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The Role of Media and Digital Communication in Improving the Lives of People with Special Needs in Jordan (People with Intellectual Disabilities)

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ABSTRACT

The study aimed to identify the role of media and digital communication in improving the lives of people with special needs in Jordan (people with intellectual disabilities). The study employed the descriptive-analytical method based on the use of the deductive method in testing the hypotheses. The study population consisted of parents, caregivers, and special education teachers who directly interact with individuals with intellectual disabilities in Jordan. A stratified random sampling method was used, and the study sample included approximately 100 participants. The questionnaire was employed as the instrument for data collection. The study reached several results, the most important of which are: digital media platforms significantly contribute to enhancing communication skills among individuals with intellectual disabilities in Jordan; educational content provided through digital media improves the cognitive and learning outcomes of individuals with intellectual disabilities in Jordan; and caregivers and families of people with intellectual disabilities view digital media as a valuable tool to support daily life activities and independence. Based on these results, the study presented key recommendations, including that relevant authorities, such as educational institutions and social centers, should design and implement training programs directed at individuals with intellectual disabilities, their families, and caregivers; that digital coverage in all areas should be improved; and that suitable devices and technologies should be made available at affordable prices for individuals with intellectual disabilities, along with the development of supportive policies aimed at reducing the digital gap resulting from economic and social factors.

Keywords: Media and Digital Communication, People with Special Needs, Jordan, People with Intellectual Disabilities

INTRODUCTION

In light of the rapid development of the digital era, information and communication technologies have become essential tools for social inclusion, empowerment, and the improvement of quality of life, particularly for marginalized groups. Among these groups, people with special needs, especially those with intellectual disabilities, often face systemic barriers in education, employment, healthcare, and social participation. These challenges are more pronounced in developing countries, including Jordan, where institutional support and infrastructure are still maturing. With the emergence and expansion of digital media platforms and

communication technologies, there is a significant opportunity to bridge gaps in accessibility, information dissemination, and social integration for this vulnerable group (Abu Zaid, 2021).

In Jordan, individuals with intellectual disabilities encounter a range of obstacles stemming from social stigma, limited access to specialized services, and insufficient inclusion in policymaking processes. Although many governmental and non-governmental bodies have launched programs targeting the needs of these individuals, much remains to be done to ensure their full participation in community life. Digital media and communication technologies, when effectively utilized, can serve as powerful enablers of inclusion. These tools can provide tailored educational platforms, facilitate interaction with caregivers and support networks, offer accessible content, and promote social and civic engagement. Furthermore, digital communication channels can amplify the voices of individuals with intellectual disabilities, enabling them and their families to advocate for their rights, resources, and reforms (Al-Khalidi, 2022).

This research seeks to examine the role of digital media and communication in improving the lives of individuals with intellectual disabilities in Jordan, focusing on their patterns of technology use, access, and its tangible effects on their social and emotional well-being. The study aims to highlight how digital platforms—ranging from social media and mobile applications to online learning environments—can be strategically employed to enhance educational opportunities, support independent living, and strengthen community participation for this group (Al-Hamouri, 2023). By exploring the intersection between digital inclusion and disability support, the study will contribute valuable insights into the potential of digital interventions in overcoming structural limitations and social barriers.

This research will also address the role of policy frameworks, digital literacy initiatives, and community programs that influence the adoption and effectiveness of digital tools among individuals with intellectual disabilities in Jordan. Understanding these dynamics is critical for stakeholders—including policymakers, educators, caregivers, and technology developers—to design inclusive strategies and digital environments that respond to the specific needs of this group. Ultimately, the study aspires to provide practical recommendations to enhance the use of digital media and communication technologies in empowering individuals with intellectual disabilities and strengthening their rights to equal participation in Jordanian society.

Research Problem

In the era of rapid digital advancement, digital media and communication technologies have emerged as effective tools for social inclusion, information dissemination, and empowerment. However, despite their potential, the integration of these tools and the accessibility of individuals with intellectual disabilities to them in Jordan remain insufficiently explored. Intellectual disability is characterized by significant limitations in intellectual functioning and adaptive behavior, which may affect communication, social participation, and independence. For individuals with intellectual disabilities, digital media can play a crucial role in improving quality of life through educational support, access to healthcare information, social interaction, self-expression, and community participation (Heitplatz et al., 2022).

There are significant challenges hindering the effective use of digital media among this group in Jordan. These challenges include limited access to assistive technologies, inadequate digital literacy training for individuals and caregivers, a lack of localized and inclusive digital content, and insufficient institutional support. Furthermore, there is a scarcity of empirical studies in the Jordanian context that explore how individuals with intellectual disabilities currently use digital media or how communication technologies can be adapted to their needs (Al-Saadi, 2021).

This knowledge gap raises an urgent research problem: How can digital media and communication technologies be effectively harnessed to improve the lives of individuals with intellectual disabilities in Jordan? What are the existing barriers and opportunities, and what are the effects of digital interaction on this marginalized group?

Research Questions

To address the research problem, the following questions guide this study:

Main Research Question:

How do digital media and communication technologies contribute to improving the lives of individuals with intellectual disabilities in Jordan?

Sub-Questions:

1. What is the role of digital media in enhancing communication skills among individuals with intellectual disabilities?
2. What is the educational impact of digital content on individuals with intellectual disabilities?

3. What is the role of digital content and related technologies in supporting daily life and independence for individuals with intellectual disabilities?
4. Are there statistically significant differences in the impact of digital media on individuals with intellectual disabilities based on demographic variables such as age, gender, and level of intellectual disability?

Significance of the Study

Scientific and Theoretical Significance

This study contributes significantly to the academic and theoretical understanding of the role of digital media in social inclusion, particularly in developing countries such as Jordan. While existing literature in Western contexts has explored the potential of digital media in empowering people with disabilities, little is known about how these dynamics function in Arab and Middle Eastern societies. By focusing on individuals with intellectual disabilities—who are often marginalized in both digital and academic domains—this study advances disability studies, media studies, and communication theories.

From a theoretical perspective, the research integrates concepts from the social model of disability, media accessibility theory, and digital inclusion frameworks. The study challenges the traditional deficit-based perspective of intellectual disability by shifting the focus toward agency, capacity, and empowerment through media. It also opens space for interdisciplinary dialogue among media studies, special education, psychology, and public policy.

Practical Significance

Practically, the study provides valuable insights for policymakers, educational institutions, non-governmental organizations, caregivers, and media developers in Jordan. The findings can inform the design of more inclusive digital platforms, training programs, and policies that empower individuals with intellectual disabilities. In addition, this research can support the development of culturally and linguistically appropriate content tailored to the cognitive and communicative needs of this group.

By highlighting barriers and enablers of digital participation, the study can guide the development of national strategies for digital inclusion, promote social participation, reduce isolation, and improve the overall well-being of individuals with intellectual disabilities. It also offers evidence for NGOs and advocacy groups striving to enhance digital accessibility and human rights for this vulnerable population.

