# SOCIO-DEMOGRAPHIC, MATERNAL MEDICAL FACTORS, AND BEHAVIORAL PATTERNS OF AUTISTIC CHILDREN IN DUHOK CITY

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*Submitted 3 March 2025; accepted 30 April 2025*

## ABSTRACT

**Background:** The prevalence of autism spectrum disorder (ASD) is increasing worldwide, and diagnoses are often delayed, especially in settings with limited resources. Behavioral issues, medical risk factors, and sociodemographic disparities hamper early detection and intervention. In order to enhance screening and support services, this study seeks to examine the behavioral patterns, medical risk factors, and sociodemographic traits linked to ASD.

**Materials and Methods:** 207 children with ASD participated in this cross-sectional study in Duhok City, which ran from September to December 2024. Convenient non-random sampling was used to gather data through face-to-face interviews using a semi-structured questionnaire and a standard scale of child behavior assessment instrument (CBAI).

**Results:** Important demographic, prenatal, and behavioral factors were highlighted in the study's analysis of autistic children. With a mean age of 5.18 years, the majority were male (76.33%), from urban areas (81.16%), and from nuclear families (72.46%). Consanguinity was reported in 41.06% of cases, and mental health issues during pregnancy were prevalent (48.79%). Postnatally, 34.30% had a family history of autism. The intricacies of behaviors associated with autism were reflected in behavioral challenges such as limited eye contact (28.99%), destructive tendencies (31.40%), attention issues, and distress from routine changes (39.13%).

**Conclusion:** The study highlights the impact of behavioral, maternal medical, and sociodemographic factors on ASD, suggesting that early detection, intervention strategies, and support services can improve the quality of life for ASD patients.

**Duhok Med J 2025; 19 (1): 95-106.**

**Keywords:** Autism spectrum disorder, DSM-5 criteria, Socio-demographic factors

Autism spectrum disorder (ASD) is a neurodevelopmental condition marked by social communication difficulties, restricted interests, and repetitive behaviors. It has traditionally been viewed as an impairing condition. Based on current DSM5 criteria[1].

ASD core domain symptoms typically appear between the ages of 12 and 24 months. There is no single behavioral indicator that definitively rules out an ASD diagnosis, and initial presentations vary. Language delay, inaction when the child's name is called, and lack of eye contact are some of the first things that parents may worry about[2].

Although estimates are higher in high-income nations, the prevalence of autism is slightly less than 1% worldwide[3]. According to the most recent data available, the prevalence in the US was 1/54 in 2020. The prevalence increased from 0.35% in 2018 to 0.7% in 2020 in China. It has attracted international attention and is among the pediatric diseases with the fastest rate of growth[4].

Although the exact cause of ASD is unknown, several genetic and non-genetic risk factors have been identified and are linked to the development of ASD either

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separately or in combination[5].

Although ASD cannot be cured, early detection can improve rehabilitation results, such as increased communication[6]. Numerous studies now agree that early intervention can produce the best long-term outcomes, potentially altering children's developmental outcomes and reducing the incapacitating effects of certain symptoms[7].

To address behavioral issues like hyperactivity, impulsivity, inattention, aggression, property destruction, self-harm, mood disorders, and psychotic or tic disorders, about 30% of people with ASD need psychological and psychiatric treatments, including medication[8].

Parents must be involved in intervention efforts in order to treat children with ASD. According to research, when parents participate in treatment, their children receive more intervention and their skills become more generalizable[9].

Autism traits at 18 months are known to correlate with certain factors, including sex and preterm birth. Though studies have connected higher autism scores on 18-month screening tools with maternal nausea, neonatal illness, maternal depression and anxiety, immigrant status, and lower parental education, there is little data on other factors[10].

Stress in caregivers is associated with ASD, and maternal nutrition and parental socioeconomic status are important factors. A child's health may suffer as a result of inadequate nutrition brought on by a low economic status. The risk of ASD is increased by older parents and variables such as hypoxia, preterm birth, and gestational infection. Additionally, some research indicates that paternal age and later birth order are risk factors(11).

