

Utilising Al technology to improve modern slavery survivor support

Research report

July 2024



Authors: Prof. Ryszard Piotrowicz, Aberystwyth University, Mr Quintin Lake, FiftyEight, Dr Julia Muraszkiewicz, Trilateral Research, Ms Emily Gilhespy and Dr Matthew Young, Causeway.



Research by:









This is the report Utilising AI technology to improve modern slavery survivor support, based on Project RESTART (The Reporting Experiences of Survivors to Analyse in Real-Time), based a research project conducted by Aberystwyth University (Dept. of Law and Criminology), FiftyEight, Trilateral Research and Causeway. The project was funded through an open call for proposals by the Modern Slavery and Human Rights Policy and Evidence Centre (Modern Slavery PEC), which in turn is funded and supported by the UK Arts and Humanities Research Council (AHRC). The full report can be accessed on the Modern Slavery website at modernslaverypec.org/resources/Al-modern-slavery-support.

The Modern Slavery PEC has actively supported the production of this Research Report. However, the views expressed in this summary and the full report are those of the authors and not necessarily of the Modern Slavery PEC.

Acknowledgements:

Project RESTART was an innovative study into the use of artificial intelligence and a specially adapted app to gain insights into how better to support people who have been subjected to modern slavery.

We would like to acknowledge the funding support provided by the Modern Slavery PEC, which enabled this project to take place. We are particularly grateful for the regular and supportive feedback and suggestions offered by Izzy Templer, Victoria Tecca and Alex Balch.

We also express our deep appreciation for the contributions of the Experts by Experience Advisory Panel. Our panel members, Sosa Henkoma, Nelson Omoragbon, Olessya Glasson, Rozi Faheem, Sarah, Mohamed, STJ and AK, provided essential consultation throughout the design and execution of the project. Additionally, we are deeply thankful to the app's end users, the survivors of modern slavery who volunteered to trial the app.

Our project also benefited from the input of our Advisory Board, the members of which offered their time and expertise freely: Mike Dottridge, Sosa Henkoma, Suzanne Hoff and Baerbel Heide Uhl.

We would also like to acknowledge Amber Wickham of Causeway for helping facilitate the participation of survivor app end users in the project, and Phillip Clayton and Sarah Sanabria for their work in setting up the project.



Acronyms and key terminology

Acronyms

AI Artificial Intelligence

ECAT Council of Europe Convention on Action Against Trafficking in Human Beings

MSHT Modern Slavery and Human Trafficking

NGO Non-Governmental Organisation
NLP Natural Language Processing
NRM National Referral Mechanism

RESTART Reporting Experiences of Survivors to Analyse in Real-Time

Key Terminology

Modern Slavery

Modern slavery lacks a universally accepted and comprehensive definition. However, within both UK and some international legal contexts, it encompasses various interconnected forms of severe exploitation(the definition of modern slavery contained in the Modern Slavery Act 2015 includes the offences of slavery, servitude, forced or compulsory labour and human trafficking). Acknowledging the commonly accepted understanding of this term within the UK context, we adopt 'modern slavery' as an umbrella term. However, it is important to recognise the legal and practical limitations of this terminology, ¹ along with the sentiment among some survivors who believe that 'modern slavery' inadequately captures their diverse experiences and perspectives.²

Survivor

Despite its widespread adoption, many experts by experience involved in this project did not identify with the term 'survivor', citing its failure to fully capture the ongoing nature of their recovery journeys. Conversely, some individuals found it to be an empowering term that reflected their shared experiences. Given its established prevalence and clear definition within the UK context, the decision was made to use the term 'survivor' in this report to refer to individuals who have experienced modern slavery.3

Although prevalent in legal frameworks, all experts by experience agreed that wherever possible, the term 'victim' would be avoided due to its negative and, in some case cases, triggering connotations of perpetual victimhood.

¹ Dottridge, M. (2017). *Eight reasons why we shouldn't use the term 'modern slavery'*. Available at: < https://www.opendemocracy.net/en/beyond-trafficking-and-slavery/eight-reasons-why-we-shouldn-t-use-term-modern-slavery/. (Accessed 16 Jan 2024).

² Asquith, W. Kiconco, A. Balch, A. (2022). *Promising practices in the engagement of people with lived experience to address modern slavery and human trafficking. Research Summary.* London: Modern Slavery and Human Rights Policy and Evidence Centre.

Lived Experience Advisory Panel (LEAP) and Experts by Experience

Experts by experience refers to the unique and first-hand knowledge of individuals acquired through personal experience, particularly those related to challenging or traumatic experiences. In the context of Project RESTART, survivors contributed their insights and perspectives to shape the development of this project through the formation of a Lived Experience Advisory Panel (LEAP). This panel consisted of a diverse group recruited from both within and outside Causeway, providing essential consultation at every juncture of the project's design and execution. Following the recommendations of the LEAP regarding terminology, 'experts by experience' has been adopted in lieu of 'lived experience experts'. This distinction recognises that expertise does not exclusively stem from experiences of exploitation; rather, it grows as survivors embark on journeys of recovery, and build their own skillsets and knowledge.

App end-users

We draw a distinction between our LEAP panel and participants in the MeL app trial, who we refer to as app end users. While we acknowledge the expertise by experience of all survivors involved in this project, app end users were primarily engaged in data creation rather than the conceptualisation and delivery of the programme. This distinction did not preclude participants from providing feedback; instead, we provided multiple opportunities for them to express their opinions about the projects and responded accordingly.

Artificial Intelligence and Natural Language Processing

Artificial Intelligence (AI) refers to a computer's capacity to execute tasks which would have traditionally required human intelligence, such as understanding human language, visual perception and engaging in human-like reasoning for decision-making. Al capabilities are typically implemented through mathematical models, enabling computers to analyse and learn from historical data, thereby enhancing their proficiency in performing specific tasks. Natural Language Processing (NLP) is a subset of AI that specifically focuses on the computer's ability to comprehend and process human language, whether presented as text or speech.

Recovery

'Recovery' is an inherently subjective and individualised process, shaped and articulated by survivors in diverse ways.³ Our definition is not exclusively tied to experiences of modern slavery; it also considers pre-existing issues that may have underpinned vulnerability to exploitation in the first place. We recognise the potentially cyclical, non-timebound nature of recovery, and emphasise survivor autonomy in directing their own recovery journeys.⁴

³ Modern Slavery and Human Rights Policy and Evidence Centre. (2023). *Policy brief: Survivor support. Based on the Modern Slavery PEC funded research portfolio*. Available at < https://modernslaverypec.org/assets/downloads/MSPEC_SurvivorRecovery_Brief_FINAL.pdf> (Accessed 16 Jan 2024)

⁴ Ibid.

Introduction

Since the introduction of the National Referral Mechanism (NRM), the UK government's dedicated framework for identifying and supporting survivors of modern slavery, conversations have focused on its effectiveness in meeting survivor support needs.⁵ There has been growing recognition of the necessity to incorporate survivor perspectives into these conversations to broaden our understanding of the self-defined needs and goals of survivors.⁶

The Reporting Experiences of Survivors to Analyse in Real-Time (RESTART) project was initiated in response to a funding call issued by the Modern Slavery PEC, which called for projects that could employ, and demonstrate the value of data science methods and techniques to enhance understanding of modern slavery and improve the policies addressing it. This project employed an innovative blend of artificial intelligence systems, data analytics and interactive mobile applications to analyse large datasets related to survivor support needs. Project RESTART used Natural Language Processing (NLP), an Al technology, to analyse large and complex data sets held by Causeway, a charity that supports survivors of modern slavery, that would otherwise remain underutilised due to resource constraints.

Recognising the authority of survivors in comprehending their own needs and proposing solutions, RESTART introduced a novel approach to integrating survivor voices in research. This approach empowered survivors to actively document their individual experiences and assess their own needs and goals via a smartphone app over a four-month period. Subsequently, the data generated by survivors underwent analysis using NLP techniques.

This report summarises the findings of project RESTART, providing unique perspectives on survivor support needs. It offers insight into how AI technologies, in collaboration with survivors, can be utilised for the real-time analysis of survivor needs and the generation of novel datasets. By leveraging AI techniques, particularly NLP, this research emphasises the potential advantages of using technology to handle large volumes of data and bypass manual analysis to inform insights and proposals regarding survivor needs. It also highlights technology as a new avenue for survivors to actively shape support services and policy recommendations.

⁵ Schwarz, K., & Williams-Woods, A. (2022). 'Protection and support for survivors of modern slavery in the UK: assessing current provision and what we need to change', *Journal of Poverty and Social Justice*, *30*(2), 98-119. ⁶ Asquith, W. Kiconco, A. Balch, A. (2022). A review of current promising practices in the engagement of people with lived experience to address modern slavery and human trafficking. London: Modern Slavery and Human

with lived experience to address modern slavery and human trafficking. London: Modern Slavery and Human Rights Policy and Evidence Centre.

⁷ Lazzarino, R., Julia, J., Vaughn, E., & Murphy, C. (2022). 'Introduction: Victim journeys, survivors' voice'. In *Modern Slavery and Human Trafficking*. Bristol, UK: Policy Press.

1. Research Questions

The overarching aim of this project was to explore the use of AI technology for gaining deeper insights into the needs of survivors. To achieve this, the project focused on the following research questions:

- 1. How can support workers, researchers and policy makers harness AI capabilities to provide faster, more effective and efficient insights into the support requirements of survivors?
- 2. If Al is beneficial in gaining insights, what are the recommended methods for its utilisation, and what challenges does it present?
- 3. Does smartphone technology serve as a viable platform for survivors to contribute their lived experiences and expertise in shaping MSHT services authentically?
- 4. What are the prevailing support needs amongst survivors of MSHT?

2. Composition of Team

This research project was a collaborative effort involving Aberystwyth University, Causeway, Trilateral Research, FiftyEight and a Lived Experience Advisory Panel (LEAP). Its aim was to combine specialist knowledge in areas including law and policy, modern slavery, survivor support services and data software engineering and science.

3. Lived Experience Advisory Panel

We assembled a diverse Lived Experience Advisory Panel (LEAP) with the primary aim of delivering essential consultation at every stage of the project's design and execution. The recruitment process for the LEAP involved extensive advertising both within Causeway and externally, culminating in the formation of a panel that varied in terms of gender, nationality and the forms of exploitation experienced.

The engagement of the LEAP commenced at the project's inception, with several members providing feedback and letters of support during the early funding stage. To cultivate a sense of belonging and integration, LEAP members participated in a 'kick-off event', affording them the opportunity to meet and forge connections with the wider research team.

Throughout the project's lifecycle, regular LEAP meetings were scheduled to ensure that the panel members were not merely engaged in the design phases but were able to provide consistent feedback during the project's execution. The nuanced perspectives offered by the LEAP were vital to optimising participant engagement and ensuring that the project remained trauma-informed.

4. Background

Established in 2009 to fulfil the UK's obligations under ECAT⁸ and the Palermo Protocol,⁹ the NRM serves as the primary framework for identifying 'potential victims' of modern slavery and referring them into dedicated support services. The NRM is partly a decision-making mechanism, through which the Single Competent Authority (SCA) or Immigration Enforcement Competent Authority (IECA), both based within the UK Home Office, assess whether there are reasonable grounds, and subsequently conclusive grounds, to believe someone has experienced modern slavery. If reasonable grounds are established, the survivor can access support under the state-funded Modern Slavery Victim Care Contract (MSVCC) upon request, through which they access a suite of support provisions including accommodation, financial assistance and support accessing services relating to health, employment and education.¹⁰ MSVCC support is coordinated by the Salvation Army in England and Wales (support for people in the NRM is coordinated by the relevant justice department in Scotland and Northern Ireland) and provided by subcontractors, including Causeway.

The data analysed in this report relates to those who have exited the NRM after receiving conclusive grounds decisions. The Recovery Needs Assessment (RNA) was introduced in 2019 to assess and respond to enduring support needs prior to exit from MSVCC support, and may be used to extend existing MSVCC support. While providing a route to longer-term support, the RNA process has been criticised for its overbearing and complicated demands in terms of evidence gathering, the powers it gives to the Home Office to judge survivors'

⁸ Ratified by the UK in 2008, Article 12 of the Council of Europe Convention on Action Against Trafficking in Human Beings mandates State Parties to enact necessary measures supporting the physical, psychological and social recovery of trafficking survivors.

Council of Europe Convention. (2005). Council of Europe Convention on Action Against Trafficking in Human Beings. https://rm.coe.int/168008371d (Accessed 4 December 2023).

⁹ Ratified by the UK in 2006, Article 6 of the 2000 Protocol to Prevent, Suppress and Punish Trafficking in Persons (commonly known as the Palermo Protocol) commits States Parties to provide support and protection to survivors of MSHT.

United Nations. (2000). Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the United Nations Convention against Transnational Organized Crime. https://www.ohchr.org/sites/default/files/ProtocolonTrafficking.pdf (Accessed 4 December 2023).

¹⁰ In England and Wales, support is provided via the Modern Slavery Victim Care Contract, overseen by the Salvation Army in accordance with guidance issued by the Home Secretary. In Scotland and Northern Ireland, support is coordinated by Ministers in line with the Human Trafficking and Exploitation (Scotland) Act 2015 and the Human Trafficking and Exploitation (Criminal Justice and Support for Victims) Act (Northern Ireland) 2015, respectively.

In England and Wales, survivors become eligible for support only after the UK Competent Authority or Immigration Enforcement Competent Authority reaches a 'reasonable grounds' decision, indicating that an individual referred into the NRM is a 'potential victim of modern slavery'. This determination is based on 'objective factors but falling short of conclusive proof'. The ensuing support lasts for 30 days or until a Conclusive Grounds decision is made, stipulating that 'on the balance of probabilities, there are sufficient grounds to decide that the individual being considered is a victim of modern slavery'. In contrast, legislation in Scotland and Northern Ireland allows Ministers to provide support prior to a reasonable grounds decision. See, Beddoe, C., Bundock, L., & Jardan, T. (2015). Life beyond the safe house for survivors of modern slavery in London: gaps and options review. *Human Trafficking Foundation*.

complex needs and the short length of support extensions (a maximum of 6 months).¹¹ Those who exited MSVCC support after 4th January 2021 with a positive conclusive grounds decision are also eligible for Reach-in support. Reach-in is provided by designated services (also including Causeway) and is separate to MSVCC support, with a greater focus on transitioning survivors into mainstream or alternative systems and does not include the provision of accommodation or finance. It is instead based on information and signposting to services involving physical and mental health treatment, translation, interpretation and ESOL, support through legal and criminal processes, employment and housing.¹²

Since its introduction, the NRM has faced criticism for inadequately facilitating meaningful recovery. We criticisms relate to the lack of support options prior to entry into the NRM, the existence of 'cliff edges' in support upon exit, and a 'postcode lottery', wherein essential legal, mental health and other satellite support services vary significantly based on the region where survivors are housed. Despite a suite of reforms to the NRM being announced in 2014, the Home Office has been slow to implement key improvements in support provision. Critics have also highlighted the conflation of the NRM with immigration enforcement systems and associated delays in decision-making. The lack of regularised immigration status for many survivors further limits their ability to access education, training, and employment opportunities. Recent immigration legislation threatens to further prioritise immigration enforcement over the identification and support of survivors. These factors result in survivors facing prolonged periods with minimal access to mainstream support, and states of uncertainty and instability.

Research has increasingly sought to involve experts by experience in the identification of survivor support needs through their integration into advisory panels and recruitment as peer researchers.²¹ Most notably, survivors played a key role in the development of the Modern

¹¹ Anti-Trafficking Monitoring Group, One Day at a Time: A Report on the Recovery Needs Assessment by those experieing it on a daily basis, April 2022.

¹² UK Home Office, Modern Slavery: statutory guidance for England and Wales (under s49 of the Modern Slavery Act 2015) and non-statutory guidance for Scotland and Northern Ireland, Updated 22 Feburary 2024.

