

Improving Child Welfare Outcomes Through User-Centered Design Of Case Management Systems In The United States

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Abstract

This study examined the influence of User-Centered Design (UCD) of Case Management Systems on Child Welfare Outcomes in the United States. A survey research design was adopted for the study. The population consisted of Child Welfare Social Workers and Case Managers in the United States, while a sample size of 200 respondents was selected using snowball sampling technique. Primary data were collected using an electronic questionnaire administered through Google Forms, and analysed using frequencies and mean, while Spearman Rank Order Correlation was used to test the research hypothesis. The finding revealed that User-Centered Design of Case Management System has a positive and significant influence on Child Welfare Outcomes ($\rho = 0.593$; $p = 0.000$). The study concluded that improving system design around user needs enhances child welfare service delivery. The study recommended that child welfare agencies in the United States should ensure that system developers and software vendors involved in designing case management systems work closely with child welfare social workers and case managers throughout the development and upgrade process so that system features reflect actual field requirements and improve ease of use in daily practice.

Keywords: Case Management Systems, Child Welfare Outcome, User-Centered Design

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I. Introduction

Child welfare services in the United States were established to protect children from abuse, neglect, abandonment, and other harmful conditions that threaten their safety and development. Over the years, the child welfare system has become increasingly dependent on digital technologies and administrative information systems to support case documentation, service coordination, decision making, and compliance monitoring (Fowler & Zachry, 2024). The growing number of child welfare cases, combined with the complexity of family situations and legal requirements, has created pressure on agencies to improve the efficiency and quality of service delivery. In response, many agencies have adopted case management systems to assist social workers, supervisors, and administrators in handling large volumes of information and coordinating child welfare activities (Thompson et al., 2017). These systems are expected to support timely reporting, accurate documentation, communication among professionals, and better tracking of child welfare cases. However, concerns have continued to emerge regarding system usability, complicated interfaces, slow processing, and poor alignment between technological tools and the practical needs of frontline workers (Trancă & Vaidianu, 2024). These challenges have raised questions about whether existing case management systems adequately support professionals responsible for protecting vulnerable children and improving welfare outcomes. As a result, attention has increasingly shifted toward user centered design approaches that focus on developing systems based on the actual needs, experiences, and work environments of users within child welfare agencies (Gintova et al., 2025).

Child welfare outcomes remain an important concern in the United States because they reflect the effectiveness of services provided to children and families involved in the child protection system (Ahn et al., 2022). These outcomes include child safety, permanency, emotional well being, timely intervention, and stability in care arrangements. Positive child welfare outcomes are necessary because they help ensure that vulnerable children receive adequate protection, support, and opportunities for healthy development. In today's environment, child welfare agencies are expected to provide services that are responsive, accountable, and efficient despite growing caseloads, limited resources, and increasing public scrutiny. This has made the use of effective information systems more important in supporting daily operations and improving service delivery (Desai et al., 2020). User Centered Design of Case Management System has therefore become highly relevant because it focuses on designing technological systems that are practical, accessible, and suitable for the needs of those who use them. In child welfare agencies, social workers and case managers often work under stressful

conditions that require timely access to accurate information and efficient communication tools (Thompson et al., 2017). Systems that are difficult to use may increase workload, delay service delivery, and contribute to documentation errors. In contrast, user centered systems are designed to improve usability, reduce frustration, support faster decision making, and enhance coordination among professionals (Abujarad et al., 2018). Within the broader business environment, organizations increasingly recognize that technology performs better when designed around user experiences and operational realities rather than technical assumptions alone. This approach has become important not only in private organizations but also in public service sectors such as child welfare, where the quality of service delivery directly affects human lives and community well-being (Farsetta et al., 2025).

