Focused attention of young children during free play

6 young children, 3 girls and 3 boys, ranging from the age of 37 months to 84 months were observed interacting with a room full of age related toys for a period of 5 minutes. The observation was a non-participant structured, observation. The aim was to see whether the attention of a child was affected as the age of the child increased.

The attention of the child was to be measured by the number of toy changes the child made.

The study found that there was a very strong correlation between age and toy change. The Pearson's correlation value was -0. 813. As the child got older the number of toy changes decreased thus the level of attention increased.

The study supports Ruff and Lawson's (1990) study that as age increases so does focused attention, contradicting Vandenberg's (1984) study, that as age increases, the attention of a child decreases.

Introduction.

A popular topic of developmental inquiry concerns the development of focused attention in young children, however very little is known about the development of sustained attention during the preschool years.

According to the encyclopaedia of psychology (2000) 'attention can be defined in terms of the clearness of sensory processes' according to it, observers can selectively attend to inputs which they find of interest.

The attention of infants is sometimes known as voluntary or captured, certain aspects of the environment are seen to demand attention. For example infants are very likely to respond to brightly colored, flashing or moving objects.

Past research by Moyer and Gilmer (1955), found that attention spans of young children can be very long and the attention span of the young during free play depends on the type and the number of toys available to them.

Ruff and Lawson (1990) also did two studies on focused attention of young children. The first study, they studied children from the age of 1 till 3. 5 years and found that focused attention increased significantly over the ages studied. In the second study children from the ages of 2. 5 years to 4 years was studied and it was found that focused attention again increased as the child got older.

Krakow (1987) also did a study of children aged between 2 to 6 years and he found that as the child got older their attention span also increased.

Much of the research supports the fact that attention increases as age increases, however a study by Vandenberg (1984), contradicts theses studies.

Vandenberg studied children between the ages of 4 and 12 years. He found that younger children's attention tended to be dominated by one toy, whereas older children tended to explore the other possible toys available before making a choice.

Another study, conducted by Power et al (1985) also studied infants at play. They studied infants from the ages of 12 - 24 months on two different days and they found that there was a very low correlation between attention span and infant age.

The present study conducted, studied 6 children, 3 girls and 3 boys, between the ages of 37 months and 7 years. The study involved, allowing the child to play on their own in a room full of toys.

There were different toys for different ages and for the boys and the girls. The child was left to play on their own with an adult present in the room. The aim was to see if a child's focus attention varies as the child gets older.

The aim was to see if our study supported Ruff and Lawson's' study, that focused attention increases as the child gets older or if our study supported Vandenberg's study, that focused attention decreases as the child gets older.

The attention of the child was measured by observing them playing with or persisting with a toy before becoming distracted or losing interest. The attention of the child was measured by measuring the number of toy changes each child made.

Before doing the study a definition of toy changes was made in groups. This was done so that it could be clarified what is termed as a toy change and what is not.

Method.

Design.

The study was a Non participant, structured observational study which produced quantitative data. The study was controlled and conducted in a lab room. The study aimed to measure the focused attention of the child through the behavior of the child. The independent variable was the age and the dependent variable was the attention span, measured by the number of toy changes. There was no conditions used in the experiment and each child was given a period of 5 minutes with the toys.

Participants.

6 participants were used for the experiment. There were 3 girls and 3 boys. The children ranged from the ages of 3 years and 1 month to 7 years. The participants were lecturers children and were selected as a convenience sample. In the room with the child the mother and the camera person was present.

Apparatus and Material.

The apparatus that was used was Observer Pro, where the video clips of the 6 children was viewed. The SPSS package was also used to produce the graphs and results. The results were recorded on a data sheet, which is labeled as appendix 1.

Procedure.

Before the experiment was conducted, we were given the introduction of the study. We were told of the two contradicting studies of Ruff and Lawson (1990), and Vandenberg (1984). We were then told that the aim of this experiment was to see if the age of young children was related to the attention they gave to toys. We were told that this would be done by counting the number of toy changes a child made in a 5 minute period.

