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An Investigation and Development of Communication Skills Training for Children with Intellectual Disabilities

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Abstract
This research focused on the development and evaluation of a communication skills training program for children with intellectual disabilities (ID). The objectives of this study included: (1) developing ecological inventories for assessing communication skills, (2) assessing the communication skills of children with ID, (3) creating a communication training program, (4) evaluating the program's effectiveness, and (5) providing recommendations for improving communication skills in these children. Ten boys with ID from Faisalabad were selected for the development of ecological inventories and training programs. Tasks for the program were designed using task analysis principles and behavior modification techniques to enhance communication skills. Findings indicated that the program effectively improved communication skills through behavior modification. This research provides valuable insights and practical guidelines for improving communication strategies in special education settings.
Keywords: Intellectual Disability, Communication, Development, Children

Introduction

This study aims to design, implement, and evaluate a communication skills training program for children with intellectual disabilities (ID), focusing on improving their communication abilities in both everyday and educational settings. The research aims to develop a structured training plan that can facilitate better interaction and self-expression for these children. Additionally, the study focuses on creating specialized tools for assessing communication skills in children with ID and evaluates how these children can improve their communication abilities through targeted exercises and activities. The program's effectiveness is assessed by tracking the children's progress and identifying necessary adjustments to enhance communication skills.

Intellectual disability (ID) is a neurodevelopmental disorder characterized by deficits in intellectual functioning and adaptive behavior, which includes limitations in self-management, social skills, and communication. ID affects approximately 2% to 3% of the global population, with a higher prevalence in males (Ke & Liu, 2012; Karam et al., 2016). Genetic factors contribute to 17% to

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50% of ID cases (Ke & Liu, 2012). Early identification and assessment, along with parental consent, are critical for determining eligibility for special education programs (Lipkin, Okamoto, & Health, 2015). Communication difficulties are widespread among individuals with ID, some of whom may require alternative communication strategies such as picture exchange systems or speech-generating devices (Baxter, Enderby, Evans, & Judge, 2012). The development of ecological inventories and communication training programs is essential for supporting these individuals' education, improving their communication skills, and promoting social integration (Patel et al., 2018). Behavioral interventions play a crucial role in managing undesirable behaviors in children with ID (Hagopian et al., 2001). This study aims to assess the communication skills of children with ID and develop effective training programs to enhance these skills, benefiting educators, families, and future research.

Research Objectives

1. Develop ecological inventories for assessing communication skills.
2. Assess communication skills of children with intellectual disabilities.
3. Develop a training program for communication skills.
4. Evaluate the effectiveness of the communication skills training program.
5. Provide recommendations for improving communication skills in children with intellectual disabilities.

Research Questions

1. What communication challenges do children with intellectual disabilities face?
2. How effective are ecological inventories in assessing communication skills?
3. What factors contribute to evaluating the communication skills training program?
4. How effective is the assessment of communication skills in children with intellectual disabilities?
5. What are teachers' attitudes toward developing communication skills training programs?

Significance of the Study

This research offers new perspectives for future studies and provides valuable benefits for various stakeholders. It will help parents better understand the communication challenges of children with intellectual disabilities, assist these children in managing their communication skills more effectively, and support special education teachers in developing communication programs. Additionally, the study provides practical guidelines for teaching strategies in special education settings, improving communication through learning, modeling, and fostering social interactions.

Limitations

This study is limited to assessing communication skills within the school context of children having intellectual disability in Faisalabad city.

Literature Review

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Intellectual disability (ID), often referred to as mental retardation, is a neurodevelopmental disorder marked by significant deficits in intellectual functioning and adaptive behaviors, such as limitations in self-management, social behavior, and communication (Caldwell, 2008). ID is generally a genetic condition that can range from mild to profound severity, affecting a person's daily functioning. To meet diagnostic criteria for ID, three conditions must be met: onset before age 18, intellectual functioning deficits (typically an IQ below 70), and adaptive behavior deficits (Vasilis, 2009).

ID is increasingly viewed as not just a limitation of intellectual ability but as a broader issue impacting an individual's overall health, societal participation, and community roles (Buntinx & Schalock, 2010). Early identification and intervention are key, as delays in communication and social skills often accompany the condition (Knudson et al., 2006). Early intervention programs, especially in education, can significantly improve outcomes for children with intellectual disabilities, enhancing their quality of life and social integration (Snell et al., 2009).

Methodology

Population and Sample

The study population included children with intellectual disabilities attending schools in Faisalabad District, Punjab. A sample of 10 children, aged 10-12, was selected for the study. The children were categorized based on their level of functioning, with 2 exhibiting mild disabilities and 3 showing moderate disabilities. In addition, teachers, parents, and classmates of these children were involved in the training program.

Sampling Technique

Purposive sampling was employed to select the participants, as the study specifically targeted children with intellectual disabilities. Parents, teachers, and classmates were also selected to participate based on their involvement in the children's communication development.

Instruments

The following instruments were used to gather data:

- **Parental Consent Form**: To obtain parental consent for participation.
- **Parent's and Teacher's Diaries**: To document communication behaviors observed in children.
- **Observation Record Form (ORF)**: To assess children's communication tasks across different environments.
- **Interviews**: To collect qualitative data from parents and teachers regarding communication difficulties.
- **Ecological Inventories**: To assess common communication tasks for children with and without intellectual disabilities.
- **Weekly Evaluation Reports**: To monitor progress in communication skills development.
- **Screening Checklist for Communication Skills**: To evaluate the communication abilities of the children.

Research Design

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The research adopted a qualitative design, focusing on observational data, interviews, and assessment tools to track the development of communication skills over time. Weekly evaluations were used to assess the effectiveness of the training program.