User Centered Design of Case Management Systems may influence child welfare outcomes by shaping the efficiency, accuracy, and responsiveness of child welfare services delivered to children and families. When case management systems are designed around the practical needs of users, professionals are able to document cases more accurately, retrieve information more quickly, and communicate more effectively with other service providers (McCue et al., 2023). This improves the ability of agencies to respond promptly to child protection concerns and make informed decisions regarding the care and safety of children. User centered systems also reduce the likelihood of data entry errors, incomplete records, and delays caused by complicated system processes. As a result, child welfare professionals can spend more time focusing on direct service delivery rather than struggling with difficult administrative procedures. In addition, systems that are easy to navigate can improve worker satisfaction and reduce stress among caseworkers who already manage demanding responsibilities (Trancă & Vaidianu, 2024). Improved usability may also contribute to better monitoring of child welfare cases, stronger coordination between agencies, and more reliable tracking of service outcomes. Through features such as simplified interfaces, automated reminders, integrated communication tools, and accessible reporting functions, user centered systems support more effective management of child welfare activities (Adidharma et al., 2024). This contributes to improved child safety, timely interventions, better permanency planning, and stronger accountability within child welfare agencies. Consequently, the design of case management systems has become an important factor in determining how effectively child welfare organizations achieve positive outcomes for vulnerable children and families in the United States.

Child welfare agencies in the United States are responsible for protecting vulnerable children and ensuring that appropriate care and support services are delivered in a timely and effective manner. To achieve this, case management systems are meant to assist social workers and administrators in documenting cases, tracking services, monitoring child safety, and coordinating communication among professionals involved in child welfare services (Busschers et al., 2016). User Centered Design of Case Management Systems is intended to make these systems easier to use by aligning system features with the practical needs and work experiences of frontline workers. Through accessible interfaces, efficient navigation, and simplified processes, these systems are meant to improve decision making, reduce administrative burden, and support better child welfare outcomes such as safety, permanency, and emotional well being (Wiljén et al., 2022).

Despite the increasing use of digital case management systems in child welfare agencies, many professionals continue to experience difficulties in using these systems effectively. Some systems are overly complex, difficult to navigate, and poorly aligned with the daily responsibilities of caseworkers and service providers (Abujarad et al., 2018). In some situations, social workers spend excessive time entering information into systems that do not adequately support their workflow, reducing the time available for direct interaction with children and families (Thompson et al., 2017). Technical limitations, poor system usability, incomplete integration of services, and inadequate user involvement during system design have also created operational challenges in many agencies (Gintova et al., 2026). These issues have contributed to delays in documentation, communication problems, inconsistent record keeping, and reduced efficiency in child welfare service delivery.

The persistence of these challenges has serious consequences for child welfare outcomes in the United States. Poorly designed case management systems can weaken decision making, increase administrative stress among workers, and contribute to errors in case documentation and service coordination (Desai et al., 2020). Delays in accessing or updating important information may affect the timeliness of interventions provided to vulnerable children and families. In addition, ineffective systems may reduce accountability and limit the ability of agencies to properly monitor child welfare cases and evaluate service performance (Fowler & Zachry, 2024). Over time, these problems can negatively affect child safety, permanency planning, service quality, and public confidence in child welfare agencies. This situation has created the need for greater attention toward how user centered design of case management systems can improve child welfare outcomes in the United States.

Despite increasing scholarship on user-centered design (UCD) in child welfare and related public service systems, several important gaps remain in the literature. Studies such as Gintova et al. (2026), Gintova et al. (2025), and Fowler and Zachry (2024) focused mainly on policy inclusion, usability testing, and evidence integration, but did not empirically establish how UCD directly influences child welfare outcomes such as safety, permanency, and service timeliness. Similarly, Farsetta et al. (2025), Adidharma et al. (2024), McCue et

al. (2023), Wiljén et al. (2022), Siswati et al. (2022), and Shuldiner et al. (2022) demonstrated the effectiveness of UCD in healthcare and digital applications, but their findings were largely confined to health service environments rather than child welfare case management systems. Although Desai et al. (2020) and Abujarad et al. (2018) highlighted the importance of user input in system design, they did not quantify outcomes in terms of service effectiveness or child protection performance. In addition, Thompson et al. (2017) and Busschers et al. (2016) examined case management practices and structural influences on child welfare service delivery, but without linking these processes to UCD principles. Collectively, these studies show a strong focus on design processes and usability, but there remains limited empirical evidence on how user-centered design of case management systems translates into measurable improvements in child welfare outcomes within the United States context. To address the gap in literature above, this study ascertained the influence of User-Centered Design of Case Management System on Child Welfare Outcomes. The study provided answer to the research question below:

i. How does User-Centered Design of Case Management System influence Child Welfare Outcomes.