## METHODS

Study setting and design

The study was conducted in all governmental and private autism centers in Duhok city. There are two governmental centers for autism diagnosis and care, along with seven private autism centers under the Ministry of Social Affairs and Welfare, providing specialized services. A cross-sectional study design was used to accomplish the study's aims and objectives. The study was conducted during four months from the 1st of September 2024 until the 31st of December 2024. Data were collected by the researcher through face-to-face interviews with mothers of autistic children who agreed to participate. Approvals were taken from the scientific and ethics committees related to the Directorate of Health in Duhok. Written consents were obtained from each participant after giving the necessary information.

Study sample

The study population included all mothers of autistic children aged 3-6 years who had medical reports confirming their condition from government and private centers. Convenience sampling was used based on the research criteria, with 211 cases selected from various autism centers in Duhok City. Of these, 207 participants were included, while 4 cases refused to participate for unknown reasons. Each session lasted 40-60 minutes. Before starting, the researcher introduced himself, explained the study’s purpose, and assured participants of their right to withdraw or reschedule. The sample was selected according to the following inclusion criteria: All mothers of children with a documented diagnosis of autism spectrum disorder (ASD) based on standardized diagnostic criteria such as the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) and the age range: Children within a specific age (3-6 years old). Exclusion criteria: Children that do not have a confirmed diagnosis of autism spectrum disorder (ASD) based on standardized diagnostic criteria (e.g., DSM-5, ICD-10), children under 3 years old or over 6 years old, and children with

other developmental disorders that may confound the results.

Study instruments

In this study, a structured questionnaire served as the primary tool for data collection. The questionnaire was meticulously designed to gather detailed information across several critical areas relevant to the study. It was organized into three sections: sociodemographic factors, medical factors, and child behavior assessment. 1- Socio-demographic data composed of 10 questions which included socio-demographic features like age, gender, residence, and family type. 2- Maternal medical factors related to mothers of autistic children, which consisted of 14 questions like history of eclampsia, drugs used during pregnancy without physician consultation, and history of gestational diabetes. 3- Child Behavior Assessment Instrument (CBAI) to evaluate behavioral patterns, social interactions, communication skills, and repetitive behaviors in children, which consisted of 15 questions.

Validity and reliability of the CBAI

The validity of the questionnaire was confirmed with the assistance of a panel of fourteen experts from various relevant fields. The experts had an average of 45 years of work experience in areas such as nursing, psychology, pediatrics, special education, maternity medicine, psychiatry, and community medicine. They were provided with copies of the study's questionnaire and asked to evaluate its clarity and the sufficiency of the information. Their feedback included several suggestions, which led to modifications being made to the questionnaire.

Reliability

The reliability of the Child Behavior Assessment Instrument was performed using the multivariate analysis. Cronbach's α of the scale was 0.8335 for the entire set. The Cronbach's α of the items was greater than 0.80 for each item.

Statistical analysis

The general and medical characteristics of the patients with autism and their parents were presented in mean and standard. deviation for continuous variables and number and percentage for nominal variables. The prevalence of medical conditions of the patients with autism and their parents were determined in number and percentage. The prevalence of behavior issues of children was determined in number and percentage. The significant level of difference was identified in a $p<0.05$. The statistical calculations were performed using JMP®, Version 18.0. SAS Institute Inc., Cary, NC, 1989–2023.

## RESULTS

The distribution of autism cases across different centers in Duhok city is shown in table 1, with the majority of patients from MHC (43.96%), followed by Naz (19.81%) and Hevi (13.04%). Smaller proportions were reported in the other centers.

**Table. 1: Distribution of Autism Cases by Center (n = 207)**

| The centers of Autism | | All patients | |
|---|---|---|---|
| | | Number | Percentage |
| **Center** | MHC | 91 | 43.96 |
| | Naz | 41 | 19.81 |
| | Hevi | 27 | 13.04 |
| | ETET | 18 | 8.70 |
| | Jan Laveen | 9 | 4.35 |
| | Lawzheen | 8 | 3.87 |
| | NBAC | 6 | 2.90 |
| | ATT | 5 | 2.42 |
| | Dost u Bra | 2 | 0.97 |

The mean age of the enrolled patients ranged from 3 and 6 years old with of 5.18±1.03 years. The socio-demographic characteristics of autism cases show that most children (76.33%) were male. The majority lived in urban areas (81.16%) and belonged to nuclear families (72.46%). Fathers had diverse educational backgrounds, with 25.60% having a college degree or higher, while mothers had a slightly lower rate (22.71%). Most fathers (50.24%) were employees, whereas the majority of mothers (63.29%) were housewives. The average maternal age at pregnancy was 29.53 years (Table 2). Family members of the affected child were ranged from 1 to 7 with a mean of 3.25±1.43 and the mean rank of the affected child is 2.5±1.49. The mean age of the mother at delivery was 29.53-5.77 years (ranged from 16-43 years).