Procedure

The study involved designing ecological inventories based on the communication tasks children with intellectual disabilities typically encounter. Children were assessed on these tasks through observations and inventories. A communication skills training program was then implemented, with progress tracked through weekly evaluation reports.

Program Evaluation

The program's success was determined by assessing changes in the children's communication skills, as reflected in the weekly evaluation reports. The analysis was based on the improvement in performance on communication tasks over the course of the training program.

Results

Case Study: Zohaib

Background: Zohaib, an 11-year-old boy from a low-income rural family, was diagnosed with mild intellectual disability. His family dynamics were strained, and his father was his primary caregiver. He displayed stubbornness, aggression, and poor concentration. His milestones were delayed, and his behavior was mostly neglected.

Ecological Inventory: Zohaib had difficulties functioning in a school environment. His ecological inventory was designed around his school activities. Key tasks were assessed, and he achieved a task mean score of 0.72.

- **Task 1: Telling His Name**
  Objective: Zohaib would learn to tell his name.
  Evaluation: With support, Zohaib initially struggled, but after 5 weeks, he was able to pronounce his name without assistance.
- **Task 2: Sharing Objects with Peers Verbally**
  Objective: Zohaib would learn to share objects verbally.
  Evaluation: Initially, Zohaib couldn't share verbally, but after 5 weeks of support, he successfully shared objects with peers independently.
- **Task 3: Taking Permission for Drinking Water**
  Objective: Zohaib would learn to ask for permission to drink water.
  Evaluation: After 5 weeks of practice and reinforcement, Zohaib was able to ask for permission independently.

Case Study: Zulfiqar

Background: Zulfiqar, a 10-year-old from a low-income urban family, had mild intellectual disability. His father worked in a factory, and his mother was a housewife. Zulfiqar had attention issues, was stubborn, and had delayed milestones. His behavior was largely neglected by his family.

Ecological Inventory: Zulfiqar, like Zohaib, faced challenges in school. His ecological inventory showed he needed focus on basic communication skills. His task score was 0.66.

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- **Task 1: Taking Permission for Toilet**
  Objective: Zulfiqar would learn to ask for permission to use the toilet. *Evaluation*: After 7 weeks of practice, Zulfiqar was able to ask for permission independently.
- **Task 2: Saying Sorry for Mistake**
  Objective: Zulfiqar would learn to say sorry for his mistakes. *Evaluation*: After 4 weeks of practice, Zulfiqar could apologize verbally without teacher support.
- **Task 3: Saying Thank You to Peers**
  Objective: Zulfiqar would learn to say thank you to his peers. *Evaluation*: Zulfiqar was able to say thank you independently after 4 weeks of reinforcement.

Summary and Conclusion

This research aimed to assess and improve the communication skills of children with intellectual disabilities through ecological inventories and a communication skills training program involving teachers and parents. The study focused on ten children (aged 10-12) with intellectual disabilities from both rural and urban areas of Faisalabad, Punjab. The objectives were to develop ecological inventories to assess communication skills, create a training program, and evaluate its effectiveness. The study used observations, interviews, and weekly evaluation reports to track the progress of the children. The findings demonstrated significant improvement in communication tasks, such as telling their names, asking for favors, and saying "thank you" and "sorry."

Findings

1. **Zohaib's Communication Tasks**:
- Telling His Name: Zohaib could not tell his name at the start but after 5 weeks, he could do so without support.
- Sharing Objects Verbally: Initially, Zohaib struggled to share objects verbally but was able to do so independently after 5 weeks of practice.
- Taking Permission for Drinking Water: Zohaib was unable to ask for permission initially but was able to do so after 5 weeks, with no support by the end.

2. **Zulfiqar's Communication Tasks**:
- Taking Permission for Drinking Water: Zulfiqar initially struggled but managed to ask for permission independently after 7 weeks.
- Saying Sorry for Mistakes: Zulfiqar was unable to apologize at first but could do so independently after 4 weeks.
- Saying "Thank You" to Peers: Zulfiqar had difficulty thanking others initially but was able to do so without support by the end of the training.

Conclusions

1. The training program significantly improved the communication skills of the children, with both teachers and parents playing crucial roles in their success.
2. Teachers observed an increase in the children's confidence and willingness to participate in communication tasks.

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3. Demonstration-based instruction was an effective method for achieving desired outcomes in the training.
4. Rewards were a key reinforcement tool, aiding in motivating the children to engage with the tasks.
5. The training addressed the cognitive and functional needs of the children, facilitating their progress.

Recommendations

1. **Further Research**: There is a need to examine the long-term effectiveness of ecological inventories and communication task-based programs in special education settings.
2. **Regular Practice**: A daily or regular communication program should be implemented for children with intellectual disabilities to ensure continued improvement.
3. **Improved Teaching Methods**: Teachers should adapt their teaching styles to better meet the needs of children with mild intellectual disabilities.
4. **Task Analysis & Behavioral Approaches**: More task analysis and behavioral approaches should be used to enhance the effectiveness of teaching.
5. **Government & NGO Involvement**: Government and NGOs should conduct home-based and institutional programs to better support children with intellectual disabilities, particularly in rural and urban areas.
6. **Parental Involvement**: Increased involvement of parents in understanding and supporting the communication needs of children with intellectual disabilities is essential.
7. **Awareness & Attitude Change**: The study should help in changing societal attitudes towards children with disabilities, fostering a more supportive environment.
8. **Facilities & Support**: New facilities and professional support should be developed to assist children with intellectual disabilities in both rural and urban settings.

In conclusion, this study demonstrates that targeted interventions, when supported by teachers, parents, and the community, can significantly enhance the communication skills of children with intellectual disabilities, providing a foundation for their further development and integration into society.

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