Study Objectives

The present study seeks to achieve the following objectives:

1. To identify the role of digital media in enhancing communication skills among individuals with intellectual disabilities.
2. To measure the educational impact of digital content on individuals with intellectual disabilities.
3. To identify the role of digital content and related technologies in supporting daily life and independence for individuals with intellectual disabilities.
4. To detect statistically significant differences in the impact of digital media on individuals with intellectual disabilities based on demographic variables such as age, gender, and level of intellectual disability.

Research Hypotheses

The study seeks to verify the following assumptions:

- **H1**: There is a statistically significant effect of digital media platforms on communication skills among individuals with intellectual disabilities in Jordan.
- **H2**: There is a statistically significant effect of educational content delivered through digital media on the cognitive and learning outcomes of individuals with intellectual disabilities in Jordan.
- **H3**: Caregivers and families of persons with intellectual disabilities perceive digital media as having a statistically significant effect in supporting daily life activities and independence.

THEORETICAL FRAMEWORK AND PREVIOUS STUDIES

Concepts of Intellectual Disabilities

Intellectual disabilities are characterized by significant limitations in both intellectual functioning (such as reasoning, learning, and problem-solving) and adaptive behavior, which encompasses a range of social and practical everyday skills. These disabilities originate before the age of eighteen and affect an individual's ability to function independently. According to the American Association on Intellectual and Developmental Disabilities

(AAIDD), intellectual disability is defined not only by a low intelligence quotient (IQ), but also by the individual's ability to adapt to the demands of daily life (Gibson et al., 2021).

In Jordan, individuals with intellectual disabilities face numerous challenges, including social exclusion, limited opportunities to access quality education, and a lack of support services. The social stigma associated with disability often exacerbates these challenges, resulting in a cycle of marginalization. Therefore, the need for innovative, comprehensive, and sustainable solutions is of critical importance. Digital media and communication tools provide a pathway to bridge the gap between individuals with intellectual disabilities and society as a whole (Al-Tarawneh, 2022).

Digital Media in Jordan

Jordan has witnessed rapid growth in its digital infrastructure, with increasing access to mobile technology, internet connectivity, and social media platforms. The government's focus on digital transformation, as reflected in initiatives such as the National Digital Economy Strategy, contributes to creating an enabling environment for leveraging technology to support vulnerable populations. In this context, digital media encompasses a wide range of platforms, including social media, mobile applications, educational programs, interactive websites, and assistive technologies. Despite the availability of digital tools, their targeted use for individuals with intellectual disabilities remains underutilized. The effectiveness of these tools depends on their accessibility, cultural relevance, and adaptability to the cognitive and emotional needs of the target group. Therefore, the theoretical research focuses on the intersection of media studies, communication theories, and disability studies (Al-Assaf, 2023).

Media and Communication Theories Related to Disability

Several media and communication theories provide insights into how digital platforms affect the lives of individuals with intellectual disabilities. Among the most prominent is the Uses and Gratifications Theory (UGT), which posits that individuals actively seek to use media to fulfill specific needs, such as information, personal identity, integration, and social interaction. For individuals with intellectual disabilities, digital media can serve as a tool for self-expression, skill development, and communication (Wu et al., 2023).

Another relevant theory is Media Richness Theory, which suggests that the effectiveness of communication depends on the medium's capacity to convey information. Rich media—such as video calls or interactive platforms—enable immediate feedback and personalization, making them suitable for users with varying cognitive abilities. Social Learning Theory, as developed by Albert Bandura, also emphasizes the importance of observational learning through media, which is particularly significant for individuals with intellectual disabilities who benefit from visual and repetitive learning methods (Wu & Szafir, 2023).

Inclusive Education and Digital Media

Digital media represents a cornerstone of inclusive education, offering personalized learning experiences designed to meet individual needs. In the context of intellectual disabilities, educational programs and applications can break down complex concepts into simplified steps, employ visual and auditory aids to reinforce learning, and allow repeated exposure to content. Studies have shown that technology-assisted education improves attention span, engagement, and learning outcomes for students with intellectual disabilities (Parida & Sinha, 2021).

In Jordan, where public educational institutions often lack the resources to adequately address special needs, digital platforms can complement formal education. Virtual classrooms, e-learning modules, and game-based educational content can facilitate continuous learning, particularly in rural or underserved areas. These tools also empower teachers and caregivers by providing structured content and mechanisms for progress tracking (Al-Qaisi, 2021).

The Role of Families and Caregivers

The effectiveness of digital interventions often depends on the involvement of families and caregivers. Their role in facilitating the use of digital tools, providing encouragement, and reinforcing learning is indispensable. Digital media can also support caregivers by providing resources, training, and peer support networks. For example, online forums and webinars enable caregivers to exchange experiences, seek advice, and obtain professional guidance (Smith et al., 2019).

In Jordan, where family structures play a pivotal role in caregiving, digital communication tools can alleviate some burdens by offering remote access to specialists, scheduling tools, and emergency assistance features. These technologies contribute to improving the quality of life not only for individuals with disabilities but also for their support networks (Al-Hayajneh, 2021).

Previous Studies

Mustafa's study (2023) aimed to explore the role of new digital media in the rehabilitation and integration of people with special needs into society. The study sought to highlight the contribution of digital media in reducing the isolation of this group by providing interactive platforms and spaces for self-expression that enable them to engage actively in the community, in contrast to the challenges still posed by traditional media in addressing their issues adequately and comprehensively. The study adopted the descriptive-analytical method and relied on data collection through digital media content analysis and a review of previous studies and related reports. The study population included groups concerned with the issues of people with special needs. The findings revealed that traditional media continues to fall short in addressing the issues of people with special needs, whereas new digital media provided multiple opportunities for their social inclusion, opened new horizons for self-expression and interactive participation, and contributed to lifting them out of isolation and marginalization. The findings also showed that digital media tools enabled people with special needs to present their issues themselves. Furthermore, education plays a pivotal role in enabling this group to use digital media. The study also indicated the existence of multiple barriers that prevent some individuals with special needs from benefiting from these tools, thereby hindering the desired process of social inclusion.

Haddar and Soukhal's study (2018) aimed to highlight the importance of the educational process for people with special needs. The study adopted the descriptive-analytical method by analyzing the role of modern technological tools in supporting the educational process for people with special needs. The research instruments included a set of tools used to measure the extent of the impact of technology in facilitating learning and improving academic and functional performance for these students. The study sample focused on students with special needs alongside relevant educational staff. The findings revealed the positive and effective role of modern technology in overcoming the educational challenges faced by people with special needs, by improving their cognitive and performance abilities and enhancing their active participation in the learning environment. The study also showed that technological tools helped diversify teaching methods to match individual differences among students and facilitated the acquisition of scientific concepts and academic skills, which positively reflected on the quality of the educational process.