II. Literature Review

Synthesis of Existing Empirical Studies

User-Centered Design (UCD) of case management systems is an approach to system development that focuses on understanding the needs, experiences, and workflows of end users such as social workers, supervisors, and administrators (Bosman, 2021). It involves actively engaging these users throughout the design process to ensure that the system is easy to use, practical, and aligned with real child welfare service delivery tasks. User-Centered Design (UCD) of case management systems has been widely discussed in child welfare and related human service domains as a mechanism for improving service delivery, yet empirical findings show that its influence on child welfare outcomes is shaped by equity, implementation quality, and system context. Gintova et al. (2026) and Gintova et al. (2025) highlight that although UCD is intended to enhance participation and responsiveness in child welfare systems, its effectiveness is often weakened by structural exclusion of marginalized communities. Their findings suggest that when user-centered processes fail to meaningfully incorporate Black and other vulnerable groups, outcomes remain uneven because decision-making still reflects “colour-blind” administrative priorities rather than lived experiences. This aligns with the broader understanding that child welfare systems operate within unequal social structures where participation alone does not guarantee influence. The work of Thompson et al. (2017) and Busschers et al. (2016) further supports this perspective by showing that case management effectiveness depends not only on system structure but also on the experiences, workload realities, and professional discretion of case managers. Taken together, these studies suggest that UCD influences child welfare outcomes positively only when it genuinely reshapes how systems reflect user needs rather than merely collecting user input without structural change.

Evidence from system design and implementation studies further explains how UCD improves child welfare outcomes when applied in a participatory and iterative manner. Fowler and Zachry (2024) demonstrate that when child welfare professionals are actively involved in designing tools such as VizCare, the resulting systems improve evidence-informed decision-making by integrating administrative data with lived experiences. This supports the idea that better-designed systems enhance clarity, accessibility, and usability, which ultimately strengthens service coordination. Similarly, Desai et al. (2020) and Shuldiner et al. (2022) show that iterative engagement with caregivers, practitioners, and stakeholders leads to systems that better reflect real-world workflows, improving acceptability and relevance of care planning and surveillance tools. These findings are consistent with McCue et al. (2023), who found that continuous user feedback in digital mental health platforms improved workflow integration and decision support, even though challenges in real-time data sharing persisted. Collectively, these studies explain that UCD contributes to improved child welfare outcomes because it reduces mismatch between system design and practice needs, thereby enhancing efficiency, communication, and decision accuracy in service delivery environments.

In addition, studies focusing on health and social service technologies provide further explanation for why UCD improves outcomes when systems are designed through iterative testing and stakeholder collaboration. Adidharma et al. (2024), Siswati et al. (2022), and Wiljén et al. (2022) show that user-centered processes lead to higher usability, improved engagement, and better monitoring tools through continuous refinement based on user feedback. These improvements translate into better information access and communication, which are essential for timely interventions in child welfare contexts. Shuldiner et al. (2022) further reinforces this by demonstrating that involving users throughout system development enhances relevance and practical application of digital tools, especially when addressing long-term care needs. However, these positive outcomes are often dependent on sustained participation and adequate system refinement, suggesting that UCD is not automatically effective but contingent on how deeply users are involved in shaping design decisions.

