

Predictive analytics in child welfare: background and concerns for decision-makers

Debbie Watson, Lisa May Thomas, Marisela Gutierrez Lopez, Nicola Horsley, Matt Dowse

Machine learning (ML) solutions that use predictive algorithms have become commonplace in many aspects of public life. This briefing addresses concerns about the rise of predictive analytics systems used in child welfare contexts.

About the research

This briefing has been put together by an interdisciplinary group of researchers from the [Centre for Sociodigital Futures](#). Their [Caring for Futures Projects](#) explores how experiences of care across society are affected by our relationship to digital technology. The paper draws on literature across disciplines and key policy documents over three decades to understand how we have reached the current situation where predictive analytics is increasingly being seen as a solution by authorities in their child and family services. The briefing paper documents concerns about this increasing focus on data solutions, which whilst well intended, can often result in harms for children and families.

Key findings

- The last three decades have seen an increasing emphasis on data sharing and linkage across public services. There has also been a huge reduction in statutory funding, and COVID-19 lockdowns raised concerns for children not identified as being at risk who were subsequently harmed. These external pressures, coinciding with the consensus around data sharing and linkage, have led to the increasing use of technology across services for the supposed public benefit.
- Children have been 'datafied' and reduced to (or considered in) number form and categorised according to various predetermined groups or thresholds. Nuanced contextual information about the child and their relational world is lost in this process of datafication. Social work has long been characterised as a relational profession, which is in conflict with the new datafied ways in which social workers and the families they work with are understood.
- When predictive analytic systems are introduced in child welfare contexts, they can 'undermine the practice of social work' by diverting attention from the relational aspects of the job and potentially diverting professionals towards focusing on the wrong situations and individuals. Furthermore, they can 'impede rather than enhance' decision-making (Redden, 2020: 103), as work environments are characterised by 'high ambiguity, time constraints and stress – all of which increase the likelihood of relying on implicit factors during decision-making' (Capatosto, 2017, p 4).

Policy recommendations

There is an urgent need for a critical examination of the increasing use of algorithmic solutions and coordinated resistance, which demands that the children's social care sector understand potential harms and look seriously at alternatives within broader concerns of relationships and care. In the absence of such coordinated approaches to the use of AI/ ML supported decision-making in the public sector, we urge any statutory body or local authority considering or commissioning AI- or ML-based predictive or risk modelling to adopt three key principles:

- **Relationality:** Knowledge of the child and family is fundamental for child welfare professionals. When engaging with data systems, there needs to be a clear understanding of: how they have drawn on the data that is held about individuals; what status is afforded to the data generated by risk models; how informed the professionals feel in using information from risk models to make critical decisions for children and families?
- **Transparency:** Transparent access to data systems (including algorithms and datasets, as well as their potential biases) is a necessity. There should be clear communication with all stakeholders about what the system is for, what data it is processing and by whom, and the extent to which the system provides information that is both accurate and useful.
- **Accountability:** these systems need to have clear lines of accountability and governance. It's crucial that adequate resources are provided to ensure that systems are well understood and fairly administered and that there are processes in place for reparation and redress of harms caused.

Further information

[Read the Report](#)

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Redden J. (2020) 'Predictive analytics and child welfare: Toward data justice', Canadian Journal of Communication 45(1): 101–111.

Capatosto K. (2017) Foretelling the Future: A Critical Perspective on the Use of Predictive Analytics in Child Welfare, Kirwan Institute Research Report February 2017, University of Ohio

Contact the researcher

Debbie Watson, Professor In Child and Family Welfare, Debbie.Watson@bristol.ac.uk