Adel's study (2022) aimed to explore the concept of digital transformation and technological empowerment from the perspective of young people with special needs. The study employed the descriptive-analytical method to analyze the current situation of these digital initiatives, using tools such as the questionnaire and observation. The study population consisted of young people with special needs in two centers, and a purposive sample was selected. The findings indicated that there is growing institutional interest in Egypt in digital transformation, with continuous state efforts to digitize various fields of life. The study further revealed that young people with disabilities view technological empowerment as a comprehensive process aimed at equipping them with digital knowledge and skills that enable their positive and effective participation in digital activities in line with their capacities, in addition to contributing to changing the negative societal perception of disability from marginalization to empowerment.

Mansour's study (2020) sought to highlight the shift in local attention to the issues of people with special needs in light of the rapid progress in communication technology and the emergence of social media platforms. The study employed the descriptive-analytical method and targeted as its population individuals with special needs who are active users of social media. A simple random sample was selected from this group. The findings revealed that social media networks represent a more important and effective medium for persons with disabilities compared to traditional media, as they enable them to freely express their opinions and discuss public issues in political, economic, social, and educational domains without restrictions. These platforms also provide opportunities for acquaintance and exchange of experiences, and they enhance their social and cultural presence.

Commentary on Previous Studies

Previous studies have focused on the role of digital media in inclusion of people with special needs, in terms of integrating medical visas with digital empowerment and educational support methods.

However, the current study is unique in that it focuses on a specific category of disability: those with intellectual disabilities. However, digital media has impacted their daily lives in terms of communication, awareness, and independence, which has not been identified in previous literature. This lack of focus on a clearly defined category is also evident.

In addition, the current study focuses on simple, applied methods for improving quality of life for people with intellectual disabilities, based on four main axes: education – communication – daily independence, which are new axes not found in previous studies – demographic differences, and a quantitative analysis detailing the specific studies.

METHODOLOGY OF THE STUDY

The present study employed the descriptive-analytical method, as it is one of the scientific approaches closely linked to the human sciences, allowing for the description of the existing reality and the analysis of relationships between variables in an objective manner. The research also relied on the deductive method in testing hypotheses through the use of appropriate statistical tools. This combination of the descriptive-analytical method and the deductive approach enables the accurate and objective measurement of variables, limits researcher interference in the results, and allows for the effective testing of hypotheses when using the questionnaire as a tool for collecting quantitative data.

Study Population and Sample

The study population consisted of parents, caregivers, and special education teachers who deal directly with individuals with intellectual disabilities in Jordan. These participants possess accurate knowledge of the development of intellectual and behavioral abilities among persons with disabilities, particularly with regard to their interaction with digital platforms. The study population included both urban and rural areas to achieve comprehensive geographical representation.

A stratified random sampling method was used to ensure the representation of different groups in the study population according to geographic location (urban/rural), gender, and level of disability (mild, moderate, severe). The study sample included approximately 100 participants, which is a sufficient number to ensure the statistical validity of the results. The participants were selected from special education centers, inclusive schools, and non-governmental organizations working with people with special needs.

Data Collection Procedures

The study employed the questionnaire as its main tool to address the analytical aspects of the study variables. Primary data were collected through the questionnaire, which included a number of statements designed to reflect the study objectives and address its research questions through the responses of the participants in the study sample. The study utilized a five-point Likert scale, with each response assigned a relative weight of 20%. The analysis of the data collected from the study sample was conducted using the Statistical Package for the Social Sciences (SPSS), Version 26.

Study Instrument

The questionnaire was used as the primary tool for data collection. The questionnaire was designed to align with the hypotheses and dimensions of the study and is divided into the following sections:

1. Demographic data (such as age, gender, type and degree of disability, and relationship to the person with a disability).
2. The role of digital media in enhancing communication skills.
3. The educational impact of digital content.
4. Supporting daily life and independence through digital tools.

The questionnaire relied on a five-point Likert scale ("Strongly Agree" to "Strongly Disagree") and included a limited number of open-ended questions to obtain some qualitative indicators. The questionnaire was presented to a panel of specialists in special education and digital media to verify its validity and was also pilot-tested on a small sample to ensure clarity and reliability, using Cronbach's Alpha coefficient ($\alpha \geq 0.70$).

Validity of the Study Instrument

In every study that relies on measurement tools for data collection, it is essential to establish validity, which reflects the extent to which the instrument measures what it is intended to measure. For the purposes of the present study, the validity of the instrument was verified by presenting its preliminary version to a group of university professors with relevant expertise, in order to ensure face validity. The reviewers judged the appropriateness and comprehensiveness of the items, their alignment with the corresponding dimension, and the clarity and linguistic accuracy of the items, in addition to suggesting necessary items and recommending the removal of unnecessary ones. After retrieving the instrument from the reviewers, their feedback was examined, and the necessary modifications were incorporated. Following this process, the final instrument consisted of 19 items distributed across its sections and dimensions.

In addition, Principal Component Factor Analysis and the Kaiser-Meyer-Olkin (KMO) test were applied to ensure construct validity of the instrument. Construct validity determines the degree of correlation between the concepts measured by the items and the overall score of the scale. The higher the degree of correlation, the more effectively the instrument achieves its intended measurement purpose. Principal Component Factor Analysis was

employed to examine explanation and fit, where a factor loading exceeding 0.50 indicates a good estimate, and a value exceeding 0.40 is considered acceptable.

The KMO test was used to determine sample adequacy, intercorrelations, and consistency, with values ranging between 0.8 and 1 considered high and acceptable, while values above 0.6 are deemed acceptable. Bartlett's Test of Sphericity was used to determine appropriateness, which is considered satisfactory and acceptable at a significance level of 0.05 or less. This indicates high reliability and suitability for factor analysis. The explanatory power is expressed as the percentage of variance, whereby factor loadings must be statistically significant based on sample size.

Table 1. Construct Validity Test using KMO and Bartlett's

Test	Value
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.938
Bartlett's Test of Sphericity – Approx. Chi-Square	3526.270
df	45
Sig.	.0000

It was also shown that the values of the study instrument's dimensions exceeded 40%, indicating that each dimension was suitable for factor analysis.

Reliability of the Study Instrument

The reliability test was applied to the data collected from the study sample using Cronbach's Alpha coefficient. The values were considered acceptable if they exceeded 0.70, while values below this threshold were deemed unacceptable (Sekaran & Bougie, 2016). Table (2) presents the results obtained from applying the reliability test, according to each variable and its dimensions:

Table 2. Reliability Coefficients of the Study Instrument

Dimensions	Number of Items	Reliability Coefficient
Role of digital media in communication skills	5	0.957
Educational impact of digital content	5	0.949
Supporting daily life and independence	5	0.949

The results in Table (2) show that the reliability coefficients of the study instrument were high, exceeding 0.60. The final version of the instrument was confirmed after establishing its reliability. Table (3) further shows that the Cronbach's Alpha coefficients for the questionnaire items ranged between 0.949 and 0.957, which are statistically acceptable values for research in administrative and human sciences. The lowest value was 0.949, which is higher than the minimum acceptable threshold. Thus, the study instrument is characterized by internal consistency.

