



تقييم تطور الأطفال في محافظة ديالى

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Assessment of Development of children in Diyala province

A Thesis

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Chapter One

Introduction

1.1 Introduction

Human development is a complex and predictable process that involves biological, psychological, and emotional changes that occur continuously from birth until adolescence and beyond. The sequence of development for all children is universally consistent and can be described by developmental milestones. Developmental delay is a condition that occurs when a child does not achieve these milestones within the expected time frame. (World Health Organization, 2018); (Centers for Disease Control and Prevention, 2021).

It is affected by both biomedical and sociocultural factors. Modifiable factors include nutrition, emotional support, and education. Non-modifiable factors include child gender, the parents' relationship (e.g., consanguinity), the parents' ages, and the parents' educational level. Sociocultural elements, such as poverty and exposure to violence, can also have a significant impact on child development (World Health Organization, 2018).

Developmental evaluation is a critical process that involves assessing a child's progress in achieving age-appropriate developmental milestones and identifying any potential concerns or delays. Typically, a healthcare professional, such as a pediatrician or developmental psychologist, conducts this evaluation using standardized tools to measure various aspects of development, including cognitive, motor, communication, and socio-emotional abilities (Stuart & Ottenbacher, 2012).

The American Academy of Pediatrics (AAP) recommends conducting regular developmental evaluations throughout child's early years to detect and report any delays or apprehensions as early as possible. Early detection and intervention of developmental delay can significantly enhance child's overall well-being and increase the chances of success in school and life. Parents and caregivers can also play a crucial role in the developmental evaluation process by monitoring their child's progress and sharing any concerns with their healthcare provider (Shonkoff et al., 2012); (Council on Children with Disabilities, 2006).

A systematic analysis by the Global Burden of Disease Study found that 52.9 million children under 5 years of age worldwide have developmental delays, with 95% of them living in low- and middle-income countries. (Kassebaum et al., 2018)

A study conducted in Sulaimaniyah, Kurdistan, Iraq, found that 14.6% of children aged 6 months to 6 years had developmental delays. The prevalence of developmental delays may vary across different regions of Iraq and among different age groups. Therefore, there is a pressing need to create a systematized screening program for children's developmental delays. (Al-Dabbagh et al., 2019).

The American Academy of Pediatrics (AAP) recommends the routine and periodic use of standardized tools throughout each well-child clinic visit, and at least at three specific child ages (9, 18, and 24 or 30 months of age). The ASQ-3 was chosen for this study because it is culturally sensitive and available in the native language of the participating parents. (Johnson-Reid et al., 2017).

Primary healthcare professionals, particularly family physicians, play a critical role in child development. They have more frequent contact with individuals in

society than any other occupational group, making them better placed to monitor children's growth and development and educate mothers or caregivers on how to provide the optimum environment for their child's growth (Burke et al., 2018).

1.2 Aim of the study

The study aimed to assess the development of Iraqi children aged 2–60 months in Diyala province.

Summary

Developmental assessment is a systematic and comprehensive process used to evaluate a child's progress across various domains of development, aiming to identify potential developmental delays or disabilities. Conducted by healthcare professionals such as pediatricians, psychologists, and early childhood specialists, it involves careful observation and systematic testing of a child's physical, cognitive, linguistic, social, and emotional development. The assessment helps determine a child's developmental age and areas where delays may exist, enabling early recognition and intervention.

A study in Diyala province assessed the development of Iraqi children aged 2-60 months, utilizing the Ages and Stages Questionnaires, a culturally adapted screening tool. Among 330 children from Al-Batool teaching hospital, 97.6% exhibited normal development across domains, including speech and communication, gross motor skills, fine motor skills, problem-solving, and personal-social development. However, 2.42% experienced developmental delays, with 0.6% having speech and communication delays and 1.8% facing global developmental delays.

The study also identified children in the "gray area" of assessment, signifying the need for further evaluation in domains such as speech and communication (0-16.1%), gross motor (0-22.6%), fine motor (0-20.7%), problem solving (3.8-34.5%), and personal-social (0-16.1%).

Regarding consanguinity in parental marriage, 21.2% were born to consanguineous parents, with 4.3% experiencing developmental delays. Among non-consanguineous parents, 1.9% of children faced developmental delays. No significant relationship between consanguinity and developmental delay was found (p value = 0.7).

In terms of birth status, 91.2% were born at term, with 97.3% exhibiting normal development and 2.7% showing developmental delays. Preterm births constituted 8.8%, with 6.9% experiencing developmental delays and 93.1% displaying normal development. No significant relationship between preterm birth and developmental delay was (p value = 0.9).

In conclusion, most children in the study had normal development except for a small percentage who had global developmental delay and communication delay. Another proportion of children were situated in the critical area (gray area) and needed follow-up and management. In general, gender, maturity, and consanguinity have no effect on development.