¹³ Schwarz, K., & Williams-Woods, A. (2022). 'Protection and support for survivors of modern slavery in the UK: assessing current provision and what we need to change', *Journal of Poverty and Social Justice*, *30*(2), 98-119.

¹⁴ Murphy, C. (2018). *A Game of Chance? Long-term support for survivors of Modern Slavery.* Centre for the Study of Modern Slavery, London.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Referrals to the NRM frequently lead to delays in asylum adjudication as Home Office caseworkers commonly withhold making decisions, either positive or negative, once an NRM referral is initiated.

Neal, D. (2021). An inspection of asylum casework. (August 2020 - May 2021).

¹⁸ Ibid.

¹⁹ See House of Commons Home Affairs Committee, Human Trafficking: First Report of Session 2023-24, 15 November 2023, accessed 30/01/24

 $[\]underline{\text{https://committees.parliament.uk/publications/42482/documents/211207/default/}}$

²⁰ National Audit Office. (2017). *Reducing Modern Slavery, Report by the Comptroller and Auditor General, Home Office HC 630.* https://www.nao.org. uk/wp-content/uploads/2017/12/Reducing-Modern-Slavery.pdf.> accessed 4 December 2023.

²¹ Balch, A., Kinconco, A., Research Summary - Towards principles for equitable engagement: six research projects (MSPEC, November 2023).

Slavery Core Outcome Set, actively participating in interviews and workshops.²² Nonetheless, resource constraints have often limited these projects to engaging only a small number of experts by experience. In contrast, Project RESTART used AI technology and data analytics capabilities to overcome some of the barriers that have previously hindered large-scale engagement of lived experience expertise, while also mitigating some of the unintended consequences of interviews that can have traumatising effects on both the subject and researcher.²³ Consequently, Project RESTART was able to analyse large datasets, providing detailed insights into the self-identified needs of a much broader group of modern slavery survivors.

²² Paphitis, S et al, Modern Slavery Core Outcome Set: Research project identifying core outcomes central to recovery and wellbeing of survivors of modern slavery, (MSPEC, Feb 2023)

²³ Boyd, Z., Bales, K. (2016). 'Getting What We Want: Experience and Impact in Research with Survivors of Slavery'. In: Siegel, D., de Wildt, R. (eds), *Ethical Concerns in Research on Human Trafficking. Studies of Organized Crime, vol 13.* Cham: Springer.

Methodology

RESTART adopted a mixed-method, co-design approach, delineated into two distinct phases:

Phase 1 - Application of NLP Technology in Survivor Case Notes Analysis: This phase focused on utilising NLP to analyse the information captured in Causeway's support worker case notes. Causeway, like many other NGOs, manages a significant volume of case notes that document service user support needs, as well as the corresponding actions taken to address them. These notes contain rich and insightful survivor-centred data, which has remained largely untapped due to the sensitivity of the material and the resources required for analysing such extensive volumes of information. NLP presents an opportunity for streamlined extraction of relevant data in a swift and efficient manner, with the potential to identify emerging trends in real time.

Phase 2 - Data Generation via Smartphone App: This phase focused on steering away from conventional research methods, particularly interviews, to establish an alternative platform for survivor engagement in data creation. The MeL App, originally designed as a monitoring, evaluation and learning mobile application, underwent adaptations for Project RESTART. The revised application enabled survivors to record 'bullet journal'-style diary entries using their own words, at their own pace, and in spaces where they felt most comfortable. Survivors also used the app to assess their needs in real-time and within the context of available support structures. The text generated by survivors was then analysed using NLP, enabling the identification of trends and patterns of the evolving needs of survivors over time.

In both phases, insights were extracted using NLP and data analytical methods, and subsequently categorised into the following key areas:

- a. Financial
- b. Employment
- c. Social integration
- d. Safety
- e. Education
- f. Legal
- g. Physical health
- h. Mental health
- i. Accommodation
- j. Dependants

These areas were identified through consultation with Trilateral, the Principal Investigator and Causeway during the project's initial design. While their selection was influenced by the

Modern Slavery Core Outcome Set,²⁴ it is crucial to note that it is not an exact replication. The categories were designed to optimise NLP capabilities in identifying specific insights that addressed gaps in academic literature and modern slavery expertise.

1. Using NLP to analyse LifeLine Case Notes

Project RESTART used NLP models to analyse the free text data found in the case notes of Causeway's LifeLine service. LifeLine provides long-term support independently of the NRM, and primarily caters to those who have exited the system but still require ongoing assistance. It was introduced prior to the introduction of Reach-in, and while similar in scope of support provision is accessible to those with positive or negative conclusive grounds and is fully independent of the UK government (as it is funded by Causeway) and so not subject to statutory guidance. Due to time constraints in securing Home Office permissions, our analysis only incorporates case notes from survivors post-NRM. Nonetheless, we recommend that the Home Office develops a more streamlined process to facilitate responsible access to their data for beneficial analysis.

How is LifeLine data obtained? Case workers record notes for each support call with a service user which include summaries of ongoing support needs. While case notes serve as a reflection of a service user's needs as expressed during support calls, they are authored by caseworkers and are not direct transcriptions. Although there is a standardised organisational approach to compiling case notes, uniformity in the process is not guaranteed. Variations in note-making styles may occur over the analysed period due to variance in staff approaches.

Why use NLP? With their ability to process and understand textual information, NLP models serve as effective means for analysing large volumes of potentially triggering data. These models can sift through vast datasets, extracting meaningful patterns, sentiments and contextual nuances from complex and diverse narratives. By automating the analysis of content, NLP not only expedites research but also aids the identification of common themes. This spares resources that would otherwise be required for manual data analysis while mitigating the potentially emotional impact associated with the human analyst reading and analysing extensive amounts of text.

Despite off-the-shelf²⁵ NLP methods being readily available, they tend to lack the nuanced understanding required to navigate the diverse and context-rich nature of information related to cases of modern slavery. The sensitivity and complexity of case notes demand analytical approaches that consider the unique linguistic nuances, cultural contexts and evolving terminology inherent in discourses surrounding modern slavery. As a result, off-the-shelf

²⁴ Jannesari, S., Damara, B., Witkin, R. *et al.* (2023). The Modern Slavery Core Outcome Set: A Survivor-Driven Consensus on Priority Outcomes for Recovery, Wellbeing, and Reintegration. *Trauma, Violence, & Abuse, 0*(0). ²⁵ This refers to products or solutions that are readily available and not customised or specifically designed for a particular purpose. In the context of NLP models, an off-the-shelf method is one that is pre-built; however, it lacks the nuanced understanding to analyse complex information effectively.

years, from March 2018 to April 2023.26

models run the risk of oversimplifying or misinterpreting critical information, potentially hindering the effectiveness of data analysis.

In response to this challenge, Project RESTART developed NLP models specifically designed to handle complex text data related to modern slavery. Through comprehensive training, these models were equipped to navigate the intricacies of human language within the context of modern slavery and Causeway's support services. This, in turn, facilitated the processing and extraction of meaningful insights from LifeLine case notes.

A key lesson learnt was that inconsistencies in record-keeping are not uncommon across organisations that compile text data, including the police, support organisations and governmental bodies. Without mechanisms for streamlining record-keeping, text data often becomes overly complex, presenting challenges for both human and NLP analysis.

What data did we work with? Causeway supplied Trilateral with 39,513 unique case notes, facilitated by a data-sharing agreement. These notes documented interactions with 545 distinct service users who received support from Causeway over a period of more than five

While our project primarily focused on aggregated data analysis, time constraints and restrictions on data sharing necessitated handling entries as separate data points for collective analysis, rather than tracking individual needs and their evolution over time. We acknowledge that NGOs and other support providers stand to benefit from systems that leverage advanced data analytics and visualisation tools to monitor and analyse the journeys of individual service users. To make this feasible in future initiatives, organisations would need to maintain dynamic databases that are regularly updated and capture the more intricate details of a service user's needs.

What did we do? Causeway provided LifeLine data in the form of 12 separate files, which Trilateral Research data engineers consolidated into a single large file. A data minimisation approach was adopted to ensure that only essential information was incorporated into the project. The selected data was anonymised using Trilateral's internally developed process, facilitating the removal of all Personally Identifiable Information (PII), such as names, addresses, dates of birth, phone numbers and unique ID numbers. Non-identifiable demographic information, including nationality, gender and immigration status, was retained to investigate how the prevalence of each support need type varies among different groups of service users.

A team comprising data scientists from Trilateral, the Principal Investigator and subject-matter experts from Causeway collaborated to develop an NLP model specifically trained to identify support needs from LifeLine data. The model could detect discussions of support needs in the notes and assign each of them a label based on their support need type, utilising a classification system inspired by the Modern Slavery Core Outcome Set. This approach facilitated the aggregation of support need types, offering insights into the prevalence of service user needs over time and allowing for comparisons across different demographics of service users and/or locations.

²⁶ For an examination of service user demographics, consult the structured data analysis provided below.

This report does not provide a full insight into the design and development of the NLP models used, as they are the intellectual property of Trilateral Research. Nonetheless, the classification schema used in the training of the NLP model can be reviewed below:

Label	Explanation	Examples
Accommodation	References to needing assistance in securing accommodation or addressing problems with current living situations, including facing eviction or requiring essential home maintenance.	Client ²⁷ NAME needs support with housing and benefits if in receipt of a positive asylum decision.
Dependents	References to children or pregnancy.	Client said her daughter needs a dentist because her teeth are hurting.
Education	References to needing support in accessing education, such as college, university or English for Speakers of Other Languages (ESOL).	Client said she wants to go to college but worried about childcare.
Employment	References to needing support in securing employment or volunteering opportunities and addressing associated challenges.	NAME told client to go to the job centre and council, but client does not feel able to ask for help and does not think they will help him.
Financial	References to needing financial support or help with addressing associated challenges, such as inability to afford basic necessities and applying for universal credit.	She has a problem that her UC ²⁸ has been reduced since she moved and has been given conflicting justifications for this.
Legal	References to needing support with legal matters, including asylum claims, securing the right to work, pursuing compensation and interacting with solicitors.	NAME asked NAME if she has heard anything about court.
Physical health	References to physical health issues.	Client would like full check- up including urine and blood tests.
Mental health	References to mental health issues, including the desire for counselling, and struggles with substance abuse.	Client was at risk of destitution and has mental health needs.
Safety	References possible ongoing threats to personal safety, including abusive or hazardous home environments, danger from traffickers and risk of re-trafficking.	Client says that someone has informed him that associates of his attackers have been asking after him

²⁷ Causeway formerly used the term 'client' to address individuals accessing any of their support services. It is only more recently that it has transitioned to using 'service user' instead of 'client'.

²⁸ Universal Credit

		in various places, including Birmingham.
Social integration	References to needing assistance in social integration and overcoming social isolation. This may include building friendships, becoming involved in the community and reconnecting with family members.	We are growing increasingly concerned about her mental health due to the isolation.
Positive Feedback	References positive feedback from the service user regarding the support received from Causeway.	Client has a lot of respect for Causeway and is very grateful for the tablet.

Note: If a service user discussed two needs, such as destitution and mental health, each need was counted separately.

Phase 1 and Phase 2 of Project RESTART ran concurrently. As Trilateral data engineers developed NLP models for analysing LifeLine data, our project partner, FiftyEight, focused on augmenting the MeL app, transforming it into a comprehensive journalling tool. The following section provides an in-depth overview of the steps taken during Phase 2.

2. Involving survivors in data generation via the MeL app

While case notes can serve as valuable indicators of the needs of service users, they should not be considered authentic survivor narratives but rather second-hand representations of the thoughts, needs and goals of service users. Recognising this limitation, project RESTART aimed to leverage survivor expertise and devised a platform that allows survivors to directly engage in data generation. This initiative resulted in the development of a smartphone app, enabling survivors to express themselves through free-text journaling.

How did we co-design the development of the app? At the start of the project, the FiftyEight team adapted an existing app platform called MeL (Monitoring, Evaluation and Learning) to align with the specific requirements of project RESTART. Recognising the need for modification to render MeL suitable for regular use by survivors, the LEAP contributed their expertise to ensure that the app would be accessible, beneficial and trauma-informed.

The feedback from the LEAP highlighted the app's potential to go beyond its role as a mere data-capture tool. It emphasised its capacity to function as a personal device for capturing self-reflections and needs, which, in turn, could prompt or guide access to support from external services or case workers. The LEAP also stressed the importance of signposting app users to additional help and support for core needs, including but not limited to legal advice, mental health support, employment and education.

During the development phase, the LEAP recommended that the app's journaling feature distinguish between immediate needs and long-term goals, emphasising the importance of

this distinction in a survivor's recovery journey. As a result, free-flow entries were structured as either a 'need' or a 'goal'.

What did the app include? A key feature of the adapted app was its free flow journaling function, enabling survivors to reflect upon their individual needs and goals, as well as the relevant support structures available to them. This approach empowered survivors to share their stories at their own pace and in a setting where they felt comfortable expressing their thoughts freely. Survivors had the flexibility to document their experiences in English or, if preferred, in another language of their choosing. Nonetheless, English was encouraged for this project due to the limitations of the NLP model employed.²⁹

To enhance the reflective process, the app integrated a series of questions (see Annex), codesigned in collaboration with the LEAP. Acknowledging the potentially triggering nature of reflecting on difficult situations, the LEAP recommended the inclusion of more open-ended questions alongside an 'I don't know / prefer not to say' option for trauma-informed purposes. In response to the LEAP's suggestion that app usage might prompt users to seek additional information or support, a signposting section was added. This section offered valuable resources, covering areas such as compensation, education as well as mental health and wellbeing support.

The app's functionality is outlined in the two boxes below:

Free-flow Journaling

Free-flow journaling allowed survivors to create diary-like entries. These entries were categorised against core modern slavery outcomes and securely stored on the app platform. Each entry served as a personal record, capturing experiences, thoughts and emotions associated with their recovery from MSHT. Users had the flexibility of adding thoughts at their convenience, facilitating the construction of a timeline that documented their evolving needs and subsequent engagement with support services.

Push Questions

Survivors were sent push notifications via the app messaging platform, prompting them to share responses to questions related to compensation, finances and employment, social needs, housing, support and health. These questions sought to elicit both qualitative and quantitative responses, ensuring comparability and nuanced data collection. Each set of questions was accompanied by multiple links, signposting users to further support and advice.

²⁹ The addition of a translation functionality would be feasible for a larger project without the same time and financial constraints.





Figure 2: Image of the app used in project RESTART

Who used the app and how? Participants in the MeL app trial were recruited from a preexisting database of LifeLine service users, all of whom had previously indicated an interest in engaging with research, policy and advocacy initiatives. Many of these individuals have already made active contributions to various research projects, participating in interviews and serving in advisory capacities.

App end users were required to have access to a functional smart device³⁰ and demonstrate proficiency in both written and spoken English.³¹ After an initial screening process, Causeway invited all eligible service users to participate, resulting in 57 individuals providing consent to use the MeL app over a four-month period. The period of time was chosen based on the length of the project.

Causeway's Participation Facilitator played a pivotal role in fostering equity of opportunity and participation. This was particularly important considering the varying levels of techliteracy among app end users, ranging from those with prior app development experience to others who had never used a computer or email before. With the added help of the FiftyEight

³⁰ Causeway operates a LifeSupply service, equipping service users with smart devices and internet data packages. Consequently, Causeway successfully ensure that participants lacking access to smart devices or the internet could still engage with project RESTART.

³¹ A significant number of participants were not native English speakers and had only acquired proficiency in the language after entering the NRM. As a result, we anticipated variations in the quality of written communication.

team, the facilitator offered regular troubleshooting support for the technical challenges faced by participants. By remaining a regular point of contact with app end users, the facilitator built a relationship of trust which enabled them to maintain engagement in app use without being overbearing. The facilitator observed that the close professional relationship they maintained with users made it easier to respond to dips in app-use in a sensitive manner, and in some cases signpost to other services to manage external factors influencing engagement. The inclusive approach to recruitment and non-judgemental support offered helped the facilitator to respond to a broad range of technical and end-user issues that may have otherwise compromised consistent app use.