Table 3. Cronbach's Alpha Reliability Test for the Study Instrument Items

Item	Cronbach's Alpha	Item	Cronbach's Alpha	Item	Cronbach's Alpha
Q1	.974	Q6	.973	Q11	.974
Q2	.974	Q7	.973	Q12	.973
Q3	.974	Q8	.973	Q13	.973
Q4	.974	Q9	.973	Q14	.973
Q5	.973	Q10	.973	Q15	.973

Statistical Analysis Methods

The statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS V.26). The data were analyzed using the following statistical methods:

- KMO coefficient, to verify the construct validity of the study instrument.
- Cronbach's Alpha equation, to ensure the reliability of the study instrument.
- Frequencies and percentages, to describe the personal and functional characteristics of the study sample.
- Descriptive statistics, by calculating means and standard deviations, to answer the first and second research questions.
- Skewness and kurtosis tests.
- To test the study hypotheses, simple regression analysis was employed.
- The class length equation was used to measure the level of importance of the study variables, according to the following formula:

$$\frac{\text{Upper limit of the scale (5)} - \text{Lower limit of the scale (1)}}{\text{Number of required classes (3)}} = \frac{5-1}{3} = 1.33$$

RESULTS OF DATA ANALYSIS AND HYPOTHESES TESTING

Description of the Personal and Functional Characteristics of the Study Sample

Table (4) presents the distribution of the sample members according to personal and functional characteristics.

Table 4. Description of the Personal and Functional Characteristics of the Study Sample

Variable	Category	Frequency	Percentage
Gender of the person with intellectual disability	Male	66	66%
	Female	34	34%
	Total	100	100%
Age of the person with intellectual disability	Less than 10 years	28	28%
	10 years to less than 15 years	44	44%
	16 years to less than 20 years	23	23%
	More than 20 years	5	5%
	Total	100	100%
Level of intellectual disability	Mild	18	18%
	Moderate	38	38%
	Severe	44	44%
	Total	100	100%
Relationship to the person with intellectual disability	Parent	45	45%
	Sibling	30	30%
	Guardian/Caregiver	15	15%
	Teacher/Specialist	10	10%
	Total	100	100%

It is evident from Table (4) that the percentage of males exceeded that of females, with males accounting for 66% compared to 34% for females. Regarding the distribution of the sample according to the age of the person with intellectual disability, the highest percentage was for those aged between 10 years and less than 15 years (44%), followed by those under 10 years (28%), then those between 16 years and less than 20 years (23%), and finally those over 20 years (5%).

As for the distribution of the sample according to the level of intellectual disability, individuals with severe disabilities represented the highest percentage (44%), followed by those with moderate disabilities (38%), while those with mild disabilities accounted for 18%.

Concerning the distribution of the sample by relationship to the person with intellectual disability, it is noted that parents constituted the largest category (45%), followed by siblings (30%), then guardians/caregivers (15%), and finally teachers/specialists (10%).

Description of the Study Variables

First Dimension: The Role of Digital Media in Communication Skills

What is the role of digital media in enhancing communication skills among individuals with intellectual disabilities?

The means and standard deviations of the items of this dimension were calculated, as shown below:

Table 5. Means, Standard Deviations, Ranks, and Levels for the Items of the First Dimension

Item No.	Item	Mean	Standard Deviation	Rank	Level
1	Digital media helps the individual to express himself more clearly.	4.52	.500	1	High
2	The use of social media or messaging applications improves daily communication skills.	4.37	.642	2	High
3	Videos or digital tools help in teaching language and effective expression.	4.11	.680	3	High
4	The individual shows greater confidence when communicating through digital tools.	4.04	.673	4	High
5	Digital media has become an essential part of their	3.94	.673	5	High

	communication routine.				

Overall Mean = 4.02 (High)

The results indicate that digital media has become an essential and influential tool in enhancing communication skills among individuals with intellectual disabilities, as the first dimension showed an overall high mean score of (4.02). This reflects a clear appreciation by the respondents of the role these media play in facilitating expression and social interaction.

Specifically, the item *"Digital media helps the individual to express himself more clearly"* obtained the highest mean score (4.52), confirming that digital media serves as a supportive means that strengthens individuals' ability to convey their thoughts and feelings with greater clarity and precision. This can be attributed to several factors, including the use of multiple forms of expression (such as images, videos, emojis, and voice messages) that enable individuals to overcome verbal or cognitive difficulties. This openness to alternative channels of expression also supports self-confidence and makes individuals more capable of engaging in conversations and social interactions.

The item *"The use of social media or messaging applications improves daily communication skills"* scored a high mean (4.37), indicating that regular and systematic use of these digital media positively influences the frequency and diversity of communication, which is essential for building sustainable communication skills. These platforms provide an interactive virtual environment where individuals can participate in live conversations, exchange ideas, and receive immediate feedback, thereby encouraging the development of language and social skills. They also foster interactive learning through diverse and engaging content that facilitates comprehension and retention.

Although the item *"Digital media has become an essential part of their communication routine"* obtained the lowest mean score (3.94), this still indicates a relatively high acceptance of digital media use. However, it also suggests that challenges remain in integrating these tools fully and consistently into daily life. Possible reasons include limited access to smart devices or internet services in some households, weak technological skills, insufficient technical or training support, and social or cultural factors that may restrict regular use, given that some families or communities may still lack full awareness of the importance of digital media in improving the quality of life for people with special needs.

Taken together, these findings demonstrate that digital media represents a real opportunity to enhance communication skills among individuals with intellectual disabilities. However, success requires coordinated efforts from all relevant stakeholders—educational, health, and social institutions—to ensure the provision of suitable technological infrastructure and the delivery of specialized training programs that align with the capacities and levels of understanding of this group. It is also essential to support families and caregivers with continuous awareness on the effective and safe use of these tools and to integrate them into therapeutic and educational plans.

Furthermore, the high indicators related to clearer expression and improved daily communication suggest that social media and messaging applications may serve as effective tools for reducing social isolation and fostering a sense of integration and belonging to society. Accordingly, efforts should be directed toward developing interactive digital content tailored to their specific needs, while ensuring privacy and cybersecurity.

These results point to digital media and communication as strategic tools for improving communication skills among individuals with intellectual disabilities, positively reflecting on their quality of life and enhancing their social participation. Therefore, it is necessary to better invest in this opportunity through the development of supportive policies, technical assistance, and educational programs, to ensure the sustainable and effective use of digital media in achieving the fundamental goal of empowering people with special needs and improving their standard of living in Jordanian society.