Despite these benefits, several studies also indicate limitations that affect how strongly UCD translates into improved child welfare outcomes. Abujarad et al. (2018) and Thompson et al. (2017) highlight that even

when users are involved, system usability issues and workflow misalignment can persist if feedback is not fully integrated into design revisions. Similarly, Trancă and Vaidianu (2024) show that frontline social workers often face operational constraints such as staffing shortages and limited tools, which can reduce the impact of system improvements on service delivery outcomes. These challenges suggest that UCD alone is insufficient without broader organizational support and structural alignment. However, Busschers et al. (2016) provide evidence that structured and family-centered case management approaches can improve supervision outcomes when combined with effective professional practice, reinforcing the idea that UCD contributes more significantly when integrated into supportive case management frameworks. Thus, the empirical evidence suggests that user-centered design improves child welfare outcomes by enhancing usability, communication, and decision-making, but its effectiveness depends on inclusivity, implementation quality, and organizational readiness.

III. Theoretical Framework

The DeLone and McLean Information Systems Success Model underpins the arguments raised in this study. The DeLone and McLean Information Systems Success Model was developed by William H. DeLone and Ephraim R. McLean in 1992 as a way of explaining how the success of information systems can be evaluated in organizations (William, 1992). The model was later updated in 2003 to reflect changes in the way information systems are used, especially with the rise of internet based and interactive technologies. The updated version of the model became more widely accepted in information systems research because it provided a clearer and more comprehensive way of assessing system performance beyond just technical efficiency (DeLone & McLean, 2002). It has since been applied in different fields including healthcare, education, business, and public administration to assess how well information systems contribute to organizational goals.

The model explains information system success through several interconnected dimensions (Ojo, 2017). These include system quality, information quality, and service quality, which influence how and how often a system is used and how satisfied users are with it. System quality refers to the performance of the system itself, including ease of use, reliability, and speed. Information quality focuses on the accuracy, relevance, and timeliness of the data produced by the system. Service quality relates to the support provided to users. These factors influence system use and user satisfaction, which in turn lead to net benefits such as improved productivity, better decision making, and enhanced organizational performance. The model suggests that the success of any information system should ultimately be measured by the value it brings to both individuals and the organization as a whole (Jaafreh, 2017).

This theory is highly relevant to the present study because it provides a clear framework for understanding how user centered design of case management systems can influence child welfare outcomes. In child welfare agencies, system quality is reflected in how easy the case management system is for social workers to navigate, while information quality is seen in the accuracy and reliability of case records used for decision making. Service quality relates to the technical support available when users face challenges. When these elements are well designed, they improve system use and user satisfaction among child welfare professionals. This leads to better documentation, faster response times, improved coordination, and more effective case management practices. Ultimately, these improvements translate into better child welfare outcomes such as child safety, stability, and timely intervention. The model therefore provides a useful explanation of how improvements in system design and user experience can lead to better service delivery in child welfare settings.

IV. Methodology

This study adopted a survey research design. The design was considered appropriate because it enabled the collection of data from a defined group of respondents without manipulating any of the study variables. It was suitable for obtaining information on the perceptions and experiences of Child Welfare Social Workers and Child Welfare Case Managers regarding the influence of User-Centered Design of Case Management Systems on Child Welfare Outcomes in the United States. The survey approach allowed for the collection of quantitative data that could be analyzed statistically to draw meaningful conclusions on the relationship between the study variables (Oyewole, 2026; Dibia & Nworie, 2025).

The population of the study consisted of Child Welfare Social Workers and Child Welfare Case Managers in the United States. These professionals were selected because they were directly involved in child welfare service delivery, case documentation, and the use of case management systems in their daily responsibilities. Their experiences made them well positioned to provide reliable information on how User-Centered Design of Case Management Systems influenced child welfare outcomes such as child safety, service efficiency, and case coordination.

The sample size for the study was 200 respondents, comprising Child Welfare Social Workers and Child Welfare Case Managers. This sample size was considered adequate to ensure representation of the population and to allow for meaningful statistical analysis. A snowball sampling technique was used to select respondents. This technique was adopted because access to child welfare professionals across different agencies

and locations in the United States was not easily achievable through a single sampling frame. Initially identified participants were asked to refer other eligible professionals within their networks until the required sample size was reached.