To enhance participant proficiency with the MeL app, Causeway developed various graphic and video resources. App end users, including those who identified as tech-illiterate, praised the effectiveness of these resources, with one participant sharing that:

In the beginning it was difficult, but Causeway was sending me some video. I went through the video, then came back to my phone. Any time I was stuck, I texted [the facilitator]. I keep on, keep on until I could do it'. (RP1)

In other instances, the facilitator and information resources contributed to raising app end user confidence in using mobile applications:

If you told me to use an app I wouldn't know how and wouldn't have the confidence to. But the information they gave, it gave me confidence and I did it. (RP23)

In addition to addressing technical challenges, the facilitator employed effective communication strategies to encourage overall engagement. Recognising diverse preferences, regular contact was maintained through telephone and WhatsApp, with the latter being identified as the preferred method of communication by app users. This personalised approach facilitated the prompt resolution of issues, ensured sustained access to the MeL app, and actively motivated users to stay engaged with the project.

While journal entries were not directly monitored, Causeway demonstrated a commitment to the well-being of app users by providing support through LifeLine for any potential needs or safeguarding risks during the journaling process. This additional layer of support underscores the comprehensive approach to equity of participation, acknowledging and addressing potential challenges beyond technical issues. The holistic support system implemented by Causeway contributed to creating an inclusive and accessible environment for all participants.

How did we ensure privacy? Prior to accessing the MeL app, users were required to provide informed consent. Detailed information about the project, including its objectives, methods for participant involvement, and processes for data anonymisation and usage, were shared via information sheets (refer to Annex) and verbal communication over the telephone. App users were explicitly informed of their option to withdraw from the project at

any time without consequence. Apart from an email address used for login and reset purposes, no personally identifiable information was captured. All user-entered data was completely separated and anonymised from the associated email address before being shared with Trilateral Research for analysis. Access to data was restricted to approved data handlers within the FiftyEight technology team for security and maintenance purposes.

Any data shared externally from the data platform was anonymised in accordance with the agreed framework. The app data was exported to an encrypted and password-protected CSV file before being transferred to Trilateral for analysis. 90% of app end users interviewed stated that they understood the project's data protection policies, and 97% said they felt their data was secure when using the app.

An existing relationship of trust with Causeway was cited by some participants as a key factor in their involvement in the project, and the role of the facilitator proved essential to ensuring engagement with the MeL app.

What did we do with the data collected? The data collected via the MeL app underwent analysis using classic data analytics methods. Here the sample was too small to warrant the development of bespoke NLP models. The project had 425 journal entries containing notes that were generated by 46 participants over the period from 19 June 2023 to 13 October 2023. While app activity was initially high, with 81 entries submitted in June 2023 and peaking at 137 entries in August 2023, there was a gradual decline in the number of entries over time. The number of entries per user varied from one to 66, with the majority submitting an average of three to 12 entries throughout the 4-month period. Notably, half of the users submitted at least eight entries each.

Having developed the tech capabilities, NLP models for the large data from case notes and the MeL app to capture new data, the project became aware of limitations, which we turn our attention to next.

3. Limitations of NLP, the MeL App and Analysis

While we highlight the advantages of utilising NLP technology, as detailed in our findings below, it is important to also acknowledge its limitations:

Language Limitations and Cultural Nuances

- Due to project constraints, the NLP model was limited to analysing text information in the English language. While this constraint this did not restrict the analysis of Causeway's case notes, given that they were written in English, we had to exclude all app entries written in other languages from analysis. We acknowledge the potential benefits of incorporating multi-language models for broader applications. This would be particularly advantageous for NGOs operating in other languages.
- The complexity of human language poses challenges for natural language processing models. Despite vast datasets and advanced algorithms, teaching AI to

consistently understand human-like text remains imperfect. In a field as complex and diverse as modern slavery, the need to understand the intricacies of exploitation, trauma, recovery and cultural disparities is particularly pronounced. This was a particular issue when analysing app journal entries where, as users had the freedom to express themselves freely, NLP was unable to analyse some culturally specific language. As a result, our response to research question two - if Al is beneficial in gaining insights, what are the recommended methods for its utilisation, and what challenges does it present - is twofold. Firstly, human involvement is essential, particularly as the development of effective models requires the input of a subject-matter expert. Secondly, considering the diverse ways in which text data is collected, even within a single organisation, Al models need to be bespoke and trained on the specific source data.

Human in the Loop

- While human involvement and subject-matter expertise played a significant role in the development of this project's NLP models, we acknowledged that the role of human intervention should not conclude at this stage. As much as the model was customised and trained to consider the context of Causeway and the needs of modern slavery survivors, it cannot be solely relied upon to consistently capture the nuanced aspects of text that a human analyst is likely to discern. This sentiment reflected some of the feedback gathered from the LEAP and app users, where there was a collective desire for human oversight and support - to "have someone at the other end" who could understand and respond to the needs as expressed.

Additional NLP Training Required for Context Specific Comprehension:

Despite Trilateral Research randomly sampling over 2000 sentences from Causeway's LifeLine files for the training of the NLP model, classifying specific categories such as safety and social integration, proved challenging due to ambiguity in some of the free text, and even led to a lack of consensus between subject matter experts on how some sentences should be classified. Take the following sentence, for example: "This is a man that stays with one of the ladies who also lives in the house." In this instance, there is no direct reference to safety, though it could be highlighting a safeguarding issue depending on the context. Another example is: "Not done a lot recently is scared to go out wants to be living a normal life but doesn't know what life is about." There is no clarification whether the fear of going out is due to a specific circumstance e.g., the exploiter finding them. With more training data, it would potentially be possible for the model to increasingly learn the context around the two classes and improve in performance (a project recommendation for future projects in line with research question number two). One issue that we faced with the limited training set was that the model was more likely to learn specific keywords and phrases rather than the context of the sentence (for example, generally mentioning 'safeguarding' would lead to the model identifying this as a safety issue, even when safeguarding was mentioned in the positive sense). One way to try to generalise and force the model to not rely so heavily on

specific parts of the sentence would be through selecting sentences actively for labelling which contain the phrases (such as safeguarding) but where no need is present. This was also an approach which we attempted with regard to distinguishing between past and present needs – for example, we did not want to flag past education needs (as we were looking at survivors' needs post-exploitation), and hence in later annotation rounds we labelled negative example sentences with past education needs.

Overall, fine-tuning pre-trained models allowed the team to train a well-performing model, which is able to identify victim needs in freeform text. With a relatively small number of training examples, the team were able to achieve better performance than other machine learning approaches. At the same time, the limited number of training data, and only using the Causeway dataset, means that the model will not necessarily generalise very well if used on a completely different set of texts. It is thus recommended, as mentioned above, that future projects be carried out on a large scale with data from different organisations. The more ambiguous labels, such as safety and social integration, which were a lot more contextual and ambiguous even for the human annotators, performed worse in model classification. Including more training examples, or experimenting more with model architecture (for example, to try and include paragraph-level context) could allow the model to learn more of the context.

Findings

In this section, we present the results of data analysis: firstly, from the structured data held by Causeway; secondly, the free-text narrative data held by Causeway (where we applied NLP); and finally, the data generated by survivors using the MeL app, which we analysed using traditional data analysis.

Analysis of structured data within Causeway's case notes

Causeway's LifeLine case notes analysed through NLP included 39,526 individual calls from 545 service users across 149 cities/towns in five counties, spanning from March 2018 to April 2023. While all data was anonymised, the structured dataset does provide background information about the service user base. The following insights were found:

- Nearly all service users were in England or in the UK, with the exception of 2 who were travelling (Czech Republic) or repatriated (Vietnam).
- Service users were mostly located in the North West and North Central of England, particularly around Manchester, Liverpool and Sheffield. This can be attributed to the prominence of Causeway's operations in these locations.
- Two thirds of service users were women. This represents a reversal of general NRM trends, with 78% percent of referrals in 2022 being male compared to 22% female³².
 As Causeway's post-NRM services are provided on an opt-in basis, this could reflect a higher perception of ongoing support needs among female survivors.
- The majority of users indicated that they were heterosexual. We highlight this finding, while acknowledging the substantial underreporting of LGBTQ+ individuals in the NRM and related services. This underrepresentation is likely related to the social and practical challenges faced by LGBTQ+ individuals in accessing services, with many refusing referrals into the NRM due to a lack of safety and protection³³.
- A quarter of service users were Albanian, followed by Nigerian (10%) and Vietnamese (9%). While the proportion of Albanians reflects current trends (Albanians account for 27% of referrals made to the NRM in 2022³⁴), Nigerians and Vietnamese were overrepresented in the data set (account for -1% and 5% of

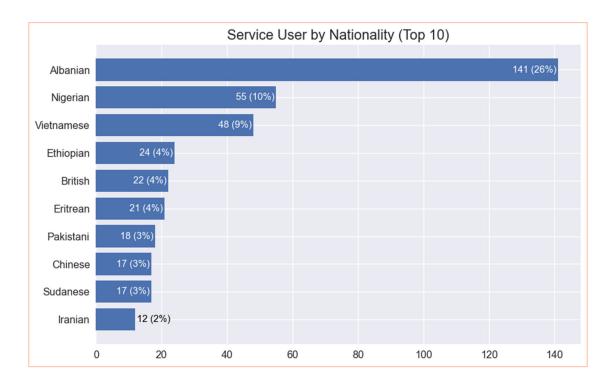
³² UK Government. (2023). *Modern Slavery: National Referral Mechanism and Duty to Notify statistics UK*, Quarter 4 2022 – October to December. Published 2 March 2023. [Online] Available at <a href="https://www.gov.uk/government/statistics/modern-slavery-national-referral-mechanism-and-duty-to-notify-statistics-uk-october-to-december-2022/modern-slavery-national-referral-mechanism-and-duty-to-notify-statistics-uk-quarter-4-2022-october-to-december (Accessed 30 Jan 2024)

³³ Ariyo, D. (2023). 'Rethinking how we undertake research in the UK modern slavery space'. [Blog post]. Modern Slavery PEC. Published: July 27, 2023. Available at: https://modernslavery-space (Accessed 16 Jan 2024).

³⁴ UK Government. (2023). *Modern Slavery: National Referral Mechanism and Duty to Notify statistics UK, Quarter 4 2022 – October to December. Published 2 March 2023.* [Online] Available at

<a href="https://www.gov.uk/government/statistics/modern-slavery-national-referral-mechanism-and-duty-to-notify-statistics-uk-october-to-december-2022/modern-slavery-national-referral-mechanism-and-duty-to-notify-statistics-uk-quarter-4-2022-october-to-december (Accessed 30 Jan 2024)

referrals in 2022 respectively). British nationals (25% in 2022) were underrepresented. This reflects the fact that Causeway service users exclusively consist of adults, and that the data sets extend back to 2018 and relate only to those who have exited the NRM. As such, the data reflects prior trends that have changed significantly in recent years (10% of referrals to the NRM in 2018 were Vietnamese and 4% Nigerian, while the majority of British national referrals in that year related to child victims of county lines criminal activity).



- Approximately one third of the service users were asylum seekers, with an additional third having obtained refugee status. The data shows that the immigration status remained the same over time for each user in the database. While this may be reflective of the delays in the UK's asylum adjudication system, it could also be linked to the limited contact between LifeLine caseworkers and service users. LifeLine, a service designed to promote autonomy and independence, often involves contact being initiated by the service user rather than the case worker. With a lower level of contact, it is possible that service users may have received decisions without the opportunity to communicate this to their caseworker. This trend might also reflect inconsistencies in record keeping.
- 5% of service users were classified by caseworkers as having high needs³⁵, equally split by gender.
- 1% (six in total) of service users had identified and recorded safeguarding issues. It
 is crucial to note that these survivors had exited the NRM and been in recovery for
 some time. As such, the expectation was for safeguarding concerns to be lower

³⁵ Causeway employs a dynamic categorisation system to assess the level of needs for a service user. Following an assessment by a caseworker, service user's needs are classified 'high needs', 'temporary high needs' or 'low needs'. This categorisation helps indicate the potential intensity of support required by the service user and their capacity for independence.

- compared to survivors who, for example, entered a safehouse immediately after being recovered from situations of exploitation.
- In relation to the NRM, our study uncovers a troubling trend that resonates with findings from other projects, raising concerns about the extended periods survivors endure within the NRM:
 - Most service users stay within the NRM system for one to four years, with half exiting the system after three years.
 - Most service users receive a 'conclusive grounds' decision between 1.5 and 3.1 years, with half receiving it after 2.5 years.
 - 82% of survivors received a positive conclusive grounds decision, with men and women both achieving similar rates of positive conclusive grounds status.
- Providing high-quality support is resource intensive. In general, there were between 10 and 101 calls initiated by a Causeway case worker with a service user, with half of users participating in up to 42 calls. There are some exceptions, where service users had over 200 calls with a case worker. Overall, the number of calls to service users has been on an increase since March 2018, and peaked between March 2020 and March 2021, with 2020 and 2021 showing the highest volume of calls (over 10,000 calls in total for each year). On average, there were 638 calls per month, though there were some variations within each year. In 2018, the number of calls slightly increased each month. For 2019 and 2020, the number of calls remained relatively consistent on a monthly basis. However, in both 2021 and 2022, there were more calls in the first quarter than in the rest of the year. It is possible to speculate that COVID lockdowns, resulting isolation as well as confusion on policies in place, were responsible for the increase in calls.

Survivor needs insights as identified using NLP on Causeway case notes

The NLP analysis extracted and categorised survivor support needs identified in the case notes. A keyword analysis was also performed to determine the number of users engaging in conversations in relation to specific themes (see Annex A for keywords). "Survivor needs" refers to a comprehensive set of requirements and support measures that individuals who have experienced modern slavery or human trafficking must have addressed to facilitate their recovery and reintegration into society. These needs span various domains, encompassing:

- a. Financial: Access to financial resources and assistance to regain economic independence.
- b. Employment: Support in securing stable and dignified employment opportunities.

- c. Social Integration: Assistance in fostering connections and rebuilding social networks within the community.
- d. Safety: Ensuring a secure and protective environment, free from the threat of exploitation or harm.
- e. Education: Opportunities and resources to pursue educational goals and skills development.
- f. Legal: Guidance and support in navigating legal processes, including access to justice and protection under the law.
- g. Physical Health: Provision of healthcare services to address any physical health issues resulting from the exploitation.
- h. Mental Health: Access to mental health support and counselling to cope with trauma and emotional challenges.
- i. Accommodation: Secure and suitable housing arrangements that contribute to a stable living environment.
- j. Dependents: Support for individuals with dependents, including children or family members, to ensure their well-being and integration into society.

We extracted 39,270 case notes from the 39,526 call entries provided by Causeway. The data was cleaned to remove any entries with missing location or date information. The case notes are thus made up of 535³⁶ unique service users currently receiving support from Causeway, spanning a period of five years from March 2018 to April 2023.

The analysis of service-user data reveals a notable trend in the mention of support needs over time. Initially, in March 2018, 32 individuals, constituting 60% of the sample, acknowledged various types of support needs. This number steadily increased, reaching 116 individuals (71%) by December 2019. A substantial surge occurred in 2020, peaking between March 2020 (184 individuals, 92%) and March 2021 (188 individuals, 63%). The notable surge in support needs for survivors of modern slavery, particularly between March 2020 and March 2021, may be indicative of the impact that the COVID-19 pandemic and associated lockdown measures had on vulnerable populations. The restrictions imposed during this period likely exacerbated the challenges faced by survivors, limiting their access to essential services, support networks and economic opportunities. The sharp increase in individuals acknowledging support needs could be attributed to heightened vulnerability during the pandemic, emphasising the urgent need for targeted assistance and intervention in the face of these unprecedented challenges.