**Table. 2: Distribution of Autism cases by socio-demographic characteristics (n=207)**

| Socio-demographics | | Number | Percentage |
|---|---|---|---|
| **Gender** | Male | 158 | 76.33 |
| | Female | 49 | 23.67 |
| **Residency** | Rural | 12 | 5.80 |
| | Sub-urban | 27 | 13.04 |
| | Urban | 168 | 81.16 |
| **Family type** | Extended | 55 | 26.57 |
| | Nuclear | 150 | 72.46 |
| | Single parent family | 2 | 0.97 |
| **Family member** | 1-3 | 132 | 63.77 |
| | 4-7 | 75 | 36.23 |
| **Child rank category** | 1-3 | 159 | 76.81 |
| | 4-7 | 48 | 23.19 |
| **Father education** | Illiterate | 23 | 11.11 |
| | Read and write | 20 | 9.66 |
| | Primary School | 33 | 15.94 |
| | Secondary School | 23 | 11.11 |
| | High School | 29 | 14.01 |
| | Institute | 26 | 12.56 |
| | College and above | 53 | 25.60 |
| **Mother education** | Illiterate | 26 | 12.56 |
| | Read and write | 12 | 5.80 |
| | Primary School | 28 | 13.53 |
| | Secondary School | 23 | 11.11 |
| | High School | 31 | 14.98 |
| | Institute | 40 | 19.32 |
| | College and above | 47 | 22.71 |
| **Father occupation** | Unemployed | 32 | 15.46 |
| | Employee | 104 | 50.24 |
| | Private job | 69 | 33.33 |
| | Retired | 2 | 0.97 |
| **Mother occupation** | Employee | 69 | 33.33 |
| | Housewife | 131 | 63.29 |
| | Private job | 7 | 3.38 |
| **Mother's age at pregnancy** | <18 years | 2 | 0.97 |
| | 18-35 years | 172 | 83.09 |
| | >35 years | 33 | 15.94 |

The medical characteristics reveal that 34.30% had a family history of autism, and 41.06% were born to consanguineous parents. Maternal health conditions during pregnancy included gestational diabetes (13.53%), high blood pressure (16.42%), and thyroid disease (19.32%) (Table 3). Nearly half of the mothers (48.79%) had a history of psychiatric disorders during pregnancy, with mood disorders and anxiety being the most common. Additionally, 22.70% of mothers used medication without a doctor's advice, and 35.27% were exposed to toxic materials. Smoking during pregnancy was not reported, but 53.14% of mothers lived in households with other smokers.

**Table 3: Medical characteristics of the mothers of patients with autism spectrum disorder**

| Medical characteristics (n=207) | | All patients | |
|---|---|---|---|
| | | Number | Percentage |
| **Family history of autism** | | 71 | 34.30 |
| **Consanguinity with the husband** | | 85 | 41.06 |
| **History of gestational diabetes** | | 28 | 13.53 |
| **High blood pressure at pregnancy** | | 34 | 16.42 |
| **Thyroid disease during pregnancy** | | 40 | 19.32 |
| **History of Psychiatric disorders during pregnancy** | | 101 | 48.79 |
| **Types of Psychiatric disorders during pregnancy** | No | 106 | 51.21 |
| | Mood disorder | 31 | 14.98 |
| | Anxiety | 24 | 11.59 |
| | Unknown | 21 | 10.15 |
| | depression | 10 | 4.83 |
| | OCD | 10 | 4.83 |
| | Schizophrenia | 3 | 1.45 |
| | Postpartum depression | 1 | 0.48 |
| | PTSD | 1 | 0.48 |
| **Using drugs during pregnancy without doctor advice** | | 47 | 22.70 |
| **Drug type** | Antibiotics | 9 | 19.15 |
| | Others | 17 | 36.17 |
| | Pain relievers | 21 | 44.68 |
| **Using drugs at trimester** | No | 156 | 75.36 |
| | First trimester | 25 | 12.08 |
| | Second trimester | 17 | 8.21 |
| | Third trimester | 9 | 4.35 |
| **Exposure to X-rays** | | 6 | 2.90 |
| **Exposure to toxic materials** | | 73 | 35.27 |
| **Smoking at pregnancy** | | 0 | 0 |
| **Other smokers at home** | | 110 | 53.14 |

