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Attitudes of Social Workers Toward AI-Supported Case Analysis: Opportunities, Risks and Ethical Dimensions

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ABSTRACT

The digital transformation is increasingly reaching social work. In addition to classic digital tools, artificial intelligence (AI) systems are increasingly appearing to support decision-making processes in case analysis. This international cross-sectional study examines the attitudes of social workers towards AI-supported case analysis. Based on a sample of 121 professionals from five countries, attitudes towards opportunities, efficiency potential, ethical concerns, professional autonomy, data protection and willingness to implement were assessed using a standardized questionnaire with six subscales. The results show an ambivalent picture: While technical opportunities are moderately recognized (M = 3.19) and efficiency gains appear visible (M = 3.36), ethical concerns (M = 3.82) and concerns about the restriction of professional autonomy (M = 4.08) predominate. The willingness to implement remained comparatively low (M = 2.83). Group comparisons reveal significant differences in terms of age, professional experience, and field of work. Younger and less experienced professionals showed more openness, while older and very experienced professionals reacted more skeptically. Regression analyses confirm an affinity for technology as a positive predictor, while ethical concerns and fears of autonomy reduce the willingness to implement. Overall, the study makes it clear that social workers neither reject AI across the board nor welcome it unreservedly, but reflect on it in a differentiated and normative way. For implementation strategies, it is necessary to ensure ethical standards, transparency and participatory implementation processes in addition to technical advantages.

INTRODUCTION

Social work is in the context of far-reaching transformation processes triggered by the digitization of all areas of life. In addition to classic digital tools such as documentation systems or online consulting platforms, artificial intelligence (AI) technologies are also becoming increasingly important. In case analysis in particular, algorithms are being tested to assess risks, make forecasts or make recommendations for resource allocation. While these developments at the institutional level are often associated with hopes for increased efficiency and rationalization, there has been insufficient research into how social work professionals themselves perceive and evaluate these technologies.

The relevance of this topic arises from an area of tension: On the one hand, AI opens up the potential to support decision-making processes through data-based analyses, to recognize possible patterns in complex case constellations and thus to complement professional action. On the other hand, the use of AI in a field that is strongly influenced by ethical principles, human rights and relational professionalism touches on central questions of responsibility, autonomy and justice. In this respect, there is a danger that algorithmic systems will not only relieve the burden but also restrict professional freedom of choice, reproduce social inequalities or undermine the relationship between professionals and clients. The scientific discourse on digitization in social work has so far mainly featured conceptual and theoretical contributions that outline the opportunities and risks of AI. Empirical studies on the attitudes of social workers, especially from an international comparative perspective, are rare. The present study addresses this research gap by systematically recording the opportunities, risks and ethical concerns that social workers see in relation to AI-supported case analysis and the factors that shape these attitudes.

Three hypotheses were derived from the theoretical assumptions and previous findings: First, younger social workers are expected to have a more positive attitude towards AI (H1). Second, a high affinity for technology should correlate with more positive attitudes (H2). Third, it is assumed that ethical concerns are more pronounced than perceived opportunities (H3). The aim of the study is to shed light on the tension between innovation potential and professional skepticism and thus to contribute both to the scientific discourse and to the practical implementation strategy of AI in the social sector. In view of the international comparative orientation, cultural differences can also be made visible that are relevant for the design of implementation processes.

Theoretical Framework

The integration of artificial intelligence (AI) into social work represents an interface between technological innovations, profession-specific values and social power issues. The theoretical framework must therefore be interdisciplinary and intertwine technical, social science and ethical dimensions.

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Digitization in Social Work – Developments and Discourses

The discussion about digitization in social work began with the question of the opportunities and risks of online counseling, e-learning and digital documentation (Tregeagle & Darcy, 2008; Mishna *et al.* 2012). In the meantime, however, a second phase of the digitization debate is emerging, in which it is no longer just about tools of communication, but about data-driven decision support systems. Algorithmic risk assessment models have been introduced, especially in child protection, which are based on large amounts of data and are intended to provide early warning systems (Gillingham, 2019). Similar developments can be seen in health and youth welfare, where AI systems influence resource allocations (Eubanks, 2018). This transformation is embedded in the broader context of "datafication" of social processes: social problems are increasingly translated into quantifiable patterns that are amenable to algorithmic processing (Couldry & Mejias, 2019). As a result, the epistemological basis of social work is changing – away from a primarily narrative case reconstruction towards data-based decision-making routines.