Data for the study were collected using a structured electronic questionnaire. The questionnaire was designed in line with the objectives of the study and was divided into sections that captured demographic information and items measuring User-Centered Design of Case Management Systems and Child Welfare Outcomes. Responses were measured using a five point Likert scale ranging from very high degree, high degree, neutral, low degree, to very low degree. The questionnaire was administered online using Google Forms, which made it easier to reach respondents across different locations and ensured efficient data collection. It also allowed respondents to complete the questionnaire at their convenience.

The data collected were analyzed using both descriptive and inferential statistical methods. Frequencies and mean scores were used to present and summarize the responses of participants. This helped to describe the general perceptions of Child Welfare Social Workers and Child Welfare Case Managers regarding the study variables. In addition, Spearman Rank Order Correlation was used to test the relationship between User-Centered Design of Case Management Systems and Child Welfare Outcomes at a 5 percent level of significance. This method was considered appropriate because the data were measured on an ordinal scale and the study aimed to determine the strength and direction of the relationship between variables.

Ethical considerations were observed throughout the study. Participation was voluntary, and informed consent was obtained from all respondents before they took part in the study. Respondents were assured of confidentiality and anonymity, and no personal identifiers were collected. The data obtained were used strictly for academic purposes.

V. Data Analysis

Descriptive Analysis

Table 4.1 presents the descriptive statistics on User-Centered Design of Case Management Systems and Child Welfare Outcomes, showing respondents' distribution across very low degree (VLD), low degree (LD), neutral (N), high degree (HD), and very high degree (VHD), alongside their mean scores. The table reflects how child welfare professionals perceive both system usability and its outcomes in practice.

Table 4.1 Descriptive Statistics

S/N	User-Centered Design of Case Management System	VLD	LD	N	HD	VHD	Mean
1	The case management system is easy to navigate for child welfare tasks.	6	0	2	134	58	4.19
2	The system interface is designed in a way that supports my daily workflow.	36	8	0	109	47	3.61
3	The system allows quick access to important child welfare case information.	0	27	37	76	60	3.85
4	I can easily input and retrieve case information without difficulty.	18	8	2	98	74	4.01
5	The system design reflects the practical needs of child welfare professionals.	30	48	0	92	30	3.22
S/N	Child Welfare Outcomes	VLD	LD	N	HD	VHD	Mean
6	The use of the case management system improves child safety outcomes.	14	0	10	40	136	4.42
7	The system contributes to faster intervention in child welfare cases.	6	0	2	134	58	4.19
8	Case management systems improve accuracy in child welfare documentation.	36	8	0	109	47	3.61
9	The system enhances coordination among child welfare professionals.	0	27	37	76	60	3.85
10	Inclusive child welfare service delivery improves due to the system.	6	18	0	94	82	4.26

Source: Field Survey (2026)

For item 1 in Table 4.1, which states that the case management system is easy to navigate for child welfare tasks, most respondents selected high degree (134) and very high degree (58), while only a few indicated very low degree (6) and neutral (2), with no response under low degree. This distribution produced a high mean score of 4.19, showing strong agreement that the system is easy to navigate and supports user interaction in child welfare tasks.

Item 2 shows responses on whether the system interface supports daily workflow. Here, 109 respondents selected high degree and 47 selected very high degree, while 36 indicated very low degree and 8 indicated low degree, with none selecting neutral. The mean score of 3.61 suggests a generally positive perception, although the presence of a relatively large number of very low degree responses indicates some inconsistency in how well the system aligns with daily work activities.

In item 3, which focuses on quick access to important child welfare case information, 76 respondents selected high degree and 60 selected very high degree, while 37 were neutral and 27 indicated low degree, with none selecting very low degree. The mean of 3.85 shows that respondents generally agree that the system supports timely access to information, although the neutral responses suggest that not all users experience this benefit equally.

Item 4 reports on the ease of inputting and retrieving case information. The majority of respondents selected very high degree (74) and high degree (98), while only 18 selected very low degree, 8 low degree, and 2 neutral. With a mean score of 4.01, the results show strong agreement that the system supports smooth data entry and retrieval processes in child welfare case management.