Assessment of Child Behavior of all enrolled children with autism is shown in table 4, highlights the parental observations across various behaviors. Maintaining attention during tasks or play activities is reported as a challenge, with 49.28% experiencing it sometimes and 26.57% very often. Similarly, 51.69% of children sometimes fail to complete tasks. Inappropriate struggles in situations (55.07% very often) and difficulty waiting their turn (42.03% very often) are common. Destructive tendencies, such as destroying property (31.40% very often) or self-harm (14.01% very often), are also noted. Social difficulties include limited eye contact (28.99% very often) and challenges in playing with peers (17.39% very often). Behavioral responses like temper issues (36.23% very often) and

distress from routine changes (39.13% very often) further underline the complexities in their behavior.

**Table 4: Child Behavior Assessment of autism children by parents**

| Behavior of children (n=207) | Frequency behaviors no (%) | | |
|---|---|---|---|
| | Never | Some times | Very often |
| Maintaining attention in simple tasks or play activities | 50 (24.15) | 102 (49.28) | 55 (26.57) |
| Not completing simple tasks | 58 (28.02) | 107 (51.69) | 42 (20.29) |
| Struggling excessively in inappropriate situations | 29 (14.01) | 64 (30.92) | 114 (55.07) |
| Not awaiting for his turn in playing or other activities | 46 (22.22) | 74 (35.75) | 87 (42.03) |
| Following instructions of adults | 55 (26.57) | 109 (52.66) | 43 (20.77) |
| Purposely destroying property | 68 (32.85) | 74 (35.75) | 65 (31.40) |
| Hurtful to others | 106 (51.2) | 66 (31.88) | 35 (16.91) |
| Purposely harm himself | 97 (46.86) | 81 (39.13) | 29 (14.01) |
| Unable to control temper | 38 (18.36) | 94 (45.41) | 75 (36.23) |
| Eye to eye contact is present when talking to others | 46 (22.22) | 101 (48.79) | 60 (28.99) |
| Playing easily with other children | 85 (41.06) | 86 (41.55) | 36 (17.39) |
| Showing abnormal body movements | 43 (20.77) | 87 (42.03) | 77 (37.20) |
| Getting upset when routine change | 44 (21.26) | 82 (39.61) | 81 (39.13) |
| Speech is relevant to the occasion | 117 (56.5) | 58 (28.02) | 32 (15.46) |
| When playing imitates adults | 48 (23.19) | 122 (58.94) | 37 (17.87) |

## DISCUSSION

This study offers important perspectives on the socio-demographic, maternal, and pregnancy-related elements that could affect the risk of ASD and the behavioral outcomes in children. Significant patterns were identified concerning maternal health issues, prenatal exposures, and family dynamics, underscoring their possible influence on neurodevelopment. The results highlight the necessity for early screening, enhanced maternal healthcare services, and specific interventions aimed at assisting children who are at risk for ASD.

In this study, the average age of children diagnosed with ASD was 5.18 years (SD: 1.03), suggesting that the majority of cases were recognized before entering school. This observation is consistent with worldwide patterns, as symptoms of ASD typically emerge between the ages of 2 and 5.[12]. In terms of residency, a significant majority of families (81.16%) resided in urban settings, while only 5.8% were located in rural areas. This disparity may indicate that urban regions provide better access to healthcare, which could result in higher rates of ASD diagnoses. Conversely, ASD may be underdiagnosed in rural areas due to a lack of awareness and limited healthcare resources[13]. Other studies have reported similar patterns, implying that environmental factors and urban lifestyles might play a role in increasing the risk of ASD[14].