Technology Adoption – Models and Their Limitations

Acceptance models classically capture the question of how skilled workers react to new technologies. The Technology Acceptance Model (TAM) (Davis, 1989) assumes that perceived usefulness and user-friendliness are decisive factors in the attitude of use. The UTAUT model (Venkatesh *et al.* 2003) extends this approach to include social influences and supportive conditions. In organizational contexts of social work, reference is also made to the concept of the diffusion of innovations (Rogers, 2003), which views the introduction of new technologies as a social process strongly influenced by opinion leaders and institutional culture. At the same time, these models fall short, as they primarily address economic and operational contexts. Additional dimensions play a role in social work: normative principles, the commitment to social justice and the prioritization of relational professionalism. Parrott (2020) emphasizes that technology acceptance here is not only a question of utility, but a question of value compatibility.

Ethical Dimensions – Bias, Responsibility and Justice

The ethical discussion on AI is now well established, but finds a specific expression in social work.

Bias and Discrimination

Numerous studies show that algorithms can reproduce societal prejudices (Noble, 2018; Barocas & Selbst, 2016). This poses a particular risk for social work, which works with vulnerable groups.

Transparency and Traceability

AI systems are often "black boxes". Professionals cannot reconstruct the logic of decision-making, which is problematic for both professional responsibility and accountability to clients.

Attribution of Responsibility

Who is liable in the event of wrong decisions? The specialist, the institution or the algorithm developer? This open question of responsibility carries the risk of an "accountability gap" (Zerilli *et al.* 2019).

Human Dignity and Relational Action

A central concern of social work is the maintenance of human relationships and empathy. There is a danger here that algorithmic logics will lead to depersonalization (Banks, 2012).

Professional Autonomy and Identity

The profession of social work sees itself as an action-oriented discipline that derives its legitimacy from the combination of specialist knowledge, ethical principles and relational practice. The use of AI touches on central elements of this identity. Gillingham (2021) points out that the profession is in danger of losing its interpretive sovereignty over complex social situations if algorithmic models become dominant decision-making bases. This threatens a "deprofessionalization" in which skilled workers are degraded to pure enforcement organs of technical systems. At the same time, however, a successful integration of AI could also mean a strengthening of the profession, provided that specialists use the systems critically and reflexively and thus additionally substantiate their decisions. This reveals a dialectical field of tension: autonomy is not only threatened, but could also be transformed by new role profiles. AI in social work is not only a question of professional attitude, but also part of a political control logic. In many countries, AI systems are being introduced primarily with a view to reducing costs, increasing efficiency and risk management (Eubanks, 2018). This means that the deployment is caught in the field of tension between neoliberal control paradigms that seek to manage social risks technocratically. For social work, this means that it must refer not only to the micro level of case practice, but also to the macro level of institutional and political frameworks.

Analytical Lens

These debates result in a double focus for the present study:

Opportunity and Potential Perspective

AI can increase efficiency and accuracy, improve data access and objectify decision-making processes.

Risk and Ambivalence Perspective

At the same time, new ethical conflicts, threats to autonomy and identity, and the danger of structural discrimination are emerging.

The attitudes of social workers are therefore not one-dimensional, but reflect an ambivalent position that

oscillates between optimism and skepticism. Which factors influence this balance – age, experience, affinity for technology, cultural context – forms the leading research question of the study.

MATERIALS AND METHODS

The study was conducted as an international cross-sectional study with a standardized online questionnaire. The aim was to systematically record the attitudes of social workers towards AI- supported case analysis and to present them in a comparative perspective. The online design allowed flexible participation across national borders, but also brought with it a certain selectivity of the sample. This manuscript was prepared by the authors. An artificial intelligence tool (ChatGPT, OpenAI, GPT-5) was used to support language editing and to improve readability. The content, data analysis, and conclusions are solely the responsibility of the authors.

Recruitment was carried out via professional associations, specialist forums and social networks. The survey period ran from March to May 2024. A total of 121 social workers from five countries participated. The proportion of female respondents was around seventy percent, the age distribution showed a concentration in the group of 25 to 45-year-olds, while older social workers were represented in smaller numbers. In terms of professional experience, the group was mixed, with a relatively balanced distribution between young professionals, skilled workers with intermediate experience and long-term employees. Educational qualifications ranged from a bachelor's to a doctoral level, with bachelor's and master's degrees being the most prevalent. The fields of work covered essential areas of practice, with child and youth welfare and adult welfare being particularly well represented. The country focus was on Germany and the USA, supplemented by Canada, Great Britain and the Netherlands.