³⁶ The original data has 545 service users. The structured analysis is based on these 545 users. The data was later cleaned (removing any entry missing location or date information) to include 535 service users. The data in the dashboard is based on these 535 users.

Despite a subsequent decline after March 2021, the number of individuals discussing any support need remained higher than in preceding months. Notably, a sharp decrease in numbers from April 2022 until March 2023 is attributed to reduced data accessibility, linked to the Home Office's introduction of 'Reach-In' support under the MSVCC. As the service is funded by the government, and so offers additional resources (including the provision to meet survivors in person), eligible LifeLine service users with ongoing support needs were therefore referred into Reach-in, impacting the available data pool from 2021 onwards. Those with negative conclusive grounds were able to remain under LifeLine provision despite their ineligibility for Reach-in. The complexities of the needs identified in this data below highlight the importance of resourcing the Reach-in service and ensuring similar provisions are available to those with negative conclusive grounds.

In the timeframe March 2018 to March 2023:

- The majority of service users (532 users, 99% of the whole sample group) discussed at least one type of support need over the observed period; three users did not mention any need type.
- 515 service users (96%) mentioned needing legal support, making it the most mentioned support need. This follows a pattern found in previous research that utilised Causeway data. In that study, by Alex Balch and Alexandra Williams-Woods (University of Liverpool), when asked 'what were the main needs you were facing', the most common answer was immigration. In project RESTART support with immigration fell within the category of "legal".
- This was followed by financial support, mentioned by 470 individuals (88%), and mental health support, mentioned by 442 individuals (83%).

In the timeframe March 2018 to April 2022, the analysis underscores a notable yet less dramatic shift in support needs, registering a 14% overall increase. Furthermore:

- Examining specific categories, all support needs demonstrated an upward trajectory, except for physical health support, which saw a 12% decline.
- Notably, the most substantial surge was observed in the positive feedback, surging by more than fivefold (542% increase) throughout the period.
- Following closely were increases in employment support needs (+87%), accommodation support needs (+77%) and financial support needs (+75%).

We now turn to breaking down each of the needs for the period of available data, March 2018 to March 2023. In each section, we also provide an example of a case note that the NLP identified as referring to the particular need.

Legal Needs

An NLP exploration of legal support needs within the dataset reveals its paramount significance, emerging as the most discussed need throughout the observed period. A total

of 515 individuals, constituting an overwhelming 96% of the entire population under consideration, engaged in discussions related to legal support needs.

The temporal analysis indicates a substantial change in the monthly number of individuals discussing legal needs, particularly noteworthy between March 2019 and November 2020. The discussion escalated from 20 service users, representing 38% of the sample, to a remarkable 138 users, constituting 50% of the sample during that period. This heightened engagement persisted through 2021 and early 2022, with an average of 141 individuals mentioning legal support needs per month in 2020 and 2021, respectively. Notably, 2020 and 2021 showed the highest numbers of individuals discussing legal support needs, with 289 and 333 individuals, respectively. Once again, it is possible to speculate that the surge is a result of the impact of the measures taken during the Covid-19 pandemic. On average, approximately half of the service users (48%) mentioned needing legal support over the observed period. Despite some variation, this percentage typically ranged between 40% and 53% each month.

The consistent prominence of legal support needs underscores the complexities and challenges faced by survivors of modern slavery within the legal system, whether it be gaining legal residence status or navigating criminal cases. The intricacies of the legal system necessitate comprehensive support for survivors, emphasising the imperative role of assistance in helping them overcome legal obstacles and attain justice. Recommendations to address this issue could include the allocation of additional resources for legal aid services, the development of specialised programmes to navigate legal complexities, and collaborative efforts between governmental and non-governmental entities to ensure comprehensive support for survivors seeking legal assistance. Additionally, ensuring that during challenging times, such as lock downs, there is even further addition of resources to avoid backlogs of cases and be prepared for an increase in support needs.

Overall, legal needs tended to be similar by demographic variables, with most demographics showing important levels of legal needs at around the 96% mark. There were modest differences:

- By **immigration status**: a smaller subset of those with indefinite leave to remain (IRL) had legal needs (85%).
- Discussions related to legal needs were high in most **cities** although they were lower in Bolton (87%) and Preston (86%) when looking at cities with large sample sizes.
- By **nationality** groups, Sudanese nationals had fewer discussions around legal needs (88%), compared to other nationality groups with a high population.

'NAME has informed us that she is a bit confused about what she is expected to do at the moment in regard to her asylum case.' (May 2020, Gender: Female, City: Sheffield)

'NAME welfare call: NAME is well but asked for support to apply for a bus pass to complete his probation in ADDRESS doing community service.' (March 2023, Gender: Male, City: Liverpool)

We also delved deeper into two specific needs, namely support with the asylum process and with compensation. These two aspects hold particular significance in the context of MSHT survivors. On compensation, in particular, previous research³⁷ notes this is a right that is not accessed by many survivors throughout the world. Yet the right to compensation is guaranteed and, moreover, compensation is crucial for survivors as they rebuild their lives. Modern slavery often involves severe exploitation, and survivors may have endured physical, emotional and financial harm. Compensation not only provides a form of redress for the harm suffered but also plays a pivotal role in helping survivors regain financial independence, access necessary services, and rebuild their lives. Recognising and addressing the financial impact of modern slavery is integral to the holistic recovery and empowerment of survivors.

Asylum: Within the cohort of 515 service users who engaged in discussions about legal support needs, a significant subset, comprising almost half (249 individuals or 48% of the sample), specifically highlighted the importance of assistance with the asylum process. This highlights the intertwined challenges faced by survivors of modern slavery, many of whom are foreign nationals navigating complex legal systems in their pursuit of safety and protection. The proportion of individuals mentioning 'asylum' was broadly consistent from 2018 to 2021, ranging between 35-44%. However, a notable decrease is observed in 2022 and 2023 (44 out of 280 people, and seven out of 47 people respectively). Based on our analysis, we note that other topics were also less frequently mentioned, suggesting that there is a wider distribution of topics discussed across users. However, it should be noted that the keyword analysis has limitations, and that we have only searched for mentions of specific, pre-defined words within parts of text identified as "legal needs" by our NLP models, those being "asylum", "compensation" and "conclusive grounds decision". To identify which other areas people cited legal needs for would require defining some more key terms to search for, and then calculating their prevalence.

'The letter was informing the client that they have had their asylum claim rejected but has had a humanitarian protection order granted lasting for DATE.' (October 2018, Gender: Male, City: Bicester)

<u>Conclusive grounds decision</u>: Among users engaging in discussions related to legal needs, 28% referenced conclusive grounds decision – of those, around half cited a positive decision and close to one quarter mentioned a negative decision. This topic was steadily mentioned from 2018 to 2020 – ranging between 17-19% of those with legal needs. It dropped in 2021 and 2022 to 11% and 6% respectively, and picked up in 2023 with 51% of individuals with legal needs engaging in discussions in relation to a conclusive grounds decision.

³⁷ Cusveller, J. (2015). Compensation for victims of human trafficking: inconsistencies, impediments and improvements. Belanda: Faculty of Law, VU University Amsterdam; Cusveller, J., & Kleemans, E. (2018). Fair compensation for victims of human trafficking? A case study of the Dutch injured party claim. *International review of victimology*, *24*(3), 297-311.

NAME was referred into our Integration Support Programme, a post NRM support service, after receiving a positive conclusive grounds decision. (June 2020, Gender: Female, City: London)

<u>Compensation</u>: A smaller subset of the legal support cohort—38 individuals (7% of the sample)—also noted issues related to 'compensation'. Acknowledging the financial impact of modern slavery, these survivors highlighted the importance of redress and recognition for the harms endured. However, there is a discernible decrease in the proportion of individuals discussing compensation-related themes since 2018, starting from eight individuals (7%) and declining to one individual (2%) in 2023. This decline may be due to various factors, such as challenges in accessing compensation or evolving priorities in survivors' recovery journeys. Regardless, it underscores the ongoing need to address and enhance support mechanisms related to financial redress for survivors of modern slavery.

'NAME told client NAME was working on her compensation inquiry.' (October 2020, Gender: Female, City: Holborn, London)

Financial Needs

In total, 470 individuals, constituting 88% of the entire data set under evaluation, engaged in discussions related to financial needs, marking it as the second most mentioned support need throughout the observed period.

The percentage of individuals discussing financial support needs exhibited a broad variation, fluctuating between 22% and 41%, with an average of 32% over the observed period. The years 2020 and 2021 stood out as the peak periods, with the highest numbers of individuals - 267 and 269, respectively - engaging in discussions about financial needs. The monthly data illustrates a dynamic trajectory, with the number of individuals discussing financial needs showing a general upward trend. It began with an average of 35 individuals per month, culminating in notable peaks during March and September 2020, with 104 individuals (52%) and 40% of the sample, respectively. Subsequently, there was a progressive decline to an average of 62 people per month in 2021 and 23 in 2022.

These findings underscore the pervasive nature of financial challenges within the service user community and highlight the temporal shifts, possibly impacted by adverse happenings such as lockdowns, in the prominence of this particular support need over the analysed timeframe.

Although financial needs were similar for men and women, they varied when analysing the split by other large demographic variables:

- By **immigration status**: there were discussions around financial needs for all service users who are EU settled (14 people), with the status 'Other', 'No status', 'Visa' or 'Humanitarian protection' (eight people overall). By contrast, there were

fewer discussions related to financial needs for asylum seekers (81% of their population) and those with indefinite leave to remain (ILR) (77%).

- There were some marked differences by **city**, for service users in Bury and Rochdale who had more discussions related to financial needs compared to the overall average (100% and 93% of their population respectively). On the other hand, financial needs were lower for people in Bolton, Sheffield and Manchester (83%, 80% and 78% of their population respectively).
- There were some differences by **nationality** with Ethiopian and Vietnamese nationals discussing financial needs more frequently (96% and 93% respectively) and Sudanese and Iranian nationals less so (82% and 67% respectively).

'NAME informed client about possibility of NRM re-entry if client is not receiving adequate subsistence or no income.' (November 2020, Gender: Male, City: Southend-on-Sea)

'Completed RI referral for SU for support applying for single person discount on council tax.' (March 2023, Gender: Female, City: Barnsley)

Accommodation needs

The comprehensive examination of accommodation support needs within the dataset reveals the following insights. A total of 381 individuals, constituting 71% of the entire sample group, engaged in discussions related to accommodation support needs. The monthly analysis delineates a distinct pattern, commencing with five individuals (9% of the sample) acknowledging this need in March 2018. The trend experienced a noteworthy increase, reaching its peak in September 2020, with 77 individuals (29% of the sample) discussing accommodation needs. However, from that peak, a gradual decline ensued, with 33 individuals (17%) mentioning accommodation needs in April 2022 and a further decrease to one person (6%) in April 2023.

Although the percentage of individuals discussing accommodation support needs fluctuated between 17-27% over the total observed period, the average remained around the 21% mark. Noteworthy are again the Covid and lockdown years 2020 and 2021, which recorded the highest numbers of individuals discussing housing needs, with 207 and 195 individuals respectively. While approximately two-thirds of the population sample engaged in discussions about accommodation needs in 2018, 2019 and 2020 (66%, 71% and 66%, respectively), this figure witnessed a decline in subsequent years, dropping to its lowest point at 32% in 2022 and to 45% in 2023.

Accommodation needs varied by demographic groups:

- **Women** tended to have higher accommodation needs than men – 73% of women had discussions with case workers related to accommodation needs, compared to 66% of men.

- Asylum seekers showed the lowest proportion of people with accommodation needs - only 46% had conversations about accommodation needs. Higher accommodation needs were present for those with refugee status (87%), EU presettled (88%) and EU/EEA nationals (no additional status) (91%).
- There were considerable differences across **cities**. In particular, 85% of service users in London had accommodation needs. This is in contrast with other cities including Bolton, Manchester, Oldham, Preston, Salford and Bury, where accommodation needs of their populations ranged between 55-65%.
- By **nationality**, Sudanese, Vietnamese and Eritrean nationals stood out with more discussions related to accommodation needs, representing 82%, 80% and 79% of their populations, respectively. In contrast, accommodation needs were lower for Albanian (66%), Iranian (58%) and Chinese (53%) nationals, respectively.

'NAME wrote supporting letter and example eviction letter for client.' (March 2020, Gender: Female, City: Salford)

'No friends, moved into temporary council flat on his own DATE (address updated), while he bids on permanent home.' (March 2022, Gender: Male, City: Little Hulton)

Dependents' Needs

An NLP exploration of mentions of dependents' support needs within the dataset unveils the following findings. A total of 326 individuals, comprising 61% of the entire population under consideration, engaged in discussions related to dependents' support needs. The monthly data reveal a discernible trajectory, starting in March 2018 with eight individuals (15% of the sample) acknowledging this need. The number increased steadily, reaching its summit in September 2020, with 108 individuals (41% of the sample) discussing dependents' needs. However, a subsequent decline ensued, with 38 individuals (19%) mentioning dependents' needs in April 2022.

Once again, and probably for the same pandemic-related reasons, 2020 and 2021 marked the highest numbers of individuals discussing dependents' needs, with 204 and 194 individuals respectively. The percentage of individuals discussing dependents' needs remained relatively stable between 2018 and 2021, fluctuating from 51% to 65%. However, a noticeable decline occurred in subsequent years, with 31% engaging in discussions about this support need in 2022 and a further decrease to 21% in 2023.

There were considerable differences when looking at demographic variables with large sample sizes:

- Only one third of **men** had discussions related to dependents' needs, compared to three quarters of **women**, highlighting that caring responsibilities still predominantly fall to women.

- Dependents' needs varied by **immigration status**, those with limited leave to remain (LLR) (79%), discretionary leave to remain (76%) and refugee status (72%) showing the largest proportion of people with dependents' needs. The number was lower for asylum seekers (47%) and British citizens (41%).
- There was some variation by **city**. People in Rochdale and London had higher dependents' needs (86% and 67% respectively) while those in Bury, Oldham and Salford had lower levels (55%, 52% and 33% respectively).
- Dependents' needs varied significantly by **nationality**. Notably, 78% of Albanian nationals had dependents' needs. The figure was much lower for Eritrean, British, Sudanese and Iranian nationals, where less than half of their populations had dependents' needs.

'Client is worried as she does not know where it is and does not know if she can take her baby.' (September 2018, Gender: Female, City: Hounslow)

Education Needs

An NLP analysis of education support needs within the dataset unveils notable trends and variations. In total, 256 individuals, constituting 48% of the entire population under consideration, engaged in discussions pertaining to education support needs. The monthly data reveals significant fluctuations, averaging around 10 individuals per month raising education needs in 2018, 13 in 2019, and 18 in 2020. A peak occurred in September 2020, with 40 individuals (15% of the sample) discussing education needs, followed by a decline to an average of 14 individuals per month in 2021, seven in 2022, and two in 2023. Despite occasional peaks, the percentage of individuals discussing education support needs often lingered between 5-10%, with an average percentage of 8% over the observed period. The highest engagement with education needs was recorded in 2020, with 131 individuals mentioning it, constituting 42% of the sample for that year.

'He also mentioned he wants to start a new college course in DATE.' (July 2019, Gender: Male, City: Preston)

'Client's next goals are to improve English reading and writing.' (November 2021, Gender: Female, City: Radcliffe)

<u>Education Needs - English language:</u> An NLP analysis of education support needs within the dataset reveals that out of the 256 individuals who engaged in discussions on this topic, 109 also highlighted challenges related to the English language, constituting 43% of the sample. Notably, this percentage was quite stable over the years, consistently ranging between 32% and 39% from 2018 to 2022.

This finding underscores the intrinsic link between education support and language proficiency, emphasising the crucial role of English language skills for survivors of modern slavery. It is particularly noteworthy for individuals from outside the UK to recognise the

significance of learning English, as it not only facilitates their integration into society but also empowers them to navigate educational opportunities effectively. Mastery of the English language opens avenues for enhanced communication, access to educational resources, and ultimately contributes to the empowerment and self-sufficiency of survivors in their journey towards recovery and integration.