Nuclear families constituted the majority of family structures at 72.46%, while extended families were less prevalent at 26.57%. Families with fewer members, specifically those with 1 to 3 individuals, made up 63.77% of the population, surpassing larger families that included 4 to 7 members, which accounted for 36.23%. These results differ from certain studies conducted in developing areas where larger family units and extended family arrangements are more typical among cases of ASD, potentially due to increased caregiver support or shared genetic predispositions among closely related relatives[15]. The average rank of children within these families was 2.50 (SD: 1.49), with a significant majority, 76.81%, being either firstborns or second-borns. Some studies indicate that the risks associated with ASD may vary between

firstborn and later-born children, influenced by factors such as maternal age and conditions during pregnancy.[16]

A significant proportion of fathers (25.6%) and mothers (22.71%) possessed a college education, whereas 11.11% of fathers and 12.56% of mothers were illiterate, which may influence awareness of ASD and the initiation of early interventions. A majority of fathers (50.24%) were in the workforce, while 15.46% were without jobs; conversely, most mothers (63.29%) were homemakers, with 33.33% engaged in employment. Research indicates that lower levels of maternal education are associated with delays in ASD diagnosis and restricted access to therapeutic services[17], while higher educational attainment and employment among fathers can enhance access to healthcare and promote earlier identification of ASD.

A positive family history of autism was reported in 34.3% of the cases, suggesting a strong genetic component in ASD risk. This finding aligns with previous studies that have established genetic predisposition as a key risk factor for ASD[18]. Similarly, consanguineous marriages were reported in 41.06% of cases, which is a significant proportion and supports prior research indicating that parental consanguinity increases the risk of autism due to the inheritance of recessive genetic mutations(19).

Numerous maternal health issues have been connected to ASD. For instance, gestational diabetes, which affects 13.53% of pregnancies, may disrupt fetal neurodevelopment; however, this rate is lower than the 20-25% prevalence found in other research[20]. Hypertension, present in 16.42% of cases, can result in placental insufficiency and fetal hypoxia, both of which negatively influence brain development. Additionally, thyroid disease has been associated with compromised fetal brain development and a heightened risk of ASD, occurring in 19.32% of pregnancies[21].

A significant 48.79% of mothers indicated experiencing psychiatric disorders while pregnant, with mood disorders (14.98%) and anxiety disorders (11.59%) being the most prevalent. Additionally, cases of depression, obsessive-compulsive disorder (OCD), schizophrenia, and post-traumatic stress disorder (PTSD) were also noted. This observation aligns with earlier studies that demonstrate how maternal mental health challenges during pregnancy, especially depression and anxiety, elevate the likelihood of ASD in children[22].

During pregnancy, the use of non-prescribed medications was significant among 22.7% of mothers, with pain relievers (44.68%) and antibiotics (19.15%) being the most frequently utilized. This finding is consistent with studies suggesting that the maternal consumption of specific drugs, especially non-steroidal anti-inflammatory drugs (NSAIDs) and antibiotics, may be associated with ASD[23]. The first trimester exhibited the highest prevalence of unprescribed drug usage at 12.08%, a crucial time for the development of the fetal brain.

The behaviors most commonly reported included excessive struggles in unsuitable situations, with 55.07% indicating they experienced this “Very Often.” Additionally, 51.69% noted that they “Sometimes” failed to complete simple tasks, and 42.03% reported not waiting their turn during play or other activities “Very Often.” These behaviors are characteristic of ASD and underscore difficulties related to impulse control, task completion, and social interactions, which are frequently observed in children diagnosed with autism.

Additionally, it shows a relatively high frequency of behaviors such as hurting others (51.21% reported this "Never") and hurting themselves (46.86% reported this "Never"). This suggests that while aggression is present in some children, it is not universally exhibited in this sample.

Furthermore, eye-to-eye contact was noted as present in 28.99% of the children "Very Often," while playing easily with other children was reported as "Never" by 41.06% of the sample, which is indicative of social interaction difficulties often observed in children with autism.

The results of this study align with existing research on the behavioral traits of children with autism. For instance, Kanner's foundational research emphasized social and communication challenges as fundamental aspects of autism, which is evident in the observed difficulties with eye contact and social interaction in this study. Likewise, the American Psychiatric Association (2013)[24] characterizes autism by deficits in social communication and the presence of restricted and repetitive behaviors, both of which are illustrated by the significant number of children facing challenges with turn-taking and adhering to instructions in the current research.