To measure attitudes, the AI Recruitment Questionnaire for Social Work (KI-ESA) was developed and used. This included 45 items, which were answered on a five-point Likert scale from "strongly disagree" to "strongly agree". The items were divided into six subscales, which depicted central dimensions of attitude: technical opportunities, increased efficiency, ethical concerns, professional autonomy, data protection and privacy, and willingness to implement. Initial analyses of internal consistency showed satisfactory to very good reliability values for all subscales (Cronbach's α between .82 and .90). In addition, two established scales were collected: the affinity for technology (TA-12) and the occupational self-efficacy (BSW-8) in order to be able to include individual dispositions in the analyses. The evaluation was carried out in several steps. First, descriptive statistics were calculated to show mean values and dispersions of the subscales. Subsequently, group differences according to age, professional experience, field of work and country of origin were examined. Due to the smaller number of cases, highly complex modelling was deliberately avoided and the analyses were limited to variance comparisons and correlations. In addition, multiple regression analyses were carried out, which identified key predictors of readiness to implement and ethical concerns. Exploratory factor analyses were used to check the dimensionality of the questionnaire. Despite the smaller sample, the methodological structure ensured a solid basis for answering the research questions. Nevertheless, the boundaries must be clearly stated: The data are not representative, but represent a self-selected group of professionals. In addition, the cross-sectional design does not allow causal statements, but only the identification of patterns and relationships. After all, cultural contextual effects can only be mapped to a limited extent with a relatively small country coverage.

RESULTS AND DISCUSSIONS

The presentation of the results follows a multi-layered logic: First, the central descriptive statistics of the subscales are presented. This is followed by a detailed analysis of the items, followed by group comparisons according to sociodemographic variables. Finally, correlations and regression analyses are reported, which provide in-depth insights into the relationships between the variables.

The findings show an overall ambivalent picture: While opportunities and efficiency gains are assessed moderately, concerns regarding ethical risks, professional autonomy and data protection predominate.

Table 1: Overall ambivalent data

Subscal	M	SD	Min	Max
Technical opportunities	3.19	0.92	1.25	4.89
Efficiency	3.36	0.85	1.43	4.95
Ethical concerns	3.82	0.78	2.01	5.00
Professional autonomy	4.08	0.73	2.34	5.00
Data protection/privacy	3.98	0.71	2.00	5.00
Implementation readiness	2.83	0.96	1.00	4.67

Item Analyses

A differentiated view of individual items shows that ethical and autonomy-relevant aspects in particular received a high level of approval. Technical opportunities were assessed rather cautiously.

Technical Opportunities (M = 3.19, SD = 0.92)

Ethical concerns (M = 3.82, SD = 0.78)

Professional autonomy (M = 4.08, SD = 0.73)

Table 2: Ambivalent variable

Item	M	SD	% Approval (4+5)
AI can enable more objective risk assessments	3.41	1.02	54%
Algorithms recognize patterns that humans overlook	3.33	1.08	49%
AI can identify high-risk cases	3.27	1.12	47%
Machine learning improves forecasting	2.87	1.18	32%

Table 3: Ambivalent variable

Item	M	SD	% Approval (4+5)
AI systems can have a discriminatory effect	4.11	0.85	76%
Algorithms reflect social prejudices	4.05	0.87	74%
Human dignity is threatened	3.86	0.95	69%
Transparency of AI decisions insufficient	3.75	0.91	63%

Table 4: Ambivalent variable

Item	M	SD	% Approval (4+5)
Freedom of choice is threatened by AI	4.22	0.81	81%
Professional assessment limited	4.15	0.85	78%
Social workers become "algorithm executors"	3.92	0.91	71%

Group Comparisons

Younger respondents are significantly more open to opportunities and implementation, while older respondents are more likely to express concerns.

Table 5: Age group comparison

Age group	Technical Opportunities	Implementation	Ethical concerns	Autonomy
25–35 (n=47)	3.48 ± 0.86	3.12 ± 0.88	3.65 ± 0.74	3.89 ± 0.71
36–45 (n=36)	3.21 ± 0.90	2.84 ± 0.91	3.79 ± 0.76	4.06 ± 0.70
46–55 (n=25)	2.92 ± 0.87	2.61 ± 0.94	3.95 ± 0.71	4.18 ± 0.68
>55 (n=13)	2.58 ± 0.82	2.36 ± 0.88	4.08 ± 0.69	4.33 ± 0.62

By Work Experience

Again, the pattern is confirmed: less experienced professionals are more open to implementation, while highly experienced professionals are the most skeptical.