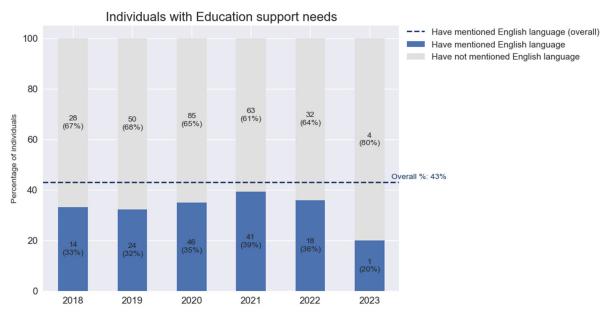


Figure 13 Individuals with education needs mentioning things related to the English language

There were some differences when looking at education needs by demographic variables:

- Education needs were higher for **women** than for **men** (51% and 42% of their population respectively).
- There were considerable differences by **immigration status** with those who are EU settled and refugees showing high education needs in their population (71% and 63% respectively). By contrast, asylum seekers showed substantially lower education needs (29% of their population).
- Significant differences also appear **by city**, notably with service users in London showing high education needs (63%), in contrast to Bolton and Manchester where the need was much lower (22% and 40% respectively).
- We observed considerable differences by **nationality**. Notably, Eritrean, Sudanese and Pakistani nationals stood out with high education needs (68%, 65% and 56% of their population respectively), in contrast Vietnamese, British and Chinese nationals (40%, 32% and 29% respectively).

"Client is interested in attending college again to study ESOL." (January 2019, Gender: Female, City: Salford)

Employment Needs

In total, 293 individuals, 55% of the entire population under consideration, engaged in discussions related to employment support needs. The monthly data indicates a general upward trend from 2018 to 2020, with the average number of individuals discussing employment needs increasing from 15 to 29. However, a subsequent decline was observed, reaching an average of 11 individuals per month in 2022, punctuated by occasional increases.

Despite fluctuations in absolute terms, the percentage of individuals discussing employment needs remained relatively stable, fluctuating between 9% and 16%, with an average of 12% over the observed period. The years 2020 and 2021 emerged as peaks, with 145 and 131 individuals respectively engaging in discussions about employment needs. These findings demonstrate the dynamic nature of employment support discussions within the dataset, highlighting both temporal trends and the enduring importance of addressing the diverse employment-related challenges faced by individuals within the sample group.

When looking at employment needs by demographic variables, they were generally similar by gender but showed some differences:

- By **immigration status**, those who are EU settled and have limited leave to remain (LLR) had especially high employment needs (86% and 79% of their population), whereas for asylum seekers it was much lower (27%).
- By **city**, London and Preston showed high education needs (67% and 64% respectively) whereas Manchester and Bolton on the lower end (42% and 35% respectively).
- By **nationality**, among the larger groups, Eritrean and Nigerian nationals had higher employment needs (79% and 67% of their population respectively), whereas Albanian, Iranian and Chinese nationals showed lower needs (44%, 33% and 18% respectively).

'NAME said to inform the job centre on her new address and ask them about the letter or to go to the old house to see if there is any post for her there.' (October 2020, Gender: Female, City: Bury)

When looking at employment needs and financial needs together, we can see some clear contrast.

Financial needs tended to be higher than employment needs, with almost twice as many individuals requiring financial support compared to those requiring employment support (293 and 470 individuals respectively). Although discussions related to these needs showed an upward trend between 2018 and 2020, there was a notable decrease for financial needs in the following years. In contrast, employment needs remained stable.

When delving deeper into the comparison by demographic variables, the analysis indicated a relatively consistent percentage across various demographic groups in relation to financial needs. By contrast, employment needs were more varied between demographic groups.

- For instance, although discussions around financial needs varied by immigration status (range between 77% and 100%), there was a striking disparity when it came to employment needs. It ranged from 27% for asylum seekers to 79% and 89% for those with limited leave to remain (LLR) and EU settled individuals.
- The same pattern emerges when looking at the larger cities. For instance, most of the cities showed between 83% to 90% of their population discussing financial needs. For employment needs, this ranged between 44% and 61%.
- For nationality groups, among the larger samples, the range of individuals with financial needs spanned between 85% and 92% of their population for the majority of the nationalities. The range was more dispersed for those with employment needs between 44% and 64% for most of the nationalities.
- The only consistency was by gender where the distribution between men and women was the same in terms of both financial and employment needs.

While exploring the differences between employment and financial needs, such as urgency or the impact of addressing those needs, it is important to note that our existing NLP models are currently designed to identify needs rather than qualify them. Further development and refinement would be needed to create a model capable of evaluating and qualifying needs based on factors such as urgency or impact.

Positive feedback

An exploration of positive feedback from the clients towards support workers within the dataset reveals the following patterns. In total, 371 individuals, comprising 69% of the entire population under consideration, shared sentiments of appreciation. The monthly data portrays a notable trajectory, commencing with an average of 25 users expressing appreciation each month in 2018. The number increased, reaching its peak in July 2020, with 122 individuals (53% of the sample) conveying their appreciation. However, a subsequent decline ensued, with the monthly average dropping from 44 users in 2021 to nine users in 2022.

Despite fluctuations in absolute terms, the percentage of individuals giving positive feedback remained dynamic, oscillating between 11% and 29%, with an average of 23% over the observed period. The years 2020 and 2021 emerged as peak periods, witnessing the highest numbers of individuals — 273 and 244, respectively — giving positive feedback about support workers. These findings underscore the noteworthy impact of support workers and the evolving nature of positive feedback within the dataset, providing valuable insights into the dynamics of client-appreciation relationships over time.

Positive feedback varied by demographic groups:

- They tended to be slightly lower for **men** compared to **women** (61% and 74% of their population respectively).
- There was some large variation by **immigration status**. On the higher end, EU presettled and EU settled citizens showed more expression of gratitude (88% and 86% respectively). On the other hand, asylum seekers expressed their gratitude less often (51% of their population).
- By **city**, the figures remained high with most **cities**, with 96% of service users in London expressing their appreciation. It was much lower in some cities, notably Preston (57%) and Salford 56%).
- In terms of nationality groups, figures stayed consistently high among the larger nationality groups except for the Eritrean (63%), Chinese (53%) and British (45%) nationality groups.

'Client was very thankful for the support and the call.' (June 2020, Gender: Female, City: Leyland)

Mental Health Needs

Within the dataset, mental health support needs emerge as a significant focus, with a total of 442 individuals - comprising 83% of the entire population - engaging in discussions on this crucial aspect. This makes mental health the third most mentioned support need over the entire observed period.

A temporal analysis of the monthly data unveils a gradual upward trajectory in the number of individuals discussing mental health needs, commencing with seven service users (7% of the sample) in March 2018 and peaking at 131 users in July 2020, representing a substantial 55% of the sample during that period. However, there was a subsequent decline, with 36 users (18%) mentioning mental health needs in April 2022, punctuated by occasional increases.

Notably, the years 2020 and 2021 stand out as having the highest numbers of individuals engaging in discussions about mental health needs, with 254 and 262 individuals, respectively.

'DATE NAME received phone call back from NAME at SLAM trust regarding client's MH support.' (August 2020, Gender: Female, City: London)

'On next call: ask client if he would like to move to reactive support' (August 2021, Gender: Male, City: Manchester)

The terms 'mental health', 'counselling', 'support' and 'GP' were the most used words in case notes about mental health needs. Below, we present a word cloud generated from the case notes, where the size of each word corresponds to the frequency of its occurrence.



Word clouds from case notes dealing with mental health needs

Recognising the persistent and multi-faceted challenges associated with mental health among victims of MSHT, we delved deeper into the dataset to gain a nuanced understanding of their evolving needs. We found that, of the 442 individuals with mental health needs, 199 also mentioned specific mental health conditions; of those there were 128 women, 68 men and three couples. This represents almost half of the sample - 45% overall, 43% of women, 49% of men and half of couples with mental health needs. The split by mental health condition tends to be similar by gender:

- Anxiety: 29% overall

- PTSD, trauma: 13% overall

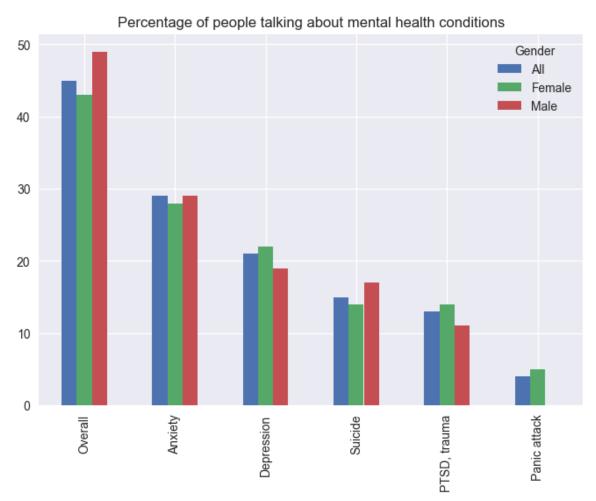
However, the figures vary for:

Depression: 22% of women, 19% of men and half of couples. This mirrors the gender trend in the population. As reported by Johns Hopkins Medicine, "women are about twice as likely to be diagnosed with depression as men, with depression being the leading cause of disease burden among women." It is important to note that while women are diagnosed with depression more often, this does not mean that men are immune to depression. Men may experience depression differently, and

³⁸ Johns Hopkins Medicine, available at https://www.hopkinsmedicine.org/health/conditions-and-diseases/depression-his-versus-

hers#:~:text=Researchers%20have%20known%20for%20years,of%20disease%20burden%20among%20women

- their symptoms might manifest in ways that are not traditionally associated with the disorder, such as anger or irritability.
- Suicide: 14% of women, 17% of men and 33% of couples. Once again this mirrors trends in the general population, where suicide and thoughts of it are higher amongst males.³⁹
- Panic attack 5% of women, 17% of couples. Men did not talk about panic attacks.

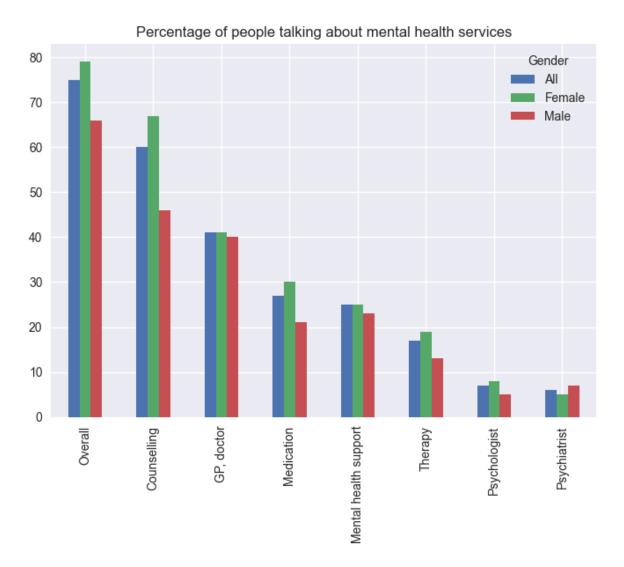


Percentage of individuals with mental health needs, talking about mental health conditions, by theme

Individuals talking about mental health services: Of the 442 individuals discussing mental health needs, 332 people (75%) also talked about mental health services. Women tended to mention them more – 234 women (79%), 93 men (66%) and five couples (83%). Counselling services is the most mentioned theme: 67% of women mentioned them, 46% of men. 41% of women and 40% of men talked about GPs and doctors. Medication, mental health support and therapy are often mentioned - by 27%, 25% and 17% of those with

³⁹ Murphy, G. E. (1998). Why women are less likely than men to commit suicide. *Comprehensive psychiatry*, 39(4), 165-175.

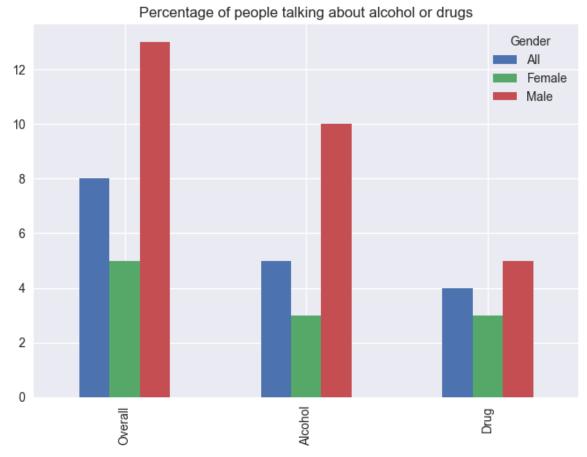
mental health needs. The discussions about psychologists or psychiatrists are less common and were only mentioned by 7% and 6% of the sample respectively.



Percentage of individuals with mental health needs, talking about mental health services, by theme

Individuals talking about alcohol or drugs: While mental health emerged as a predominant concern amongst the dataset, discussions around alcohol or drugs were comparatively fewer. Among the 442 individuals with mental health needs, 34 individuals—constituting 8% of the sample—also engaged in discussions related to alcohol or drugs. Within this subset, there were notable demographic variations, with 14 women (5%), 18 men (13%), and two couples (33%) discussing these themes in conjunction with their mental health needs.

Looking at the overall dataset, alcohol was a more frequently discussed topic than drugs. Specifically, alcohol was mentioned in 5% of the discussions, while drugs were discussed in 4%.



Percentage of individuals with mental health needs, talking about alcohol or drug, by theme

As to mental health split by demographic variables, we found the following high-level insights (please note it is possible to delve deeper; however, for the purposes of this report we present the most important results:

- Slightly more women than men discussed mental health needs (296 women 84% of their population; 140 men 79% of their population).
- By **immigration status**, British citizens, refugees and those with EU pre-settled status presented the most discussions relating to mental health needs (91%, 90% and 88% of their population respectively). By contrast those seeking asylum and those with limited leave to remain showed fewer discussions related to mental health needs (76% and 62% of their population).
- Among the larger **cities**, people living in Rochdale, Bury, London and Bolton discussed mental health most frequently (87-93% of their population). Salford and Oldham showed lower percentages compared to the average of 83% (78% and 71% of their population respectively).
- There was some variation among the larger **nationality** groups, ranging from 71% of both Sudanese and Ethiopian nationals discussing mental health needs to between 88% and 94% of people of Chinese, Eritrean, Iranian and Pakistani nationality discussing this need.
- More women (67%, 298 of the sample) than men discussed mental health needs.

- Albanians were the most common nationality discussing mental health needs (26%).
- Those with refugee status (37%) and claiming asylum (33%) were the highest group discussing these needs. By comparison, only 5% of British citizens discussed them.
- Persons in living in Liverpool discussed mental health most frequently (16% of the sample population).

Physical Health Needs

The NLP examination of the dataset reveals the prominence of discussions surrounding physical health support needs, with a total of 402 individuals—constituting 75% of the entire population—engaging in conversations about this vital aspect. Again, both 2020 and 2021 showed the highest number of individuals discussing physical health needs (272 and 242 individuals respectively). In 2020, notes from 22 individuals were associated with COVID-19 guidelines (e.g. the support worker sent COVID-19 guidelines or discussed them with the service user).

The monthly analysis illustrates a discernible trend in the number of individuals discussing physical health needs. Commencing with 10 individuals in March 2018, representing 19% of the sample, there was a gradual increase, culminating in a peak of 131 individuals in March 2020, accounting for a significant 71% of the sample during that period. Subsequently, there was a gradual decline, reaching 33 individuals (17%) in April 2022. The percentage of individuals engaging in discussions about physical health support needs fluctuated between 19% and 32% over the observed period, with an average of 26% individuals per month.