A study by Lai[25] indicated that children diagnosed with autism often face challenges in completing tasks and tend to struggle in unsuitable situations. The results of the present study align with these findings, as numerous parents reported that their children display such behaviors either "sometimes" or "very often." Additionally, behaviors like property destruction and difficulties in managing anger are frequently documented in other research, including a study by Koegel[26], which identified aggression and temper

In contrast to previous research, this study indicates a slightly greater prevalence of children who "never" exhibit aggression (i.e., harmful behaviors towards themselves or others) than is typically reported in existing literature. For instance, Matson and Nebel-Schwalm[27] found a more consistent occurrence of aggressive behaviors among children with autism, although the intensity of these behaviors can vary significantly across different populations and geographical areas.

## CONCLUSION

The results are largely in agreement with the current literature regarding the condition. They underscore significant socio-demographic, maternal health, and child behavioral factors that affect the risk of ASD. Factors such as lower levels of maternal education and economic challenges may hinder timely diagnosis and restrict access to necessary care, highlighting the importance of community-oriented ASD awareness initiatives and financial assistance. The implications of drug exposure during the third trimester indicate a need for more precise medication guidelines. The prevalence of psychiatric disorders among mothers necessitates the integration of mental health services during pregnancy. Furthermore, issues related to consanguinity and exposure to secondhand smoke point to the necessity for genetic counseling and public health measures. Enhancing maternal healthcare, implementing effective environmental policies, and promoting early intervention programs could lead to better outcomes for children diagnosed with ASD.

Future studies might build upon these results by employing direct observation methods and adopting a longitudinal approach to monitor the ongoing presence and evolution of these findings. Furthermore, contrasting these outcomes with those from different regions or nations could provide additional understanding of the cultural or environmental elements that might affect the behaviors of children with autism.

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# پوختە

## فاکتەرێن جڤاکی و دیموگرافی، و فاکتەرێن پزیشکی یێن دەیکەنییێ و شێوازێن ڕەفتاری یێن زاروکێن توشبوویێن ئوتیزمێ ل باژێرێ دهوکێ

**پێشەکی و ئارمانج:** بەلاڤبوونا تێکچوونێن ئۆتیزمێ ل جیهانێ بەرەف زێدەبوونێ یە، و پتریا جاران دەستنیشانکرنا وێ گیرۆدبیت، بتایبەت ل وان جهێن ژێدەرێن سنوردار هەین. پشکنینێن دەستپێکی ب ڕێیا تێبینیکرنا کێشێن ڕەفتاری، کارتێکرنێن مەترسیێن پزیشکی، و ئاریشێن جڤاکی و دیموگرافی دهێنە کرن. ژبۆ هاندانا ئەنجامدانا تێستان و دابینکرنا خزمەتگوزاریان، ئارمانج ژڤێ ڤەکولینێ ڤەدیتنا نموونەیێن ڕەفتاری، کارتێکرنێن مەترسیێن پزیشکی، و کاریگەری و کارتێکرنێن جڤاکی یێن گرێدای ب ئوتیزمێ ڤەیە.

**ڕێکێن ڤەکولینێ:** ٢٠٧ زاروکێن توشبوویێن ئوتیزمێ پشکداری دڤێ ڕاپرسیا (نموونەیا بڕگەیی) دا کریە ل باژێرێ دهوکێ, کو ئەڤ ئامارە هاتییە کومکرن ژ هەیڤا ئەیلولێ هەتا کانوونا ئێکێ یا سالا ٢٠٢٤ ێ. نموونەیێن نە هەڕەمەکی یێن گونجای هاتینە بکارئینان ژبۆ ئەنجامدانا چاڤێکەفتنێن لنێزیک ب هەبوونا ڕاپرسیێن نیمچە ڕێکخستی و هەروەسا ئامرازێ پیڤەرێ ستاندارد وەک ڕاپرسی ب دیارکرنا ڕەفتارێن زاروکی هاتییە بکارئینان.