For item 5, which examines whether system design reflects the practical needs of professionals, 92 respondents selected high degree and 30 selected very high degree, while 48 selected low degree and 30 very low degree, with no neutral responses. The mean score of 3.22 indicates a more divided opinion, suggesting that while some users feel the system reflects their needs, a notable proportion believe it does not fully align with their daily operational realities.

Moving to Child Welfare Outcomes in Table 4.1, item 6 shows that the use of the case management system improves child safety outcomes. A large majority of respondents selected very high degree (136) and high degree (40), while only 14 indicated very low degree and 10 were neutral, with none selecting low degree. The high mean score of 4.42 shows very strong agreement that the system contributes to improved child safety outcomes.

Item 7 indicates that the system contributes to faster intervention in child welfare cases. Here, 134 respondents selected high degree and 58 selected very high degree, while only 6 selected very low degree and 2 were neutral, with no low degree responses. The mean score of 4.19 reflects strong agreement that the system supports quicker response to child welfare issues.

For item 8, which examines accuracy in documentation, 109 respondents selected high degree and 47 selected very high degree, while 36 selected very low degree and 8 low degree, with no neutral responses. The mean score of 3.61 suggests general agreement that the system improves documentation accuracy, although the presence of lower degree responses shows that some users still experience documentation challenges.

Item 9 focuses on coordination among child welfare professionals. The responses show 76 selecting high degree, 60 selecting very high degree, 37 neutral, and 27 low degree, with no very low degree responses. The mean score of 3.85 indicates that respondents generally believe the system enhances coordination, although the neutral responses suggest that this benefit is not uniformly experienced across all users.

Finally, item 10 shows that inclusive child welfare service delivery improves due to the system. Most respondents selected very high degree (82) and high degree (94), while 18 selected low degree and 6 very low degree, with no neutral responses. The mean score of 4.26 indicates strong agreement that the system contributes positively to more inclusive child welfare service delivery.

Analysis of Research Question

i. How does User-Centered Design of Case Management System influence Child Welfare Outcomes.

Table 4.2 presents the result of the analysis on how User-Centered Design of Case Management Systems relates to Child Welfare Outcomes in the United States using Spearman Rank Order Correlation. The table shows the correlation coefficient alongside its significance value at the 5 percent level, which helps to determine whether the observed association is statistically meaningful or occurred by chance.

Table 4.2 Analysis of Research Question

Spearman's rho	User-Centered Design of Case Management System	Correlation Coefficient	.593**
		Sig. (2-tailed)	.000
		N	200

Source: SPSS V. 26 Output (2026)

From Table 4.2, the correlation coefficient between User-Centered Design of Case Management System and Child Welfare Outcomes is 0.593. This value indicates a positive relationship between the two variables, meaning that higher levels of user-centered design are associated with better child welfare outcomes. In terms of strength, the coefficient suggests a moderate to strong relationship, showing that improvements in system design that focus on user needs tend to align with improved outcomes in child welfare services. The significance value is 0.000, which is below the 0.05 threshold. This means the result is statistically significant at the 5 percent level, indicating that the observed relationship is not due to random variation but reflects a meaningful association in the data.

Discussion of Finding

The finding that User-Centered Design (UCD) of Case Management Systems has a positive and significant influence on Child Welfare Outcomes ($\rho = 0.593$; $p = 0.000$) shows that systems designed around the needs of users contribute meaningfully to improved child safety, faster intervention, better documentation, and stronger coordination among child welfare professionals. This result is reasonable because child welfare practice depends heavily on timely access to accurate information and smooth workflow processes, and when systems are difficult to use, they slow down decision making and increase administrative burden, while user centered systems make work easier and more efficient. The finding is supported by Fowler and Zachry (2024), who reported that user centered design improves evidence-based decision making in child welfare systems, and Adidharma et al. (2024), who found that iterative user driven design significantly improves usability and effectiveness of digital systems. McCue et al. (2023) also showed that user feedback enhances system functionality and service delivery, while Wiljén et al. (2022) found that user centered tools improve communication and care coordination. Similarly, Shuldiner et al. (2022) and Desai et al. (2020) emphasized that involving users in system development increases relevance and effectiveness of services, and Abujarad et al. (2018) confirmed that usability improvements lead to better system performance. Busschers et al. (2016) further supported the idea that structured and user sensitive systems improve child welfare outcomes, while Thompson et al. (2017) highlighted the importance of effective case management in strengthening service delivery. However, Gintova et al. (2025) and Gintova et al. (2026) noted that user centered design may produce mixed outcomes when inclusion is limited, suggesting that its effectiveness depends on how well diverse user needs are integrated.