Although the volume of discussions around physical health needs was similar for men and women, there were some slight differences when examining other large demographic groups:

- It was higher for EU/EEA nationals (no additional status) (91%), EU settled and with limited leave to remain (LLR) (86% for both), and those with refugee status (85%).
 By contrast, it was lower for those with indefinite leave to remain (ILR) (62%) and asylum seekers (61%).
- Physical needs were higher in some **cities**, especially in London and Salford (89% for both) and much lower for some others, including Sheffield (67%), Manchester (60%) and Preston (57%).
- In terms of **nationality**, physical needs were higher notably for Pakistani (89%) and Vietnamese nationals (87%) and lower for Albanian (69%), British (68%) and Eritrean nationals (58%).

'NAME completed Covid-19 Risk Assessment for client, client has no medical conditions that increase his c19 risk' (July 2020, Gender: Male, City: Houghton Le Spring)

Safety Needs

Ensuring the safety and protection of survivors of modern slavery is of paramount importance in their journey towards recovery and independence. This section delves into the critical aspects of safeguarding, including re-trafficking - a persistent threat faced by individuals who have already endured exploitation. In summary, discussions around safety support needs involved a total of 225 individuals, representing 42% of the entire population under consideration. The monthly analysis depicted a general upward trend, starting with an average of six service users per month and peaking at 37 users (14% of the sample) in October 2020, followed by a steady decline to an average of four users per month in 2022. The percentage of individuals mentioning safety needs showed modest change, typically ranging between 5-10% of the sample per month, with an average of 8%. The year 2020 stood out, with the highest number of individuals discussing safety needs (126 individuals). Over the observed period, the percentage of individuals engaging in discussions about safety needs varied, initially increasing from 23% in 2018 to 44% in 2019, and progressively declining to 14% in 2023.

Discussions related to safety needs remained consistent by gender but showed some differences when examining other large demographic groups:

- By immigration status: they were particularly high for those who are EU settled or EU/EEA (no additional status) (79% and 73% of their population respectively) and British nationals (59%). By contrast only 28% of asylum seekers discussed safety needs.
- By **city**, people in Sheffield and Liverpool had more discussions around safety needs (54% and 52% of their population respectively). In contrast, service users in Rochdale (29%), Bury (27%), Salford (22%), Preston (21%) and Oldham (14%) had fewer discussions around safety needs.
- In terms of **nationalities**, there were more safety discussions for British (59%), Pakistani and Vietnamese nationals (56% for both) and fewer discussions for Ethiopian (33%), Sudanese (29%), Albanian (28%) and Chinese nationals (12%).

'Client told NAME that she has been suffering verbal abuse from her partner for a long time.' (February 2019, Gender: Female, City: Hyde)

'NAME is not able to approach the Egyptian Embassy for support with his Travel Document or ID documents as he does not want them to be aware of his location in the ADDRESS, for his safety and the safety of his family.' (July 2021, Gender: Male, City: Widnes)

Social Integration Needs

The NLP analysis delved into the pressing issue of social integration needs amongst survivors of modern slavery, revealing significant insights. A total of 291 individuals,

constituting 54% of the entire population, engaged in discussions about the challenges associated with social integration. Despite considerable variation in the monthly numbers, there was a discernible upward trend, starting with an average of five individuals per month in 2018 and reaching 26 in 2020. The momentum then slowed, dropping to 17 users on average in 2021, six in 2022, and three in 2023. The monthly percentage of individuals mentioning social integration needs remained largely consistent, fluctuating between 5-10% over the observed period, with an average of 7%. Notably, 2020 marked a peak in discussions about social integration needs, with 153 individuals, more than double the count from the previous year, underscoring the profound challenges and evolving nature of survivors' needs in the realm of social integration.

Of the 291 people individuals who discussed social integration support needs, 168 also mentioned family and friends (58% of the sample). Five also engaged in discussions pertaining to returning to their home country (2% of the sample).

The number of women and men who discussed integration needs was at a comparable level, but there is some variation when looking at other large demographic variables:

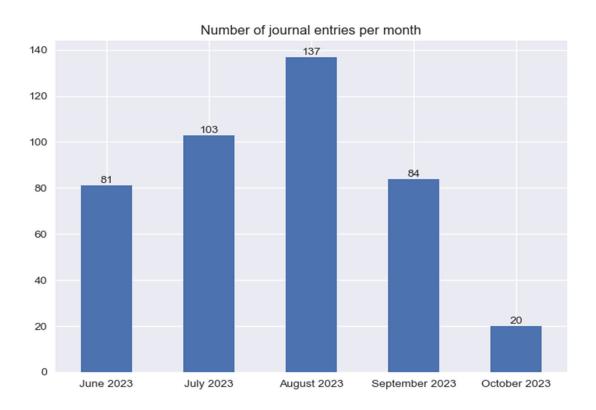
- They tended to be much higher for those who are EU settled (86% of their population), with limited leave to remain (LLR) (79%), with indefinite leave to remain (ILR) (69%) and are EU pre-settled (62%). It was much lower for asylum seekers (44%).
- They varied when looking at cities, with 79% of service users in Preston discussing needs related to social integration. This in contrast with cities like Oldham, Bury and Salford where there were fewer social integration discussions (38%, 36% and 33% respectively).
- Similarly, there were considerable differences by **nationality**, notably with Pakistani and Eritrean nationals showing more social integration needs (83% and 79% of their population respectively), and British, Nigerian and Albanian nationals displaying lower social integration needs (45%, 43% and 42% respectively).

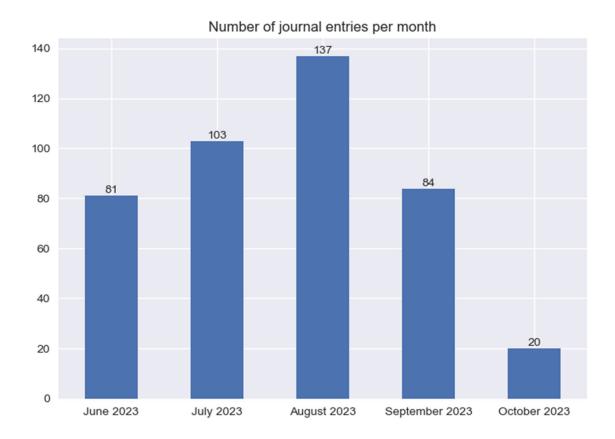
'He has become more distant and says he wants freedom and to have his own house.' (March 2019, Gender: Female, City: Newsham Park)

Survivor Needs Insights Identified Through the MeL App

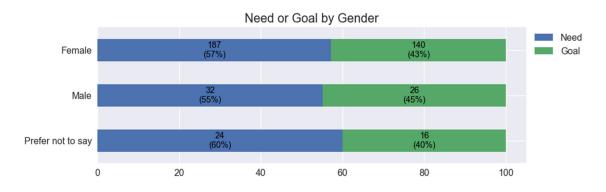
The second phase of evaluating the effectiveness of technology in comprehending survivor needs involved the deployment of the MeL app, developed by FiftyEight, and the subsequent analysis of what the survivors had recorded. This section provides a summary of the key findings.

The dataset analysed comprised 425 journal entries with note content from 46 service users, spanning the period from **19 June 2023 to 13 October 2023**. App usage was initially high, with 81 journal entries submitted in June 2023, and peaking at 137 entries in August 2023. The number of journal entries per user ranged from one to 66, with the majority submitting between three to 12 journal entries. Half of users submitted at least eight entries. This was a higher number of entries than the researchers anticipated, indicating the value for survivors in having access to a journaling platform (further feedback is contained in the following section).





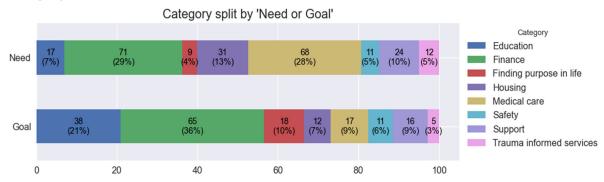
Participants were asked to determine the nature of each journal entry. More than half of the entries were associated with needs (57%), while 43% related to goals. The journal entry classification was similar when split by gender.



'Night-heat has been disturbing my sleep lately so will need to speak with my GP if it has anything to do with my prescriptions.' – Need: Medical Care

'Sometimes I feel so bad that I have never had the chance to celebrate my daughter birthday hope this dream will come true very soon' – Goal: Finding Purpose in Life

Category

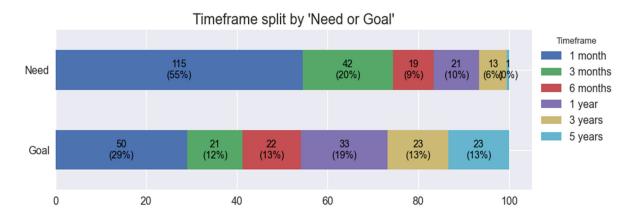


When asked to categorise the type of journal entry, 'Finance' and 'Medical care' emerged as the most selected needs, accounting for 29% and 28%, respectively. In terms of goals, more than a third (36%) chose 'Finance' goals, while a fifth (21%) selected 'Education' goals.

These findings suggest that survivors recognise financial stability and educational attainment as primary avenues for moving beyond their experiences of exploitation.

This indicated survivors' appetite for leaving their exploitation behind them and wanting to look out for change and opportunities. This aligns with prior research on survivors' goals post exploitation. Viergever *et al.* noted that their research in the Netherlands showed that "[p]articipants felt a strong need to turn over a new leaf in life, leaving negative experiences of the past behind and moving towards a life with a job, a family and friends".⁴⁰

Timeframe



In relation to timeframe for achievement of their needs or goals, over half of journal entries pertaining to **needs** were given a one-month timeframe (55%). A further 20% were within three months and 9% within six months. Only 16% of entries had a timeframe of one-three years, and one entry was within five years. The large majority of medical care needs had a

⁴⁰ Viergever, R. F., Thorogood, N., van Driel, T., Wolf, J. R., & Durand, M. A. (2019). The recovery experience of people who were sex trafficked: the thwarted journey towards goal pursuit. *BMC international health and human rights*, *19*, 1-20.

one-month timeframe (81%), demonstrating the urgency of the matter. Practices recommended by others⁴¹ in the past are that health services for trafficked persons should:

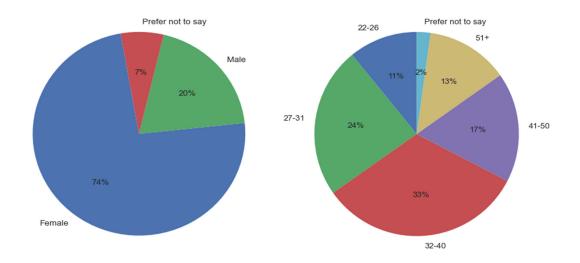
- be comprehensive
- be integrated and/or coordinated
- allow for continuity of service provision
- be population-specific ("categorical")
- provide individually tailored care
- provide culturally appropriate care
- be trauma-informed
- offer case management

Timeframes for **goals** were more varied:

- Education goals tended to have a one-year or three-year timeframe (25% and 28% of the sample respectively).
- Finance goals were both short-term (37% selected one month) or long-term (24% selected five years).
- Finding purpose in life was generally a longer-term goal 44% chose one year and 19% chose three years.
- Medical care goals were mostly pressing 65% with a one-month timeframe.
- Support goals were most often set within a six-month period (40% of the sample).
- Housing, safety and trauma-informed services goals varied in their timeframes.

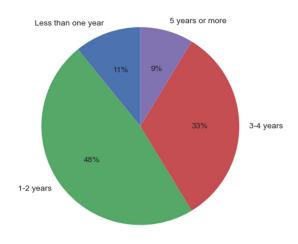
⁴¹ Viergever, R. F. (2016). *Adapting to survive: facilitating recovery after human trafficking* (Doctoral dissertation, London School of Hygiene & Tropical Medicine).

The characteristics of journal users were as follows with respect to gender, age and time since leaving the NRM:



Gender of participants





Time since leaving the NRM

Journal questions

In addition to recording their own thoughts and feelings, users were sent a list of push questions which were determined in our co-design sessions and also took into account The Modern Slavery Core Outcome Set project (MSCOS) framework⁴². Responses to our questions, which were staged so as not to overwhelm the users, were provided by 25 persons between 9-14 October 2023.

Compensation: On the whole 68% of persons were not aware that they might be entitled to compensation, while 84% stated they did not know how to get help and advice when it came to making a compensation claim. Only one person stated that had made or were in the process of making a compensation claim. This highlights that survivors are not benefiting from the right to demand compensation from the perpetrator of the criminal act for material and non-material damages, a right that is enshrined in international and national law. It should be noted that the trend found in this study is part of a broader one in Europe: "In spite of the internationally recognized right to compensation, the number of trafficked persons in Europe having actually received any reimbursement is very low". 43 Hindrances to claiming compensation include a lack of information and support.

Essential needs: A worrying 42% of persons said that they did not have enough money or other means to meet their essential needs including food, shelter, heating and medication. Users also elaborated on their needs, highlighting a general lack of finances, lack of savings and worries about getting into debt. The latter is particularly worrying given what we know about debt as a push factor into modern slavery. This highlights the importance of providing services that include help with getting subsidies and social benefits, help with filling out papers and forms for benefits, advice on how to get by with little money, and help with debts.

Employment: 18 persons (75%) had the right to work in the UK, with 96% of the total (23 persons) saying they would like to have a job. 50% (11 persons) said they had been able to find a job and 50% said they had not. When we asked about the experience of looking for a job, the following themes emerged via the free text option:

- No experience looking for a job (x6)
- Positive experience (x3)
- Negative or stressful experience (x3)
- Cannot work due to health issue (x2)
- No legal right to work (x2)

⁴² Paphitis, S., & Jannesari, S., (2023), 'Modern Slavery Core Outcome Set Project Report' available at: https://www.nottingham.ac.uk/research/beacons-of-excellence/rights-lab/resources/reports-and-briefings/2023/february/modern-slavery-core-outcome-set-project-report.pdf

⁴³Cusveller, J., & Kleemans, E. (2018). Fair compensation for victims of human trafficking? A case study of the Dutch injured party claim. International Review of Victimology, 24(3), 297-311, p.297

- Overseas experience is not valued so cannot get job, and overqualified for junior role (x1)
- Received job search support, then got a job (x1)
- Recently granted right to work (x1)
- Long process, finally got a job (x1)
- Currently looking (x1)
- 'Online' (x1)

We also asked "Can you share any difficulties that you have encountered while searching for a job? [FREE TEXT]" Here the themes were:

- None (x7)
- No legal right to work (x3)
- Cannot work due to health issues(x2)
- Experience required (x3)
- Hard work (x1)
- Going to interviews (x1)
- CV (x1)
- Criminal record as I was trafficked⁴⁴ (x1)
- Not currently looking (x1)
- Find the right job (x1)
- Financial problems (x1)

50% persons of persons stated they received guidance in job search, from:

- Job Centre (x4)
- Causeway (x1)
- City Hearts (x1)
- Breaking Barriers (x1)
- I have checked on the website and applied (x1)
- Nobody wants [to help] (x1)

⁴⁴ People who have been trafficked often find themselves coerced into criminal activities such as drug cultivation, shoplifting, and fraud. However, regional and national laws, including the Modern Slavery Act 2015 S.45, recognise the victimization of these individuals and aim to protect them from punitive measures for crimes they were compelled to commit as a result of being trafficked. Such legal provisions acknowledge the need for a compassionate approach that prioritises the rehabilitation and support of survivors rather than subjecting them to further punishment for acts committed under duress.

We note that further efforts, including through improved policy, need to be made to help survivors enter the job market. Having employment, as well as providing financial stability also improves mental wellbeing. Studies show that gaining employment can improve mental health, even for people with serious mental illnesses. In a past project conducted by Trilateral Research and Causeway (unpublished as it was commissioned by the Home Office for operational purposes), participants were asked about gaining access to employment; positive aspects of having a job mentioned by survivors included: providing a distraction from thinking about their trauma, simply having a reason to leave the house, meeting new people, becoming independent, integrating within society more, improving their language skills and learning about the country's culture.