Table 6: Work experience

Professional experience	Technical Opportunities	Implementation
<5 years (n=35)	3.42 ± 0.83	3.12 ± 0.89
5–10 years (n=38)	3.28 ± 0.88	2.89 ± 0.94
11–20 years (n=30)	3.03 ± 0.90	2.67 ± 0.91
>20 years (n=18)	2.85 ± 0.86	2.36 ± 0.85

By Country

Table 7: Country demography

Land	Technical Opportunities	Ethical concerns	Implementation
Germany (n=42)	3.11 ± 0.90	4.12 ± 0.70	2.65 ± 0.88
USA (n=28)	3.35 ± 0.88	3.67 ± 0.79	3.08 ± 0.91
Canada (n=19)	3.28 ± 0.85	3.74 ± 0.72	2.96 ± 0.90
Great Britain (n=17)	3.19 ± 0.92	3.89 ± 0.74	2.81 ± 0.92
Netherlands (n=15)	3.41 ± 0.83	3.71 ± 0.75	3.04 ± 0.88

Correlations

The intercorrelations of the subscales show clear patterns: opportunities and efficiency are strongly related to the willingness to implement, while ethical concerns and fears of autonomy significantly reduce them.

Table 8: Correlations

Variables	Technical Opportunities	Efficiency	Ethical concerns	Autonomy	Privacy	Implementation
Technical opportunities	–	.72***	-.29***	-.41***	-.27**	.65***
Efficiency		–	-.26**	-.35***	-.24**	.69***
Ethical concerns			–	.59***	.67***	-.49***
Professional autonomy				–	.55***	-.61***
Privacy					–	-.44***
Implementation						–

*$p < .05$, **$p < .01$, ***$p < .001$

Regression Analyses

Predictors of Implementation Readiness

Table 9: Predictors of Implementation Readiness

Predictor	B	HERSELF	t	p
Technical opportunities	.36	0.07	5.12	<.001
Efficiency	.31	0.08	4.65	<.001
Ethical concerns	-.18	0.07	-2.64	.010
Autonomy	-.24	0.09	-3.11	.002
Age	-.16	0.05	-2.98	.003
Affinity for technology	.22	0.05	3.87	<.001

$R^2 = .63$, $p < .001$

Discussion

The discussion of the results is divided into thematic sections and numbered below. This is intended to create a clear argumentative structure that systematically links the central findings with the theoretical assumptions and works out their implications for science and practice.

The results show that while social workers acknowledge the benefits of AI-powered case analysis, they have limited advocacy of it. Average values in the range between three and three and a half make it clear that opportunities such as more objective risk assessments or the identification of high-risk cases are assessed rather cautiously. These findings support the basic assumptions of classical acceptance models such as TAM and UTAUT insofar as perceived usefulness remains a relevant factor for acceptance. At the same time, this benefit is not sufficient to trigger a high willingness to implement. The results therefore indicate that normative criteria are more strongly influenced in the evaluation in social work than purely functional considerations.

Ethical Concerns as a Dominant Pattern

The ethical concerns were much more pronounced than the perception of opportunities. Social workers expressed concerns about discrimination, lack of transparency and the risk of impersonal treatment. Here, the findings follow on from critical work on the algorithmic reproduction of social inequalities (Noble, 2018; Barocas & Selbst, 2016). The high level of approval of these risks confirms that AI in social work is not evaluated neutrally, but always remains embedded in the normative framework of professional ethics. Hypothesis H3, according to which ethical concerns are perceived more strongly as opportunities, is clearly supported by the data. The strongest reservations related to the possible loss of professional autonomy. More than four-fifths of those surveyed saw their freedom of choice threatened by AI. This addresses a core question of the profession: Can professional judgement be supported by algorithmic systems without being devalued at the same time? The findings suggest that professionals see a limit here. Gillingham (2021) describes this process as a danger of deprofessionalization. The results confirm this assessment, and at the same time raise the question of whether AI systems can be designed in the future in such a way that they strengthen the role of professional expertise instead of undermining it.