Before carrying out the actual observations we were asked to view a practice video clip on Observer Pro of a child interacting with a room full of toys. The reason this was done was because we needed to come up with a definition of what constitutes to a change. We used an inter-observer reliability check where, in a group of four we came up with a definition of what was classed as a toy change. The definition is on the data sheet in appendix 1. In twos we then played the 6 clips which lasted 5 minutes each and we counted the number of toy changes we saw. The clips were of 6 children between the ages of 3 years and 1 month and 7 years and involved them interacting with a room full of age related toys. While counting the number of toy changes, we kept in mind the definition we made.

Once all the clips had been viewed we got back to our group of 4 and compared the results with them. We noted the other groups results as these would be used for the reliability score, to check how reliable our definition was. The reliability was measured by a strong positive correlation between the results of the two groups.

Results.

The age of the child was the independent variable and the attention of the child was the dependent variable, which was measured by the number of toy changes that the child made. Graph 1 below shows that as the age of the child increased in months, the number of toy changes decreased. This means that focused attention was increasing as the child got older.

Graph 1.

To see if the results were significant a Pearson's r correlation test was conducted for the age of the child and the number of toy changes. The test conducted was a 2-tailed test at the alpha level, where $p = 0.05$. it was found that $r = -.0813$. the results proved to be very significant as -0.813 is very close to -1. the closeness in the figures show a very strong correlation between age and the number of toy changes. Also the significance value for the test was 0.49, which is below the alpha level indicating a strong reliability.

To check if our results were reliable an inter-observer reliability check was done. Here the number of toy changes by the two groups was compared and a Pearson's correlation test was done to see the relationship between the number of toy changes between the two groups. Again the test conducted was a two-tailed test at the alpha level. The results showed that $r = 0.976$, and $p = 0.01$. The results showed that there was a very strong positive correlation between the two groups as the r value is very close to1. As the number of toy changes increased for one group the number of toy changes increased for the second group as well. Also the p value is well below 0.05

indicating a very strong reliability. The high results for the reliability check indicate that the results din't occur by chance and the actual experiment was very significant, with a strong relationship between age and toy change. From this we can accept that as the age of the child increases the number of toy changes decreases, thus the attention of the child increases.

Discussion.

The aim of this study was to see whether the age of young children affects their attention. This was done by observing young children during free play and counting the number of toys they interacted with. The aim was to see whether this present study supported Ruff and Lawson's (1990) study or Vandenberg's (1984) study. Ruff and Lawson predicted that as the child got older focused attention increased and Vandenberg found that as the children got older focused attention decreased. The statistical evidence from this study supports Ruff and Lawson's study. The results showed that as the child got older the number of toy changes decreased which meant that as children got older their focused attention improved. The results also support Krakow's (1987) study that as the child got older their attention span increased. The results contradicted Vandenberg's study.

The Pearson's r value for the test was 0. 813 showing that there was a very strong correlation. Also the p value was less than the alpha level showing a very strong reliability.

The definition of what constitutes to a toy change was also very good as we had a very strong correlation for the inter observer reliability tests with a the significance level well below the alpha level.

Although the study showed strong reliability there are a few limitations of the study. One of the main limitations is that the study cannot be ecologically valid. The study conducted was conducted in a controlled environment and in a new setting to the child. Although this method reduces extraneous results the child could have behaved differently to what they normally do as they are not used to the environment they were in. Also there was a stranger present in the room with the child and this could have caused the child to act differently than they normally do.

Also the sample chosen was a very small sample, there were only 6 participants which are not enough to get representative results. If the study was to be replicated more participants would be needed to produce a more reliable result.

Overall it was found that this study supports Ruff and Lawson's study that as the child got older, the focussed attention of the child increased.