions this starts with a backache and then gradually becomes stronger, also at this point the mother will have a 'show' this is where the plug of mucus from your cervix comes away. Next the waters may break this is the amniotic fluid that the baby grows in. In the second stage of labour the contractions continue they get stronger and last longer, as this happens the cervix softens and dilates. Once the cervix has expanded enough, usually 10cm, the mother will begin to bear down and push. The head will come first; breech birth is when the feet come first, once the head is born the baby is then turned so it can arch its back and allow the shoulder, one at a time to pass, the rest of the body then passes through easily. The umbilical cord is then cut. The third stage of labour comes after the birth, the placenta separates itself from the wall of the uterus and is pushed out by one final contraction, often the mother has been given an injection and this helps shrink the uterus allowing the midwife to pull it out. The midwife will check that the placenta and cord are intact otherwise there is a risk of infection. (Reynolds, 1987)

Whilst in the womb the baby will be covered in vernix and lanugo, the vernix acts as a moisturiser for the baby whilst it is in the amniotic sac and lanugo are fine soft hairs that cover the baby, it acts as an anchor to hold the vernix. This usually falls off just before birth but some babies still have lanugo when they are born. The midwife will check the baby using the APGAR score 1 minute and 5 minutes after the birth, this is to check activity, pulse, grimace, appearance and respiration. The baby is scored on the results: 7-10 baby is in good shape; 4-6 baby may need help; 3 or less immediate life saving measures needed. Postpartum care begins after the

birth and lasts 6-8 weeks, this entails making sure the mother eats well, rests enough and cares for her vagina. A new mother will go through physical and emotional changes and it is important that she looks after herself.

There are many things that can affect the foetus whilst being pregnant, this can either be genetic and chromosomal such as spina bifida and Down's syndrome, Down's syndrome is caused by having an extra chromosome instead of 46 they have 47 chromosomes. This can be detected early in the pregnancy through ultra-scans and a test called amniocentesis, the doctor will extract a small amount of the amniotic fluid and examine it. (Reynolds, 1987) Infections that have been contracted by the mother can cause congenital anomalies such as TORCH, this includes Toxoplasmosis, other (syphilis, varicella-zoster, parvovirus B19), Rubella, Cytomegalovirus (CMV), and Herpes infections. These infections cause mild maternal morbidity and cause serious consequences to the foetus, unfortunately treatment has no effect on the outcome of the foetus. A vaccine called the MMR (Measles, Mumps and Rubella) is given to all children in 2 doses, first between 12 to 15 months and then again between 4 and 6 year old to prevent Rubella.

Other factors are teratogens, these are classified as physical infectious or chemical agents and they can cause defects in the embryo or foetus; this can be through smoking and drinking and can affect the foetus by low birth weight or foetal alcohol syndrome. (FAS) Drugs such as cocaine are harmful to the foetus, babies exposed to cocaine tend to be born prematurely or have low birth weight, " cocaine exposed babies are three times as likely to have a very small head circumference or to show some signs of neurological

abnormalities.” (Helen Bee and Denise Boyd, 2004) Unfortunately, it is still unclear what the long-term effects of cocaine use are to the unborn child.

The mother’s health and age can affect the foetus, the mother needs to have nutrients and calories to prevent malnutrition otherwise there is the risk of stillbirth, low infant birth weight or infant death in the first year. Also, ensuring the mother has folic acid reduces the risk of spina bifida this is an abnormality in which the lower part of the spine does not close. (Helen Bee and Denise Boyd, 2004) Whilst it is important that the mother has a sufficient diet it is also important that she does not put on too much weight, this could lead to a cesaren delivery and be prone to postpartum obesity this includes heart disease and diabetes. According to the Human Reproduction journal, data was used to look at the risks associated with pregnancy in women over the age of 35, their findings showed that there is an increased risk of gestational diabetes, placenta praevia and breech presentation and still birth was higher in older women. (M Jolly, N Sebire, J Harris, S Robinson and L Regan, 2000)

Fortunately, there is a lot of support to help expectant mothers such as doctors, midwives and health visitors. Pregnant mothers are routinely monitored to check the development of the foetus and are assessed for any complications that may arise, it is important to inform the doctor of any family impediments so that regular tests can be conducted and support is put in place for the family.

The attachment theory originated from the work of John Bowlby, he states that all children need to form a bond with someone, not necessarily the

mother but the main caregiver; this is known as monotropism. Bowlby said that babies need to maintain proximity to their caregivers. He followed on from Freud's psychodynamic theory and from ethology which is the study of animal behaviour, to develop his theory about the "bonding relationship that develops between parents and children and the disruption to that relationship that can occur through separation, bereavement or emotional deprivation". (Barnes, 1995)

Bowlby felt there were 4 stages of attachment, the first stage preattachment occurs in the first few months of life, the child will not show any preference to any caregiver. The second stage is attachment-in-the-making and this is from 2-7 months of age, the child will begin to discriminate between who they know and who they do not know and will have a preference. The third stage is clear-cut-attachment, the child has developed attachments with their main caregivers and will actively seek them out, they also show signs of distress when they cannot see their caregiver. The final stage is goal-corrected partnership and this occurs from about 2 years of age, the child begins to be aware of the caregiver's feelings, up to this time the relationship has been one-sided, now the relationship is being reciprocated. (Peter Smith, Helen Cowie and Mark Blades, 2003)

The maternal deprivation hypothesis by John Bowlby came about from a study he did with delinquent boys, the study showed that continued disruption of the attachment between child and primary caregiver resulted in the child struggling to develop relationships with others as well as having emotional and behavioural problems. Bowlby felt there was a critical period, if the child had not formed an attachment by the time they were 2, then

attachment would not occur, causing the child to then develop issues later in life. Bowlby later amended this to 5 years.

Michael Rutter developed Bowlby's theory further by suggesting that if a child does not develop an attachment at all this is privation, but if the child has formed a bond but this bond has been broken this is deprivation.

Privation may occur because the child has had a lot of carers, Rutter felt that these children who are not distressed when separated will likely go on to be clingy, attention-seeking and as they get older the inability to stick to rules, form lasting relationships and in some cases anti-social behaviour and intellectual development. (McLeod, 2008)

As a result of Bowlby and Rutter's findings there has been changes in the care environment. Before children without parents would stay in orphanages or children's institutions, now children go into foster care and be with one family as opposed to having many carer's. Pre-schools now assign a key worker to help children integrate into school life this allows the child to form an attachment with them making the child feel more secure. Previously children staying in hospital would stay on their own now hospitals allow mothers/caregivers to remain with their children so the child is not left alone feeling scared and worried.

Peer relationships are important to the social development of the child, it is through interacting with peers that children learn about their social world and how to interact within it.

In the home the child will interact with their parents and siblings, Older siblings tend to have a lot of patience with their younger siblings and they

act as their attachment figure in strange situations. Research does suggest however that the child will develop their social skills firstly through their parents, parents provide the playmates and watch the interactions ensuring behaviour is good, the parent will also play with the child themselves. Older siblings will be the ones that teach the child the rules of socialization.

Babies from 2 months old are aware and look at one another, by 6 months they will smile and stare at others and by 1 year they will intentionally smile, frown and use other gestures to their play partner, they are aware of how the other behaves too and adjust their behaviour to respond to theirs. From 1 to 2 years the child will play alongside others, this is parallel play. Their interactions last longer and language will become a factor in play; as the child moves from 2 towards 3 they begin to understand rules of social exchange and can show empathy towards others. From 3 to 5 years the child