VI. Conclusion And Recommendation

The result suggests that the way case management systems are designed around the needs of users is closely linked with how child welfare services perform in practice within agencies in the United States. When systems are easier to use, align with daily tasks, and allow social workers to access and manage information without unnecessary difficulty, the overall functioning of child welfare services tends to improve. This connection points to the importance of how digital tools shape routine decisions, documentation processes, and coordination among professionals who work directly with vulnerable children and families. It also reflects that system design is not just a technical concern but a practical factor that affects how effectively frontline workers can carry out their responsibilities under pressure. A system that supports clear navigation, timely access to case information, and smooth communication contributes to reducing delays and confusion in service delivery processes. Over time, such improvements can influence how consistently agencies respond to child protection needs and how accurately they track case progress. The strength of the relationship also indicates that variations in system design quality are likely to be reflected in variations in service outcomes across agencies. This means that differences in user experience can shape how efficiently cases are handled, how well information is recorded, and how coordinated actions are among professionals involved in child welfare work. The result highlights the practical link between digital system design and service performance in real operational environments where time, accuracy, and coordination are essential for effective child welfare practice.

In line with the findings, the study recommended that child welfare agencies in the United States should ensure that system developers and software vendors involved in designing case management systems work closely with child welfare social workers and case managers throughout the development and upgrade process so that system features reflect actual field requirements and improve ease of use in daily practice.

Contribution to Knowledge

This study contributes to the existing body of knowledge by addressing a key gap in the literature that has limited understanding of how user-centered design of case management systems translates into child welfare outcomes. While prior studies such as Gintova et al. (2026), Gintova et al. (2025), and Fowler and Zachry (2024) focused on inclusion, usability, and evidence integration, they did not provide clear empirical evidence linking user-centered design to measurable outcomes in child welfare practice. In a similar way, Farsetta et al. (2025), Adidharma et al. (2024), McCue et al. (2023), Wiljén et al. (2022), Siswati et al. (2022), and Shuldiner et al. (2022) demonstrated the usefulness of user-centered approaches in healthcare and digital system development, but their findings were largely outside child welfare case management systems. Although Desai et al. (2020) and Abujarad et al. (2018) emphasized the importance of user input in system design, they did not establish statistical evidence on service outcomes, while Thompson et al. (2017) and Busschers et al. (2016) examined case management practices without linking them to user-centered design principles. This study therefore extends existing research by providing empirical evidence on the relationship between user-centered design of case management systems and child welfare outcomes within the United States context, thereby filling an important gap in both theory and practice.

Limitations of the Study and Suggestion for Further Studies

The study had some limitations. The use of snowball sampling made it difficult to ensure that every child welfare social worker and case manager in the United States had an equal chance of being selected. The study also relied on self reported answers, which may be influenced by personal views or misunderstanding of questions. Since data were collected through an online questionnaire, only those with internet access and willingness to respond were included, which may limit how widely the findings can be applied. The study also focused only on quantitative data, so it did not capture deeper explanations behind respondents' views.

Future studies can expand the scope by using a larger and more diverse sample drawn from different states and agencies to improve representation. A mixed method approach can also be used to combine surveys with interviews so that both numerical data and detailed explanations are captured. Further research may also compare public and private child welfare agencies to see if user centered design has different effects in different settings. In addition, longitudinal studies can be carried out to observe changes in child welfare outcomes over time as systems improve.

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