Second Dimension: The Educational Impact of Digital Content

What is the educational impact of digital content on individuals with intellectual disabilities?
The means and standard deviations of the items of this dimension were calculated, as shown below:

Table 6. Means, Standard Deviations, Ranks, and Levels for the Items of the Second Dimension

Item No.	Item	Mean	Standard Deviation	Rank	Level
6	Educational videos/applications improve the understanding of basic concepts (such as numbers and colors).	4.34	.666	1	High
7	Digital learning platforms help to develop memory and attention span.	4.02	.704	2	High
8	Repetition in digital educational content aids memorization.	4.00	.714	3	High
9	The individual shows progress in learning after interacting with digital content.	3.98	.620	4	High

10	Educational applications make learning more enjoyable and interactive.	3.79	.725	5	High

Overall Mean = 4.03 (High)

The results concerning the second dimension of the study, *"The Educational Impact of Digital Content,"* indicate that the use of digital and educational media plays an active and positive role in improving the quality of learning among individuals with intellectual disabilities in Jordan. The overall mean of the respondents' answers for this dimension was (4.03), a level that reflects high satisfaction and broad acceptance of the importance and impact of digital content on the educational process of this specific group.

The findings show that digital content—such as educational videos and specialized applications—significantly contributes to simplifying and reinforcing the understanding of basic concepts that individuals with intellectual disabilities often find difficult to grasp, such as numbers and colors. The item *"Educational videos/applications improve the understanding of basic concepts (such as numbers and colors)"* ranked first, with a mean score of (4.34), demonstrating that these educational tools are considered highly effective in transmitting knowledge in a way that corresponds with learners' abilities and enhances their comprehension.

The second indicator, related to *"Digital learning platforms help to develop memory and attention span,"* recorded a mean of (4.02), indicating that digital content not only provides information but also enhances cognitive skills such as concentration and memory development—two crucial elements for the success of the learning process, especially for individuals with intellectual disabilities who may struggle in these areas.

In contrast, the lowest indicator within this dimension, although still at a high level, was the item *"Educational applications make learning more enjoyable and interactive"* with a mean of (3.79). This suggests a gap in the entertainment and interactive aspects of the digital content currently used. Such aspects are highly important, as increased interactivity and enjoyment in content stimulate learners' motivation and encourage continuous engagement, which positively reflects on educational outcomes.

Based on these findings, it can be concluded that digital content plays a vital role in improving the quality of education for individuals with intellectual disabilities by simplifying concepts and developing cognitive abilities. However, there is an urgent need to further develop digital educational content to incorporate more interactive and entertaining elements, which would increase learner participation and encourage continuous self-learning. This requires directing efforts toward the design of educational programs and applications that take into account the psychological and cognitive characteristics of this group, in addition to training teachers and specialists on how to maximize the benefits of these digital media tools.

These results confirm the importance of digital media and communication as innovative and effective educational tools that can significantly improve the lives of individuals with intellectual disabilities in Jordan by providing flexible learning resources tailored to their needs and opening new horizons for learning and development. Supporting the development of digital educational content, with an emphasis on interactivity and enjoyment, represents a fundamental step toward enhancing the integration of people with special needs into society and enabling them to acquire the knowledge and skills necessary to face life's challenges.

Third Dimension: Supporting Daily Life and Independence

What is the role of digital content and related technologies in supporting daily life and independence for individuals with intellectual disabilities?

The means and standard deviations of the items of this dimension were calculated, as shown below:

Table 7. Means, Standard Deviations, Ranks, and Levels for the Items of the Third Dimension

Item No.	Item	Mean	Standard Deviation	Rank	Level
11	Digital media helps the individual to follow daily routines (such as brushing teeth and dressing).	3.78	.737	5	High
12	Digital reminders or visual schedules enhance independence.	3.80	.693	4	High
13	Caregivers benefit from digital resources when supporting individuals with intellectual disabilities.	3.82	.718	3	High
14	Digital communication helps the individual to meet his needs independently.	3.89	.691	1	High
15	The use of digital tools reduces the caregiver's burden in daily activities.	3.84	.738	2	High

Overall Mean = 3.83 (High)

The results of the third dimension in the study entitled "The Role of Media and Digital Communication in Improving the Lives of People with Special Needs in Jordan (Individuals with Intellectual Disabilities)" indicate that digital content and related technologies play an important and effective role in supporting daily life and

independence for this group. The overall mean of the respondents' answers for this dimension was (3.83), a level that reflects a high appreciation of the role of digital technologies in enhancing the self-capacity of individuals with intellectual disabilities to manage their daily affairs, despite some minor differences in the evaluation of individual items.

The highest indicator within this dimension was the item "Digital communication helps the individual to meet his needs independently" with a mean of (3.89), confirming that digital technologies, including various communication tools, enable individuals to rely more on themselves in fulfilling their daily requirements. This indicator reflects the positive impact of digital communication in enhancing the sense of independence and self-empowerment among individuals with intellectual disabilities, which is essential for improving their quality of life and efficiency in dealing with daily challenges.

Ranked second was the indicator related to "The use of digital tools reduces the caregiver's burden in daily activities" with a mean of (3.84). This highlights an important aspect of the effectiveness of digital content and technologies in alleviating the pressure on those responsible for the care of persons with disabilities, whether family members or professionals. It contributes to improving the caregiving environment and allows for more effective and sustainable role distribution.

The lowest-rated indicator, though still at a high level, was the item "Digital media helps the individual to follow daily routines (such as brushing teeth and dressing)" with a mean of (3.78). This suggests the potential for further development and enhancement of digital media to be more effective in assisting individuals in adhering to daily routines, which constitute a vital part of their independence. Although this indicator received the lowest relative evaluation, it nonetheless signals an opportunity for improvement in the design of digital content to better support basic life skills.

Based on these results, it can be concluded that media and digital communication play a vital role in improving the lives of individuals with intellectual disabilities by enabling them to achieve greater independence in their daily lives, as well as by reducing the burden on caregivers. However, the findings call for increased attention to the development of digital media that provides more effective support in practical and routine aspects directly related to strengthening independence. There is no doubt that investing in the development of interactive and tailored content that enhances self-organization skills and adherence to daily routines will lead to better outcomes in terms of quality of life and independence.

These results confirm that digital technologies and media are not merely assistive tools but represent true instruments of empowerment that contribute to building a more dignified and independent life for people with special needs, thereby strengthening their social integration and empowerment in various aspects of daily life. This underscores the necessity of continuing to develop these technologies and adapt them to the needs of special groups, in order to achieve the goals of inclusive development and social justice.

Fourth Dimension: Are There Statistically Significant Differences in the Impact of Digital Media on Individuals with Intellectual Disabilities Based on Demographic Variables Such as Age, Gender, and Level of Intellectual Disability?