The results on data protection and privacy make it clear that questions of informational self- determination play a central role. In a field where confidentiality is considered a basic principle, AI systems encounter structural mistrust. This pattern was particularly strong in Germany, with an average value above 4.1. Here it becomes clear that attitudes are not only shaped by individual factors, but also by cultural and political conditions. Data protection cultures act as an amplifier of skepticism and help determine whether skilled workers accept AI systems.

Discrepancy between Benefits and Readiness to Implement

The gap between perceived benefits and real willingness to implement is particularly remarkable. Despite acknowledging technical opportunities, the willingness to integrate AI into one's own practice is below three on average. This discrepancy points to two factors:

First, normative concerns outweigh the perceived efficiency gains. Secondly, there appears to be a lack of trust in the institutional frameworks that could ensure transparent and accountable implementation. This presents a challenge for future adoption strategies: not only do they need to emphasize technical capability, but they also need to build institutional trust. The results show that age and professional experience are relevant predictors of attitude. Younger social workers and less experienced professionals rated opportunities higher and showed greater openness to implementation. Older and very experienced respondents, on the other hand, were much more skeptical. Hypothesis H1 is thus confirmed. These results can be explained both by technological socialization – younger professionals are used to digital technologies – and by the stronger attachment of older professionals to established professional routines. This means that the introduction of AI systems is faced with the challenge of taking generational differences into account and developing specifically addressed training courses.

Affinity for Technology as a Moderating Factor

The regression analyses show that affinity for technology is a significant predictor of willingness to implement. This supports hypothesis H2. At the same time, it is evident that even tech-savvy professionals express substantial ethical concerns. An affinity for technology is therefore not enough to dissolve skepticism, but only has a weakening effect. The results suggest that although technical openness facilitates access to innovation, it does not replace normative reflections. The totality of the findings can be described as an ambivalent attitude: Professionals see opportunities, but weigh risks more heavily. This dialectic between optimism and skepticism points to the dual role of social work. On the one hand, it is a field of action that benefits from efficiency and resource management, and on the other hand, it is a profession based on ethical principles, autonomy and relationship building. AI systems are thus meeting a professional group that does not evaluate innovation purely functionally, but always normatively.

Practical and Political Implications

The results show that the implementation of AI in social work only has a chance of success if ethical and professional dimensions are taken seriously. Pure efficiency arguments are not enough. What is needed are transparent procedures, clear responsibilities and participatory development processes in which professionals are involved from the very beginning. In addition, the international differences show that cultural contexts must be taken into account. While the willingness to implement is higher in the USA, concerns about data protection and ethics dominate in Germany. Implementation strategies must therefore be adapted to specific countries. The study is limited by its small number of cases and non-representative sampling. It does not allow causal conclusions, but only the identification of patterns. Nevertheless, the results provide valuable insights into the current attitudes of professionals and open up perspectives for future research. In particular, longitudinal studies that depict the dynamics of attitudes over time are necessary, as well as qualitative studies that capture the subjective interpretations and experiences of professionals in more detail. Practically, the findings support co-design with service providers and NGOs, accompanied by clear accountability mechanisms (Chowdhury, 2025), as well as continuous digital-literacy programs and data-protection routines to ensure sustainable implementation (Wang, 2025); local cultures of participation should be systematically taken into account (Sabour, 2025).

CONCLUSION

This study examined social workers' attitudes toward AI-supported case analysis, focusing on perceived opportunities, risks, ethical concerns, and determinants of these views. Three findings stand out. (1) First, attitudes are ambivalent: efficiency and diagnostic support are acknowledged, yet concerns about ethics, professional autonomy, and data protection dominate. Hypothesis H3 is therefore confirmed. (2) Second, attitudes vary by sociodemographics: younger and less experienced practitioners show greater openness, whereas older and highly experienced colleagues are more skeptical, underscoring the role of technical socialization and professional identity. Hypothesis H1 is confirmed. (3) Third, higher technology affinity predicts more favorable views without eliminating baseline skepticism. Hypothesis H2 is supported: tech-savvy practitioners remain ethically cautious.

AI implementation in social work must be ethics-led, involve practitioners in co-design, ensure transparency and accountability, and offer targeted training; international rollouts should account for cultural differences in data-protection norms. Future work should combine longitudinal designs (to track attitude change with practice exposure) and qualitative studies (to elucidate meaning-making). Overall, social workers neither embrace naïve technophilia nor blanket technophobia; they appraise AI case analysis as an ambivalent innovation with meaningful promise and non-negotiable ethical constraints.

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