Social needs: 72% of persons stated that they felt the need to keep in contact with family, friends or support networks. 50% stated that they connected with others frequently. We also asked: "If you would like to have contact with your family, friends, or support networks but are not able to, what are the main barriers? [FREE TEXT]" Here the themes were:

- Don't want to contact them (x4)
- Network, connection problem (x4)
- Difficult to travel (x2)
- Phone credit (x2)
- No barrier (x2)
- They are unavailable (x2)
- Don't feel confident contacting them (x1)
- Loneliness (x1)
- Mental health (x1)
- Financial issues (x1)
- Already with family (x1)
- No contact with them (x1)
- Stress (x1)
- Don't have their contact details (x1)
- Feel uncomfortable (x1)
- Would like to contact them (x1)

⁴⁵ Drake, R. E., & Wallach, M. A. (2020). Employment is a critical mental health intervention. Epidemiology and psychiatric sciences, 29, e178. https://doi.org/10.1017/S2045796020000906

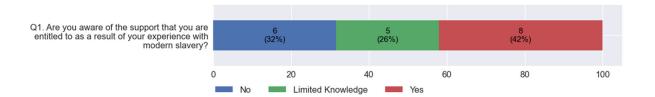
⁴⁶ Drake, R. E., & Wallach, M. A. (2020). Employment is a critical mental health intervention. Epidemiology and psychiatric sciences, 29, e178. https://doi.org/10.1017/S2045796020000906

48% of users stated that they found it very hard to reintegrate into society. 72% of applicable persons said that they did not want to return to their home country. Seven persons stated they would like to go back but cannot, and some provided reasons why:

- Yes, but I cannot fear for life (x2)
- Yes, but I cannot scared to come back to home country (x1)
- Yes, but I cannot feel I belong here in the UK (x1)

Housing needs: 16 (67%) stated that they felt their housing to be safe and suitable to their needs. This is an important and positive finding, as access to safe housing makes up part of the psychological needs as understood by self-determination theories. The same number of persons stated that they lived in state-provided housing. 11 persons (50%) stated that they paid their rent, themselves, while the other 50% stated that someone else paid it.

Support from organisations and authorities: We asked a series of questions with regard to the support that survivors receive. This question was prompted by previous research that Trilateral Research and Causeway had done for the UK Home Office, which revealed that most people were unaware where their support came from. See below for the breakdown of answers:



We then asked "if you answered 'yes' or with 'limited knowledge', please share which types of support you are aware of. [FREE TEXT]." Themes were:

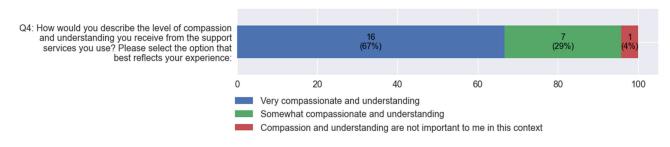
- Causeway (x3)
- City Hearts (x3)47
- Citizens Advice (x2)
- No help (x1)
- Mental wellbeing support (x1)
- Accommodation, dedicated support worker, £5 a day, and GP practice accessibility. (x1)
- Police (x1)
- Modern slavery support (x1)

⁴⁷ Causeway used to be called City Hearts.

- Refugee support (x1)
- Victim support and other organisations (x1)
- Support about own situation (x1)
- From NRM and helpline (x1)
- Help with house and school (x1)
- No help (x1)

We also asked "When you need help as a survivor of modern slavery, which organization or individual do you reach out to for support? [FREE TEXT]". Here the themes were

- Causeway (x8)
- City Hearts (x6)48
- Don't know (x3)
- NRM (x2)
- Refugee Action (x1)
- Local church (x1)
- Salvation Army (x1)
- George Trust (x1)
- Samaritans (x1)
- Bright future (x1)
- Local police (x1)
- Sahir (x1)
- None (x1)



Noting that survivors are the "end users" of modern slavery services, we asked the app users: "If you had the chance to provide training to government authorities about modern slavery and human trafficking, what topics would you include? How do you think

⁴⁸ Causeway used to be called City Hearts.

their knowledge and practices could be improved? [FREE TEXT]". The themes of the answers were:

- People-centred approach:
 - How to talk to victims make sure the person is comfortable and reassure them (x2)
 - Listen to female victims and not judge or victimise them (x2)
 - More empathy (x1)
 - Not believing real victims (x1)
 - Understanding people and their concerns (x1)
- Improve staff skills and knowledge:
 - Better understanding of trafficking, how to manage it and how to help victims (x1)
 - Better understanding of trafficking/modern slavery (x2)
 - o Better understanding of different immigration statuses (x1)
 - Better understanding of child labour, child abuse, forced marriage (x1)
 - First aid training, more time to service users (x1)
- Mental health
 - Long term mental health (x1)
 - Mental health problems (x1)
- 'Erase the modern slavery in Africa' (x1)
- 'The significance of victim recognition, protection, and assistance' (x1)
- Faster decision making, make sure to investigate case based on all information provided (x1)
- More support (x1)

Re-trafficking: The question posed - 'Do you feel safe from the person who exploited you?' – received 12 responses of 'Yes', one of 'Somewhat' and 11 answered 'No'.

English language: 100% of users stated that they could access free opportunities to learn English (when applicable to their situation).

Engagement with authorities: On the whole, most people were satisfied with how they were treated by authorities such as police, immigration or wider government. When asked to elaborate on the positive answer, the themes were:

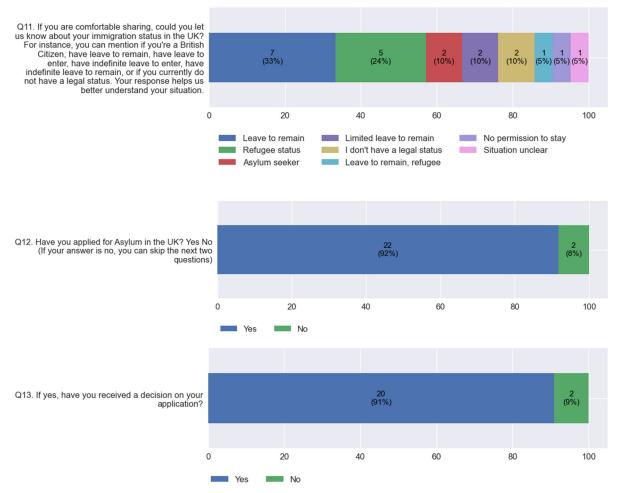
- Equal rights
- Didn't trust I could receive help before, now feel different
- Fair treatment, felt Home Office believed me
- Treated with respect and reassurance
- No answer about case

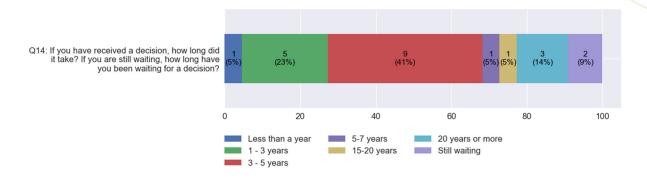
- Helped me to be in a safe place
- Happy and comfortable, able to trust them
- Felt safe and happy when police intervened
- Polite people, humble and understandable

When asked to elaborate on the negative answer the themes were:

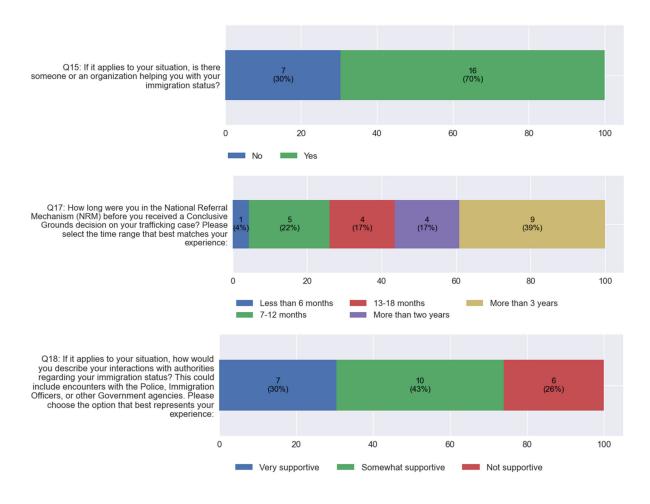
- They didn't believe me
- Felt victimised
- One of the worst experiences in my life.
- Have done multiple interviews, applied for work permit, contacted an organisation to get help but have heard nothing back

Residency status: We also asked a series of questions with regard to residency, and the insights are displayed below. These are provided as graphs as the range of answers varied, which lends itself more to a visual presentation.





It is acknowledged that the proportion of people for whom it took 15+ years is 19%, is much higher than the proportion for whom it took 15+ years in the general asylum seeker population. The researchers on this project are unsure as to why this group might be overrepresented in the research results, this could be a further area of a dedicated research project.



Medical needs: 100% of app users said they could access medical support as they required, and with regard to the medical support they currently need their answers focused on:

- Mental health (x7)
- Dental (x4)
- None (x3)
- Sexual health
- Physical health
- Gynaecology

Lastly, we asked participants: "If you feel comfortable sharing, can you let us know if there are any medical needs for which you are unable to access support? [FREE TEXT]". Here the themes were:

- None (x9)
- Not eligible for disability cost of living
- Dental
- Results from scan and getting an appointment
- IVF
- Buying medicine

Literature is rich in demonstrating that survivors "suffer from physical ailments and posttraumatic stress disorder, and they are at high risk of developing comorbid disorders such as depression and addiction disorders". 49 Therefore, the provision of medical services should be considered as a priority in the assistance programme and should address both physical and mental wellbeing. Looking at mental health in particular, to improve their mental wellbeing, all survivors should have access to quick, adequate, and long-term mental health support/counselling. Offering regular mental health drop-in sessions with a specialist at specific charities and safe houses should be considered. Survivors should be matched with a medical professional with experience in working with people who suffer from severe trauma and PTSD. Some survivors may also appreciate professionals with a similar background (ethnicity, gender, nationality). To tackle feelings of isolation, loneliness and boredom, survivors should have access to a wide range of social activities, including free access to sport facilities and art programmes (such as art classes and the gyms). Survivors should be provided with guidance on how and where to access these opportunities, including volunteering opportunities. This will promote integration into the community and society. The forming of survivor support groups should also be encouraged and facilitated. In addition, free or reduced fares for public transport to facilitate travel/commuting should be considered.

⁴⁹ Marburger, K., & Pickover, S. (2020). A Comprehensive Perspective on Treating Victims of Human Trafficking. Professional Counselor, 10(1), 13-24, p.13

The Value of Survivor Participation in the Creation of Data

Given the rapid evolution of technology and the widespread accessibility of smartphone technology, which is increasingly being integrated into support services, we aimed to address the following question: Does smartphone technology serve as a viable platform for survivors to contribute their lived experiences and expertise in shaping MSHT services authentically?

Ensuring the direct involvement of survivors in data generation was a priority for this project. As discussed earlier, we determined that the most suitable avenue for this engagement was through a dedicated app. Simultaneously, we aimed to evaluate the appropriateness of this platform for survivors to articulate their needs, and to assess its potential role in modern slavery support services.

This section represents the culmination of interviews conducted by Causeway with survivors at the conclusion of Project RESTART. Our analysis delves into the responses obtained from interview questions, providing insights into the potential benefits and drawbacks of utilising smartphone technology in the context of data creation and modern slavery support provision.

Including people with lived experience can both improve the ability of AI systems to gain insights into their support needs and benefit survivors directly

The LEAP's suggestions in the early stages of the project proved crucial in adapting the MeL app into a resource that was both accessible and beneficial for survivors. The participation of survivors as MeL app users provided the research team with insights to build a more authentic and broad understanding of survivor needs which encompassed goals, and an ability to examine progress and barriers related to these in real time. Moreover, survivors felt a tangible benefit to participating, not just in terms of financial compensation and upskilling, but in using the platform, which allowed them to have their voices heard:

I kept filling in the app even when I felt a bit all over the place and found it hard to always remember. But I still did it because I wanted people to know and understand my experiences so other people in the future can be better supported. (RP8)

This kind of research will help people understand our feelings [as] individuals. This will help the people doing the research to know what next step to do or how to help other people with who go through all this trafficking. It's nice to be included in this, to feel like you are being invested in. (RP4)

All app end users interviewed expressed interest in participating in future research projects.

While app users recognised the value of having a private space to record their thoughts, needs and goals, they also suggested that having support workers able to access selected parts of the app, and provide input, would give an app added utility. This could range from more personalised signposting materials (including leisure activities and volunteer and employment opportunities), Al-automated responses to their specific needs, a messaging function or simply words of encouragement as users work towards their goals. The benefits of such functions, and use of the app more generally, would be particularly pronounced for those in the early stages of being identified as a survivor and navigating the NRM:

Starting from the beginning of the process when someone finds you after you have escaped an app could tell you what might happen in the future, what different things you might need at different points. That might be to do with NRM, or NHS, or housing. Not all people are staying in England, some people return to their countries voluntary or otherwise. But there is not much information about how to return home, or what possibilities there are in different countries. (RP9)

Tools can be designed to provide therapeutic benefits

App users emphasised the positive therapeutic benefit of MeL's journaling function for emotional processing in a context where access to sustained, formal mental health and wellbeing services is limited. It has been recognised that processing emotions relating to stress points through journaling can help recognise and navigate key issues and barriers people face. Findings from end-of-project interviews suggest that such approaches in the context of recovery following an experience of modern slavery can provide similar benefits. The MeL app significantly contributed to participants' emotional processing and wellbeing throughout the usage period:

The app can be a therapeutic thing for people. Just going there and writing your thoughts and your goals, it can be a relief for you. Survivors go through a lot of trauma...and I understand better what I need through writing. (RP2)

I found it very helpful. Sometimes when you feel like there's no one to talk to and you go to this app and you just put down your feeling, it's therapeutic. Even when I go in and I put that I wasn't feeling well today, it's like talking to a counsellor. (RP3)

⁵⁰ Ullrich, P. M., and Lutgendorf, S. K., Journaling about stressful events: effects of cognitive processing and emotional expression., Annals of Behavioural Medicine, Vol. 24, PP. 224-250.