First: Gender of the Person with Intellectual Disability

Table 8. Means, Standard Deviations, and *t*-Test Results of Statistically Significant Differences in the Impact of Digital Media on Individuals with Intellectual Disabilities Attributed to the Gender Variable

Dimensions of Variables	Gender	N	Mean	Std. Deviation	*t* Value	df	Sig. (α)
Role of digital media in communication skills	Male	66	3.47	.965	-3.075	148	.003
	Female	34	3.88	.664			
Educational impact of digital content	Male	66	3.46	.909	-3.398	148	.001
	Female	34	3.90	.668			
Supporting daily life and independence	Male	66	3.44	.947	-2.437	148	.016
	Female	34	3.78	.771			
Overall application score	Male	66	3.44	.882	-2.862	148	.005
	Female	34	3.81	.693			

It is evident from Table (8) that there are statistically significant differences ($\alpha = 0.05$) attributed to the gender variable across all domains and the overall score, with the differences in favor of females.

Second: Age of the Person with Intellectual Disability

Table 9. Means, Standard Deviations, and *t*-Test Results of Statistically Significant Differences in the Impact of Digital Media on Individuals with Intellectual Disabilities Attributed to the Age Variable

Dimensions of Variables	Age Group	N	Mean	Std. Deviation	*t* Value	df	Sig. (α)
Role of digital media in communication skills	< 10 years	28	3.61	.842	-2.094	148	.038
	10–<15 years	44	3.93	.778			
	16–<20 years	23	3.53	.854			
	> 20 years	5	3.90	.861			
Educational impact of digital content	< 10 years	28	3.63	.818	-2.013	148	.046
	10–<15 years	44	3.93	.760			
	16–<20 years	23	3.55	.930			
	> 20 years	5	3.93	.856			
Supporting daily life and independence	< 10 years	28	3.53	.854	-2.328	148	.021
	10–<15 years	44	3.90	.861			
	16–<20 years	23	3.45	.956			
	> 20 years	5	3.89	.846			
Overall application score	< 10 years	28	3.56	.800	-2.393	148	.018
	10–<15 years	44	3.91	.757			
	16–<20 years	23	3.63	.818			
	> 20 years	5	3.93	.760			

It is evident from Table (9) that there are statistically significant differences (α = 0.05) attributed to the age variable across all dimensions and the overall score, with the differences in favor of the age group (10 to less than 15 years).

Third: Level of Intellectual Disability

Table 10. Means, Standard Deviations, and *t*-Test Results of Statistically Significant Differences in the Impact of Digital Media on Individuals with Intellectual Disabilities Attributed to the Level of Disability Variable

Dimensions of Variables	Level of Disability	N	Mean	Std. Deviation	*t* Value	df	Sig. (α)
Role of digital media in communication skills	Mild	18	3.56	.800	-2.393	148	.018*
	Moderate	38	3.91	.757			
	Severe	44	3.89	.775			
Educational impact of digital content	Mild	18	3.53	.854	-2.328	148	.021*
	Moderate	38	3.91	.861			
	Severe	44	3.90	.757			
Supporting daily life and independence	Mild	18	3.45	.956	-2.546	148	.012*
	Moderate	38	3.89	.846			
	Severe	44	3.87	.861			
Overall application score	Mild	18	3.56	.800	-2.393	148	.018*
	Moderate	38	3.91	.757			
	Severe	44	3.89	.775			

It is evident from Table (10) that there are statistically significant differences (α = 0.05) attributed to the level of intellectual disability across all domains and the overall score, with the differences in favor of individuals with severe disabilities.

Hypotheses Testing

After verifying the validity and reliability of the study data, the researcher applied the Normality Test and the Multicollinearity Test in preparation for conducting simple and multiple regression analyses of the study hypotheses (Sekaran, 2016).

Normality Test

Before performing further data analyses, it was necessary to test whether the assumption of normal distribution was met. The current study used IBM SPSS Version 26 to examine normality through skewness and

kurtosis indicators. When the distribution is normal, it is assumed that no violation has occurred. Minor deviations from normality in skewness or kurtosis values do not significantly affect the analysis. A distribution is considered acceptable if the kurtosis value is within (±7). Additionally, if skewness and kurtosis values fall within (±2), the data are assumed to approximate univariate normality. In this study, all skewness and kurtosis values were below (±1), and thus all values were accepted as evidence of normal distribution. Table (11) presents the normality test results for the study variables.

Table 11. Normality Tests

Variables	Statistic	Sig.	Skewness	Kurtosis
Role of digital media in communication skills	.172	.000	.463	.159
Educational impact of digital content	.142	.000	.335	-.432
Supporting daily life and independence	.156	.000	.641	-.180

The Bivariate Pearson Correlation test was then applied to ensure that there was no high correlation among the independent study variables, thereby confirming their independence. High intercorrelations would have necessitated combining them into a single variable. This test enhances the verification of the independence of the variables and the absence of multicollinearity, thus confirming the suitability of the data for regression analyses. As shown in Table (12), the correlation of each variable with the others was below the maximum allowable threshold of (70%). If the correlation exceeds this level, variables should be merged. Therefore, the results presented in the table confirm the independence of the study variables and support the validity of conducting regression analysis to test the study hypotheses.

Table 12. Pearson Correlation Test of the Study Variables

Variables	Role of Digital Media in Communication Skills	Educational Impact of Digital Content	Supporting Daily Life and Independence
Role of digital media in communication skills	1	.543**	.562**
Educational impact of digital content	.543**	1	.713**
Supporting daily life and independence	.562**	.713**	1

(**) Correlation is significant at the 0.01 level.

Findings Related to the Study Hypotheses

Findings Related to the First Main Hypothesis

H1: There is a statistically significant effect of digital media platforms on the communication skills of individuals with intellectual disabilities in Jordan.

To test the first main hypothesis, Simple Regression Analysis was applied to examine whether digital media platforms have a statistically significant effect on the communication skills of individuals with intellectual disabilities in Jordan. Table (13) illustrates this.

Table 13. Analysis of Variance of Regression for the First Main Hypothesis

Source	R	R Square	Source of Data	Sum of Squares	df	Mean Squares	β	Computed F Value	Sig. Level
Overall Linear Regression	.818a	.669	Regression	66.592	1	66.592	0.818	723.310	.000b
			Residual	32.960	98	.092			
			Total	99.552	99				

Table (13) shows that the correlation coefficient value for the variable *Role of Digital Media in Communication Skills* reached (0.818). The coefficient of determination (R^2) amounted to (0.669), indicating that the model explained (66.9%) of the total variance. The computed F value was (732.310), with a statistical significance level of (0.000), which is less than (0.05). Accordingly, the current hypothesis is accepted, confirming that digital media platforms have a statistically significant effect on the communication skills of individuals with intellectual disabilities in Jordan.