**ئەنجام:** د ئەڤێ ڤەکولینێ دا تەکەز لسەر کاریگەریێن دیموگرافی، بەری زاروکبوونێ، و کاریگەریێن ڕەفتاری یێن زاروکێن توشبوویێن ئوتیزمێ هاتییە کرن. تێکڕایا ژیێ ٥.١٨ یێن پشکدار ب ڕێژا پتر نێر بوون (٧٦.٣٣٪)، پشکداربوویێن باژێری (٨١.١٦٪)، و ژ خێزانێن سەرەکی (٧٢.٤٦٪) ، و هەروەسا هەڤژینییا ژ مرۆڤێن نێزیک (٤١.٠٦٪) ژ کەیسان، و ئاریشێن دەروونی د ماوێ دووگیانیێ دا (٤٨.٧٩٪). پشتی ماوێ زاروکبوونێ، (٣٤.٣٠٪) مێژوویا خێزانی ب ئوتیزمێ هەبووینە. ژوان نیشانێن ڕەفتاری یێن هاتینە زانین کو گرێدان ب ئوتیزمێ ڤە هەی، وەک بەرێخودانا چاڤی یا سنوردار ب ڕێژا (٢٨.٩٩٪)، مەیل بو خراپکاریێ (٣١.٤٠٪)، و ئاریشێن تێبینیکرنێ، و عاجزبوون ژ گوهوڕینێن ڕوتینێ ب ڕێژا (٣٩.١٣٪) بوویە.

**دەرئەنجام:** ئەڤ ڤەکولینە تەکەز ل سەر کاریگەریا فاکتەرێن ڕەفتاری، پزیشکی، و جڤاکی دیموگرافی ل سەر تێکچوونێن ئوتیزمێ دکەت، کو دەستنیشانکرنا پێشوەخت، ستراتیجیێن دەست تێوەردان وخزمەتگوزاری پشتەڤانیێ دشێت جۆرێ ژیانا نەخوشێن تێکچوونا ئوتیزمێ باشتر لێبکەت.

## الخلاصة


### العوامل الاجتماعية والديموغرافية والعوامل الطبية الامومية والأنماط السلوكية للأطفال المصابين بالتوحد في مدينة دهوك

**الخلفية والأهداف**: يتزايد انتشار اضطراب طيف التوحد في جميع أنحاء العالم، وغالبًا ما يتأخر التشخيص، وخاصة في البيئات ذات الموارد المحدودة. كما تعيق المشكلات السلوكية وعوامل الخطر الطبية والتفاوتات الاجتماعية والديموغرافية الاكتشاف المبكر والتدخل. ومن أجل تعزيز خدمات الفحص والدعم، تسعى هذه الدراسة إلى فحص الأنماط السلوكية وعوامل الخطر الطبية والسمات الاجتماعية والديموغرافية المرتبطة باضطراب طيف التوحد.

**طرق البحث:** شارك 207 طفل مصاب باضطراب طيف التوحد في هذه الدراسة المقطعية في مدينة دهوك، التي استمرت من سبتمبر إلى ديسمبر 2024. وتم أخذ العينات غير العشوائية الملائمة لجمع البيانات من خلال المقابلات الشخصية باستخدام استبيان شبه منظم وأداة مقياسي لتقييم سلوك الطفل.

**النتائج:** تم تسليط الضوء على العوامل الديموغرافية وقبل الولادة والسلوكية المهمة في تحليل الدراسة للأطفال المصابين بالتوحد. وبمتوسط عمر 5.18 سنة، كان الغالبية من الذكور (76.33٪)، من المناطق الحضرية (81.16٪)، ومن الأسر النووية (72.46٪). تم الإبلاغ عن زواج الأقارب في 41.06٪ من الحالات، وكانت مشاكل الصحة العقلية أثناء الحمل شائعة (48.79٪). بعد الولادة، كان لدى 34.30٪ تاريخ عائلي للإصابة بالتوحد. انعكست تعقيدات السلوكيات المرتبطة بالتوحد في التحديات السلوكية مثل الاتصال البصري المحدود (28.99٪)، والميول التدميرية (31.40٪)، ومشاكل الانتباه، والضيق من التغييرات الروتينية (39.13٪).

**الاستنتاجات:** تسلط الدراسة الضوء على تأثير العوامل السلوكية والطبية والاجتماعية الديموغرافية على اضطراب طيف التوحد مما يشير إلى أن الاكتشاف المبكر واستراتيجيات التدخل وخدمات الدعم يمكن أن تحسن نوعية الحياة لمرضى اضطراب طيف التوحد.