

Characteristics of the Play and Executive Functions of 3-6 years old Children Who Were Referred to Occupational Therapy with Diagnosed Developmental Delay, in Comparison to Those of Children Who Were Not Referred to Occupational Therapy

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Abstract

The evaluation process of children with suspected developmental delay conducted in Child Development Centres includes a combination of medical findings and standard tests, and is based on information provided by parents. (Oberklaid, 2005).

This process includes amongst other things, collecting information regarding the way the child plays. This is collected for two reasons: firstly, play is considered to be a primary occupation in a child's life and reflects his/her participation, and secondly, play has an integral relationship to different areas of development and is a vessel through which skills and executive functions are gained. (Bundy 1993; Rodger & Ziviani, 1999; Isquith, Crawford, Epsy & Gioia, 2005).

Obtaining information as part of the assessment process is essential for further intervention (Glascoe, 2000). However, regarding play, there is a lack of standardized measures that can provide reliable occupational information (Stagnitti, 2004; Bryze, 2008). Moreover, the range of difficulties of children diagnosed with developmental delay but without a specific diagnosis, makes it hard to prioritise and focus clinical intervention. The MCP- "My Child's Play" questionnaire (Schneider & Rosenblum, 2014), is supposed to provide this information and facilitate the assessment and intervention process.

Objectives: The purpose of this study was to establish discriminant validity and parallel validity for the MCP questionnaire (Schneider & Rosenblum, 2014) among children between the ages of 3-6 who had been referred to occupational therapy due to diagnosed developmental delay, compared to children of the same ages who were not referred to occupational therapy. Discriminant validity was examined by checking the differences in play characteristics and executive functions as measured in

the MCP questionnaire, between children who had been referred to Occupational Therapy and children who had not been referred (control group). Parallel validity was examined by checking the correlation between the “Executive Functions” category of the MCP questionnaire and the BRIEF-P questionnaire.

Hypotheses of Study:

1. High reliability and internal consistency would be found for the entire MCP questionnaire and its individual categories.
2. Differences would be found in the scores of the MCP questionnaire between the research group and the control group (discriminant validity).
3. Differences would be found in the score of the BRIEF-P questionnaire between the research group and the control group.
4. A negative correlation would be found between the scores of the “Executive Function” category in the MCP questionnaire and the general score in the BRIEF-P questionnaire (parallel validity).
5. The scores of the CHECK questionnaire would predict the level of the child play according to the MCP questionnaire.

Participants: In this study, there were 60 participants: children between the ages of 3-6, 30 of whom were diagnosed with developmental delay in the Child Development Centre in Tiberias and 30 controls who had not been referred to any evaluation or treatment. The groups were matched by age, gender and residential environment.

Measures: Demographic questionnaire, CHECK questionnaire (Child Evaluation Checklist), MCP questionnaire (My Child’s Play), BRIEF-P questionnaire (Behaviour Rating Inventory of Executive Function – Preschool Version).

Procedure: Mothers participating in the study individually filled in the demographic questionnaire and the three research questionnaires.

Data Analysis: The internal validity of the MCP and CHECK questionnaires was performed with Cronbach's Alpha. In order to compare the play characteristics according to the MCP questionnaire between the two groups, MANOVA test was used, and t-test was used to compare the total score of the questionnaires. To compare the executive functions according to BRIEF-P questionnaire between the two groups, MANOVA test was used, and t-test was used to compare the total score of the questionnaire. In order to check the parallel validity of the MCP questionnaire with the CHECK questionnaire, Pearson Correlation was used. In order to check if the scores of CHECK predict the level of play according to MCP, Stepwise Regression was used.

Results:

1. High reliability was found in all MCP questionnaires ($\alpha= 0.88$) as well as in the Interpersonal Relationship and Executive Function categories.
2. Significant differences were found between the research group and the control group in the general score of the MCP questionnaire (discriminant validity), and in the Executive Function and Interpersonal Relationship categories.
3. Significant differences were found between the research group and the control group in the BRIEF-P questionnaire.
4. A strong negative correlation was found between the scores of the MCP questionnaires in the Executive Function category and the scores of the BRIEF-P questionnaire in the research group (parallel validity).
5. The results of the CHECK questionnaire together with the group type were found to predict 49.9% of the differences in play level according to MCP questionnaire.

Conclusions:

The current study confirms that the MCP questionnaire provides valid information concerning the way a child who is diagnosed with developmental delay plays and his/her executive functions.

These findings reinforce existing knowledge relating to the correlation between development, play and executive function (Rodger & Ziviani, 1999; Isquith, et al, 2005; Uren & Stagnitti, 2009). In

addition, this study provides information regarding the difficulties faced by children with developmental delay and no specific diagnosis.

The clinical significance of this study is that the MCP questionnaire is a reliable and valid instrument for facilitating the process of evaluation and diagnosis as a base for building an effective intervention programme.