These results are consistent with the findings of Mustafa (2023), which highlighted the capacity of new digital media to integrate and rehabilitate people with special needs by opening new horizons for self-expression

and active social participation. That study showed that digital media surpasses the limitations imposed by traditional media, enabling people with disabilities to express themselves and highlight their issues, thereby enhancing communication skills and reducing their social isolation. Mustafa's study also emphasized the necessity of empowering people with special needs with digital and educational skills to achieve effective integration in the labor market, which aligns with the results of the present study confirming the impact of digital media on strengthening communication skills as a core element of social and professional inclusion.

Similarly, the results complement those of Haddar and Soukhal (2018), which underscored the positive role of technology in facilitating the educational process for people with special needs, directly influencing the development of communication skills and cognitive abilities. That study affirmed the importance of providing an appropriate educational environment equipped with modern technological tools to enhance academic and functional performance, thereby supporting the development of effective communication skills. This reflects the significance of integrating digital tools into the educational and rehabilitative processes for individuals with intellectual disabilities, as communication skills are largely reinforced by the availability of an enabling technological environment.

Moreover, Adel's study (2022) demonstrated that digital transformation and technological empowerment through social media platforms are perceived as a comprehensive process aimed at equipping young people with disabilities with the digital knowledge and skills necessary for active participation. This study affirmed that digital media not only strengthens technical capacities but also reshapes societal perceptions of disability from marginalization to empowerment. This finding is consistent with the current study's hypothesis, which confirms that digital media enhances communication skills, a key factor in raising the level of social and psychological empowerment for individuals with intellectual disabilities.

In a similar context, Mansour (2020) indicated that social media platforms represent an open space where people with special needs can freely express their opinions and participate in public discussions, thereby enhancing their social presence and interaction with the community. That study considered these platforms more effective than traditional media in providing opportunities for communication and expression, which reinforces the current study's hypothesis that digital media plays a fundamental role in improving the communication skills of individuals with intellectual disabilities and in opening new communication channels that transcend traditional barriers.

Despite these positive findings, it is worth noting the challenges highlighted in previous studies, such as poverty, weak digital empowerment, and the absence of appropriate infrastructure, which constitute real barriers to comprehensive benefit from digital media for this group. The present study stresses the necessity of institutional and community interventions to strengthen digital capacities and provide necessary support. This aligns with the recommendations of Mustafa (2023) and Adel (2022), which emphasized the importance of organizing awareness and training programs directed toward this group.

The results of this study strongly support the hypothesis linking the use of digital media platforms to the improvement of communication skills among individuals with intellectual disabilities in Jordan, reflecting the role of digital media as a tool for both social and technological empowerment. The alignment with previous studies underscores that integrating these media into educational and social processes is a decisive factor for the actual inclusion of this group, with the urgent need to remove technical and social barriers to maximize the benefits of digital media.

Findings Related to the Second Main Hypothesis

H2: There is a statistically significant effect of the educational content delivered through digital media on the cognitive and learning outcomes of individuals with intellectual disabilities in Jordan.

To test the second main hypothesis, Simple Regression Analysis was applied to examine whether educational content delivered through digital media improves the cognitive and learning outcomes of individuals with intellectual disabilities in Jordan. Table (14) presents the results.

Table 14. Analysis of Variance of Regression for the Second Main Hypothesis

Source	R	R Square	Source of Data	Sum of Squares	df	Mean Squares	Computed F Value	Sig. Level
Overall Linear Regression	.829a	.687	Regression	71.652	1	14.330	155.324	.000b
			Residual	32.661	98	.092		
			Total	104.313	99			

Table (14) indicates that the correlation coefficient value for the variable (*Educational Impact of Digital Content*) was (0.829). The coefficient of determination (R^2) amounted to (0.687), meaning that the model explained

(68.7%) of the total variance. The computed F value reached (155.324), with a statistical significance level of (0.000), which is less than (0.05). Accordingly, the current hypothesis is accepted, confirming that educational content delivered through digital media has a statistically significant effect on the cognitive and learning outcomes of individuals with intellectual disabilities in Jordan.

This result is consistent with previous studies. Mustafa (2023) emphasized the ability of new digital media to provide interactive platforms that enable people with special needs to engage actively and express themselves, thereby contributing to their social integration and reducing the isolation and marginalization they faced under traditional media. Mustafa also noted that education plays a pivotal role in enabling this group to benefit from digital technologies, thereby improving their rehabilitation and employment opportunities, which supports the findings of the current study affirming the role of digital educational content in strengthening cognitive and learning abilities among individuals with intellectual disabilities.

Haddar and Soukhal (2018) stressed the importance of providing a suitable educational environment that encompasses material, human, and technological resources to mitigate the impact of disability and enhance the cognitive capacities of students with special needs. Their results highlighted the role of modern technology in diversifying teaching methods and facilitating the acquisition of scientific skills, which aligns with the current study's results that prove digital educational content is not merely a tool for transmitting information but also a catalyst for improving cognitive and educational performance. Their study also recommended training educational staff to use these tools effectively, which can be incorporated into the current study's recommendations for enhancing the quality and impact of digital content.

Adel (2022) revealed that technological empowerment through social media represents a real opportunity for young people with special needs to enhance their digital skills and participate effectively in the digital society, transforming negative perceptions of disability from marginalization to empowerment. This resonates with the current study's results, which support the notion that digital educational content goes beyond knowledge transmission to include building technical capacities and digital skills that strengthen the prospects for social and professional integration of this group. Adel also stressed the importance of coordination between educational, technological, and media institutions to enhance digital programs, thereby reinforcing both the theoretical and practical framework of digital content in improving outcomes for individuals with intellectual disabilities.

Mansour (2020) further highlighted the strength of social media platforms as more effective tools compared to traditional media in providing opportunities for people with special needs to express themselves, interact freely with society, and strengthen their social and cultural presence. This aligns with the current study's results, which affirm that digital educational content improves cognitive capacities and can be extended to promote social and cultural interaction through digital media. Mansour's study also called for greater institutional coordination to ensure accurate and objective representation of the issues of people with special needs, which logically extends the current study's recommendations to further develop digital educational content and raise community awareness of the role of digital media in empowering this group.

Based on these results and consistent findings from previous studies, it can be confirmed that educational content delivered through digital media constitutes a fundamental tool for cognitive and learning empowerment of individuals with intellectual disabilities, while also enhancing their prospects for social and professional integration. Moreover, there is a pressing need for integrated strategies that include content development, technical capacity-building, teacher training, and improvement of digital infrastructure, in addition to raising societal awareness of this group. Such measures are essential to ensure optimal benefit from digital educational content in improving the quality of life of people with special needs in Jordan.

Findings Related to the Third Main Hypothesis

H3: Caregivers and families of individuals with intellectual disabilities perceive that digital media has a statistically significant effect in supporting daily life activities and independence.

To test the third main hypothesis, Simple Regression Analysis was applied to examine whether caregivers and families of individuals with intellectual disabilities perceive that digital media has a statistically significant effect in supporting daily life activities and independence. Table (15) presents the results.

Table 15. Analysis of Variance of Regression for the Third Main Hypothesis

Source	R	R Square	Source of Data	Sum of Squares	df	Mean Squares	Computed F Value	Sig. Level
Overall Linear Regression	.764a	.584	Regression	71.910	1	14.382	99.408	.000
			Residual	51.215	98	.145		
			Total	123.125	99			

Table (15) above shows that the correlation coefficient for the variable (*Supporting Daily Life and Independence*) was (0.764). The coefficient of determination (R^2) was (0.584), indicating that the model explained (58.4%) of the total variance. The computed F value was (99.408), with a statistical significance level of (0.000), which is less than (0.05). Accordingly, the current hypothesis is accepted, confirming that caregivers and families of individuals with intellectual disabilities perceive digital media as having a statistically significant effect in supporting daily life activities and independence.

In light of the results related to the third hypothesis of the present study, which indicate that caregivers and families of individuals with intellectual disabilities view digital media as a valuable tool for supporting daily life activities and independence, the findings demonstrate a strong positive correlation (R = 0.764), with 58.4% of the variance explained, thereby affirming the importance of digital media in this context. These results are consistent with previous studies that emphasized the active role of digital transformation and digital media in improving the lives of people with special needs at the social, educational, and professional levels.

For instance, Mustafa (2023) highlighted how new digital media provides interactive platforms and spaces for self-expression that enable individuals with special needs to engage actively in society, thereby reducing isolation and enhancing community integration. This aligns with the present study's results showing that caregivers and families of individuals with intellectual disabilities recognize digital media as an assistive tool in supporting their independence and daily activities, reflecting the contribution of digital media in removing the isolation and marginalization imposed by traditional media. Mustafa also emphasized the role of education in enabling individuals with special needs to use digital media effectively, thereby enhancing their rehabilitation and employment opportunities, which is consistent with the importance placed by caregivers and families on these tools as means of empowerment.

On the educational side, Haddar and Soukhal (2018) confirmed the role of modern technology in supporting the educational process of individuals with special needs, as technological tools contribute to improving their cognitive and academic abilities, while diversifying teaching methods in accordance with individual differences. This indicates that digital media not only supports daily life and independence but also plays an important role in strengthening education, which is one of the essential pillars of empowerment for individuals with intellectual disabilities, positively reflecting their ability to rely on themselves and integrate more effectively into society.

From the perspective of technical and social empowerment, Adel (2022) supported these results by affirming that young people with special needs perceive technological empowerment as a comprehensive process that enhances their digital skills and contributes to changing societal perceptions from marginalization to empowerment. This perspective complements the current hypothesis, showing that families and caregivers value digital media as a means of supporting the independence of individuals with intellectual disabilities, including the acquisition of digital skills that open new horizons for participation, employment, and communication.

Similarly, Mansour (2020) stressed that social media networks represent a more effective tool than traditional media in granting individuals with disabilities the opportunity to express their opinions and discuss their issues, thereby enhancing their social and cultural presence. This supports the present study's findings regarding families' recognition of the role of digital media in improving the lives of individuals with disabilities, particularly in enabling them to express themselves and increase their independence. Mansour's study also called for the integration of efforts between social and digital media institutions to improve the realistic portrayal of the lives of people with special needs, which could positively impact caregivers' role in supporting the use of these media.

It can therefore be concluded that the current study's results confirm and enrich the theoretical framework linking digital media with social and functional empowerment of individuals with intellectual disabilities, by demonstrating how families and caregivers perceive these media as effective tools contributing to supporting daily life and independence. The alignment with previous studies enhances the credibility of the results and underscores the importance of investing in the development of digital content, digital empowerment programs, and technical education for people with special needs. Furthermore, it highlights the urgent need to overcome material and technical obstacles—such as weak digital empowerment and limited coverage—that hinder comprehensive benefit, in order to ensure the real and inclusive integration of this group into the modern digital society.

This discussion emphasizes the necessity of adopting integrated national policies and strategies aimed at strengthening the role of digital media and communication in improving the lives of individuals with intellectual disabilities, through the provision of digital infrastructure, development of their technical skills, training of caregivers, and advancement of educational and media content tailored to their needs and abilities. Such measures will enhance independence and contribute to sustainable social and economic empowerment.

RECOMMENDATIONS

Based on the above findings, the study arrived at the following recommendations:

1. Relevant stakeholders, including educational institutions and social centers, should design and implement training programs directed toward individuals with intellectual disabilities, their families, and caregivers, with the aim of enhancing skills in the use of digital media. Such programs would contribute to empowering them to effectively benefit from these media in supporting their daily lives and achieving independence.
2. There is a need to improve digital coverage in all areas, especially rural and remote regions, in addition to providing suitable devices and technologies at affordable prices for individuals with intellectual disabilities. Supportive policies should be adopted to reduce the digital divide resulting from economic and social factors, thereby ensuring inclusive digital access for this group.
3. Media institutions and professional journalists should work on developing diverse digital media content that considers the psychological and cognitive characteristics of individuals with intellectual disabilities and enhances their active participation and self-expression. Emphasis should also be placed on specialized media training to ensure objective and non-stereotypical coverage of the issues related to this group.
4. Joint cooperation between schools, social support centers, and digital media institutions should be strengthened to adopt strategic plans aimed at empowering individuals with intellectual disabilities through digital education and technological empowerment. This should be accompanied by awareness programs targeting society to change negative stereotypes and combat discrimination and exclusion.
5. The study recommends that governmental bodies and policymakers establish integrated national strategies and policies to promote the digital inclusion of people with special needs. These should include digital literacy initiatives, provision of the necessary financial and technical support, and guarantees of this group's right to access digital services, with periodic monitoring of the effectiveness of these policies and their development to ensure inclusiveness and sustainability.

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Competing Interests

The authors declare no competing interests.

Author Contributions

Ahmad Abedalqader Mustafa Alfreahat (Principal Investigator): Conceptualization, study design, development of the research instrument, coordination of data collection, statistical analysis, drafting of the initial manuscript, and critical revision to ensure academic accuracy.
Nesreen Nabil Atieh (Co-Investigator): Provided theoretical and methodological guidance, contributed to the literature review, and participated in the critical scientific review of the manuscript.
Abeer Ali Alsalahat: Responsible for data validation, management of references, and technical editing of the manuscript.
Sabreen Moh'd Alsaber Hussein Alsafi: Supported participant coordination, contributed to the refinement of the study instrument, assisted in language editing, and contributed to the preparation of the final version.

Ethical Approval

Ethical approval was not required for this study as participants were accessed through established contacts at special centers, and the data were collected anonymously with voluntary participation.

Informed Consent

All participants were informed about the objectives of the study, its voluntary nature, and their right to withdraw at any stage without consequences. informed consent was obtained from all participants prior to completing the questionnaire. The study ensured confidentiality and anonymity of responses, and no identifying personal information was collected**.**

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