It was like a diary for me, stressing my feelings. Let's say if I was angry or if I was happy, I used goals to benefit myself, to save myself. To look back and say I've been strong enough on those days, I used that to motivate myself. (RP23)

Tools can provide consistency of support for survivors in a resource-limited support environment

Whilst most participants had already exited the NRM and had since moved in and out of alternative support systems, the functions of the MeL app could in some cases replicate more formal types of support:

In the past we used to see [our caseworkers] face to face, share our thoughts with them. But when you get an [NRM] decision you don't see them anymore, or only a call once a week. But with the app you still have somewhere to put down your thoughts. I have been with Causeway a very long time, and when I left them there was something empty in myself. So it was nice to have somewhere to share it again. Sometimes things happen, which you don't like to share with your friends and family. For me, it was hard not to have someone to talk to. I just needed to write somewhere, even if no one replied. (RP7)

Some participants went further, saying that using the app gave them more control over where and when to address mental health challenges, and spared them the distress that might have accompanied expressing their thoughts verbally to another person:

It's not good for you to keep on repeating the trauma and everything to people before they can support you. But when it's just you and your phone no one is going to ask you what happened...In a situation where you feel like you're writing too much and you keep remembering all this stuff. You can stop it. You can pause it. You can have a break. You can come to it whenever you feel like. (RP5)

Having access to the app as a consistent resource while navigating different support systems was recognised as an opportunity to make a more permanent record of their needs and goals and avoid potentially triggering repetition to different caseworkers and organisations:

Caseworkers change over time, so it would be nice to have a constant, where you don't have to repeat your story or goals as it is all there, recorded. (RP8)

Tools can provide a platform for survivors to plan independent recovery journeys

Reflecting the insights and recommendations of the LEAP, participants emphasised the value of being able to record both needs and goals. They found this feature helpful in planning and taking independent action towards their long-term recovery:

[Writing my goals on the app] made me think: if I would like to do this, how I will reach that point? I'm going to take whatever is available that takes me there. The

journaling helped me to look back at the steps that would take me to that point. Or sometimes it made me realise it was an unrealistic goal, so I could replace it with a more realistic goal. (RP1)

It really had a positive impact because I was able to differentiate my goal, my support and my need. And once you do that you see, OK, I'll need this support for me to be able to achieve my goal...So I'll reach out to somebody who will be able to help me meet that need. (RP6)

I have so many needs, and so many goals. So it was easy for me to write. For school, for GP, lots of things. Writing it down helped me to think about it more and focus on it. Before I didn't want to see the GP, I was frightened. But every time when I used to open the app I saw it as a need. It was a constant need. So it made me think I should just go, and I went to see the GP. (RP7)

Tools can provide a platform for survivors to take steps into education and employment

Whilst few examples were given by survivors regarding how they used the signposting materials, one example shows how access to targeted information via an app can support educational development:

I found the information about education and going into further education so helpful as I'm looking to go into University and I found on the app how to go and how to apply. These years I have been looking for a different way, to find the solution for how to go back to University and when I logged into the app I found the way. (RP25)

Three participants explained how the platform provided by MeL to think about their goals, and how to achieve them, directly led to secure employment:

When I put my goal, it was I want to get a job in care. So every time I pop into the app it's like a reminder that this is what you said, are you working on that to get where you want to go? So I would use things like Indeed, Total Jobs, Reed and so many things. I was searching and searching until I got an interview. Then I got the job and now I'm working as a full time carer. So the app has really, really helped me. It's kind of a motivational thing pushing me to do what I wanted to do. So it works, yeah it really works for me. (RP20)

Now I have got the job I need whilst using the app, a good job with a contract. It gave the energy. (RP21)

Last month I uploaded that I need a job to progress in a career. Once I set it, I set my mind. It is a kind of note in your mind to make you work towards it. And on the app you can look at your progress, it can keep you on track. I feel like I am on

track. I got a job. Now I feel like 'wow', I can do this. It's life changing. I feel the app contributed to this. (RP22)

Additional functionality would improve the utility and accessibility of an app for survivors

The research team and LEAP recognised that practical and AI functionality to allow for multiple languages to be used in the MeL app would significantly improve accessibility. Even survivors with a good level of English would have liked the option to write in their native language for ease and in order to better express themselves in a more culturally authentic way. A key benefit of this would be to enable people at an earlier stage in their recovery journey, for example following initial referral into the NRM, to access the app, which the LEAP and participants felt was a point at which survivors could most benefit from a platform to consider their recovery needs and goals, as well as access information on their support entitlements:

When I first came out of being trafficked I came out alone. I was alone, and that was the toughest time for me. Then, this app would have been a big help to let me know what support I could get. (RP2)

Some participants suggested improvement that could make the app functionality more trauma-informed. Features suggested included a hide function, where upsetting journal entries could be hidden from user view without being deleted. One participant shared the importance of a trauma-informed approach:

The problem is we are different from each other and our emotional reactions are different. Or even for the same person when you go through the same experience more than once you your reaction is not necessarily going to be the same each time. So it's all based on the individual preferences and being able to change settings or hide things. (RP1)

More broadly, the LEAP and app users felt that use of technology needed to be supplemented by access to personalised input or support when needed. While participants recognised the value of having a private space to record their thoughts, needs and goals, they also suggested that having support workers able to access selected parts of the app, and provide input through advice and personalised signposting, would give an app added utility:

If the app created a channel between the service user and the support worker that might be a better way for the users to ask for help and...would help them better understand our needs. (RP1)

LEAP had also recommended the function of adding family members or supportive friends to their app profile so that they could better understand and support them

towards their goals, and offer supportive feedback. One participant did show her daughter the app as she updated it, and shared the potential benefits of this as a formal function:

It has helped me to share things with my daughter by allowing me to make clear my own thoughts through writing. So now I can talk to her about her needs in a better way than before because I am more clear about it...It has allowed me to explain my needs and goals so I can be understood and understand myself better. (RP23)

While most of the LEAP and participants preferred sharing app data with support networks, AI functionality was identified as a potential way to replicate some of these benefits without the need to share data with external parties. The LEAP suggested that automated inspirational quotes or positive responses to recorded progress would be encouraging for users. The LEAP and other participants suggested AI could be used to generate responses to recorded needs, for example by producing automated contextual and geographically specific signposting materials (including leisure, volunteering and employment opportunities) or wellbeing and mindfulness exercises and resources. The ability to generate personalised and evolving signposting materials was seen as crucial to recognising that survivors have diverse experiences, needs and levels of existing knowledge, and that access to services varies widely across geographical areas.

Recommendations

Arising out of the recognition that the UK still falls short of adequately protecting survivors of modern slavery, project RESTART sought to provide a proof of concept for a new, and more effective, method for understanding survivors' needs. To that end, we were led by four research questions (introduced at the start of this report):

- 1. How can support workers, researchers and policy makers harness AI capabilities to provide faster, more effective and efficient insights into the support requirements of MSHT survivors?
- 2. If AI is beneficial in gaining insights, what are the recommended methods for its utilisation, and what challenges does it present?
- 3. Does technology serve as a viable platform for survivors to contribute their lived experiences and expertise in shaping MSHT services authentically?
- 4. What are the prevailing support needs amongst survivors of MSHT?

This section of the report provides recommendations derived from answering these research questions. We first present general findings, and then address each question.

General Findings and Recommendations

The RESTART project was enhanced through the involvement of survivors, both as research participants and as advisors. Other projects and endeavours may also benefit from this engagement; there should be more opportunities for survivors to engage in research and advocacy, which should be adequately compensated and factored into project timescales properly.

The research demonstrated the added value of NLP and the app in improving support for survivors of MSHT. Drawing on the above, we recommend that both survivors and support workers within the MSVCC should have access to smart devices and good quality data. Current support measures and programmes do not adequately meet the challenges faced by survivors, yet supporting them through the use of an app has shown benefits. The Home Office Modern Slavery Unit should thus consider incorporating smart devices into the next victim support contract from 2025, to enhance support structures as well as agency of survivors. Improved access to digital technology has the potential to facilitate reintegration of survivors, as well as to reduce the likelihood of revictimisation. This proposal is supported by a recent study published by the Modern Slavery and Human Rights Policy and Evidence Centre (Modern Slavery PEC).⁵¹

⁵¹ https://modernslaverypec.org/resources/technology-survivors

As a means of advancing the above outcomes, further education providers, as well as government departments, should prioritise tech literacy for people in groups represented in NRM referrals, in particular asylum seekers, vulnerable migrants, care workers and other relevant professionals. This will help ensure that survivors are not only ready for the job market, which increasingly demands tech literacy, but can also ensure that they can access support systems, which are also increasingly available through innovative solutions such as mobile phone apps.

There is significant dependency amongst survivors of modern slavery on case workers for their day-to-day well-being. Bodies providing post-NRM support services (including local, national and devolved administrations, as well as civil society) should:

- Develop phased approaches, whereby initial intensive support gradually transitions into programmes that promote self-reliance. This can reduce the risk of dependency, while ensuring survivors feel supported throughout their recovery.
- Fund empowerment training through programmes focused on building life skills such as financial literacy, time management and decision-making. These can empower survivors to handle daily challenges more independently.
- Consideration should be given to establishing programmes where survivors, who
 have successfully reintegrated, mentor those in earlier stages of recovery. Peer
 mentorship can provide practical insights and reduce dependency on support
 workers.
- Support organisations should seek to encourage and facilitate survivors' contact with their support networks, as a means of improving their mental health and resilience.
- Support organisations need to be adequately resourced to cope with increasing demand for their services. Any future Victim Care Contract should include provision for technology (or other solutions) to support case workers.

Moreover, and once again noting the demand on support organisations, there should be greater awareness of possible mental health issues arising amongst support workers and other relevant professionals, including those working in civil society organisations which have been assisting survivors, with the objective of ensuring appropriate support for them, on a case-by-case basis.

Finally, our insights found that most service users in the sample stayed in the NRM system for one-to-four years, with half exiting after three years. The NRM as it currently functions is not fit for purpose. As noted in the Report of the Select Committee for Home Affairs of the House of Commons,⁵² the excessive time taken to go through the NRM

⁵² First Report of Session 2023-24, HC 124, paras 185-206, especially para 187

causes significant avoidable stress for survivors. Resources need to be made available to the Single Competent Authority urgently to speed up the NRM process.

Research Question One: How can support workers, researchers and policy makers harness Al capabilities to provide faster, more effective and efficient insights into the support requirements of MSHT survivors?

Key findings and recommendations:

Currently, too many survivors of MSHT have to undergo repeated interviews about their experiences and needs. The demands for more and more information and insights from survivors can be traced to the growing consensus on the value of lived experience in policy and programme development, as well as research, which is generating an unprecedented demand for the involvement of people from this group. This potentially creates employment opportunities for people with lived experience who wish to get involved. The RESTART project underscored that stakeholders seeking insights into the requirements of survivors of modern slavery can leverage AI and data analytics capabilities. This enables a more efficient understanding of these needs, eliminating the necessity for repeated interviews that could potentially retraumatise survivors and researchers. However, to harness these technologies effectively, specific steps outlined below must be undertaken:

- To target lack of awareness amongst stakeholders about the power and availability of tech solutions, more specific and targeted advice on the availability of AI solutions should be made available to law enforcement, Home Office and support organisations. The Home Office ought to develop and then make available a list of available, trusted tech applications, including those that harness the benefit of AI for good, that stakeholders can use to better understand survivors' needs (and the crime of modern slavery in general). This could be added to the resources already available online.⁵³
- State funding should be made available, directly or indirectly, to support organisations across the entire spectrum of addressing modern slavery and human trafficking to purchase or pilot such applications.
- Case workers should be trained and encouraged to engage with available AI
 technologies to improve their own data analysis and in turn the type and level of
 support they can offer.
- Technology should be utilised more widely by case workers as a means of communication with survivors and establishing their needs, as well as evaluating the

⁵³ E.g., https://www.gov.uk/government/publications/modern-slavery-training-resource-page/modern-slavery-training-resource-pag

effectiveness of support measures. If that technology has AI capabilities, then analysis of data coming in from that communication can be analysed in real time and provide evidence for any needed intervention.

Research Question Two: If AI is beneficial in gaining insights, what are the recommended methods for its utilisation, and what challenges does it present?

Key findings and recommendations:

The findings of project RESTART highlight the significant benefits of leveraging AI, particularly NLP, to glean valuable insights. The project underscores the efficiency of AI in rapidly extracting insights from extensive datasets, even spanning five years. In this context, we present recommended methodologies for optimizing AI utilisation. However, it is crucial to acknowledge and address the challenges that accompany the deployment of AI technologies in this context.

The Home Office should utilise AI as a means of understanding support needs in real time and investigate fluctuations in support better to understand underlying causes, with a view to sustained enhancement of support measures and mechanisms.

The application of NLP has proved to be a swift and effective technique for gleaning insights into the needs of survivors of modern slavery. Given its effectiveness, policymakers and organisations should consider expanding the use of NLP across various datasets available to them to extract more nuanced insights about survivors' needs and experiences. Whilst substantial resources must be invested when first using this technique (particularly for training and validating the NLP model), subsequently, data can be analysed rapidly.

In addition:

- In order to facilitate the amalgamation of diverse data sets, allowing access to more extensive pools of information, it is essential to establish a cohesive approach within the sector regarding the collection of data. A practical example would be for safe houses and support organisations to adopt uniform field formats in their CRM systems. We recommend that the Independent Anti-Slavery Commissioner give consideration to undertaking this function, with the objective of establishing best practice for the country as a whole.
- Noting that only good data can produce reliable and useful results, local (where appropriate), devolved and national administrations should invest in training programmes for professionals, so that they collect/record data in such a way that it can effectively be used for analysis, including asking for consistency across the different organisations and stakeholders in the sector. These programmes should be coordinated as far as possible, to avoid duplication and identify potential gaps.

- As language and discourse evolve, it is essential for developers to have the resources to continuously train NLP models on new data to maintain and improve their accuracy and relevance. Thus, it is imperative to only employ state-of-the-art, appropriately trained NLP models for the analysis of text data rather than off-the-shelf NLP methods. The intricacies involved in documenting such sensitive information demand a tailored approach that considers the unique linguistic nuances, cultural contexts and evolving terminology inherent in the discourse surrounding slavery. To that end Trilateral Research utilised a subject-matter expert in devising their NLP models; such a socio-tech method is the only way for deploying such technologies.
- Similarly, developers must ensure that there is always human oversight of Al utilisation. Development of models requires a subject-matter expert.
- A mechanism should be included by developers whereby findings from NLP analyses are periodically reviewed by experts and the survivors themselves.
 This will ensure that the insights remain grounded in real-world experiences.
- Stringent data privacy and protection measures must be in place, especially
 when dealing with sensitive information related to survivors. Only anonymised
 and consented data should be used by developers for NLP development and
 then for analysis.
- Training programmes for professionals working with survivors should be provided by the organisation which developed the technology, equipping them to understand and utilise NLP-driven insights in their interventions and strategy development.
- When using NLP, it is necessary for developers to take account of the challenges presented by the multi-faceted nature of text: machines do not innately grasp the vast cultural, emotional and situational subtleties of language.
- Consideration should be given by the Home Office or other funder organisations
 to funding future projects to obtain more training data. It would potentially then
 be possible for the model to increasingly learn the context around different
 classes of information and thereby improve in performance.
- The Home Office should develop a more streamlined process to facilitate responsible access to its data for beneficial analysis.

Research Question Three: Does technology serve as a viable platform for survivors to contribute their lived experiences and expertise in shaping MSHT services authentically?

Key findings and recommendations:

The RESTART project confirmed that technology provides a viable platform for survivors to actively contribute their lived experiences and expertise, playing a crucial role in authentically shaping MSHT services. Overall, we found that technology such as a mobile app serves as a transformative medium, empowering survivors to share their valuable perspectives, fostering collaboration, and ensuring that their voices play a central role in shaping and refining services dedicated to combatting human trafficking.

Our overall finding is that access to an appropriate app yields significant potential benefits for survivors of MSHT by:

- providing a space where the individual can process and record thoughts and feelings, whenever they wish. Having access to the app as a consistent resource while navigating different support systems was recognised as an opportunity to make a more permanent record of needs and goals and avoid potentially triggering repetition to different caseworkers and organisations.
- providing a structured mechanism for individuals to gather their thoughts as to which goals they wish to achieve.
- enabling users to distinguish between needs and goals and to support positive action in moving towards achieving goals such as improved health or access to work.
- providing guidance about support services, entitlements and rights.

To that end we recommend:

- Consideration should be given by support organisations and those funding them
 to funding, where possible, the use of technology, such as the MeL app that was
 used in the RESTART project, to supplement case worker and other
 professional support. This would be beneficial for both NRM and post-NRM
 support.
- Consideration should be given by support organisations and those funding them
 to expanding the scope of the MeL app used in project RESTART, beyond
 survivors' immediate needs, including the provision of information for foreign
 survivors on where to find advice with regard to applying for international
 protection and/or safe return and reintegration in their home countries.
- Survivors of MSHT should be encouraged to take part in future research and any Government consultations on this subject, so that they may bring their

insights to the work and may experience therapeutic benefits through their participation. To that end:

- Research funding should be made available for these programmes, so that survivors are compensated for their time and participation.
- In appropriate cases, allocation of research funding should be conditional upon the active inclusion and involvement of persons with lived experience of MSHT.
- Government consultations should be designed in a way that enables meaningful inclusion of survivors in the consultation process
- For use of an app to be scalable and thus provide richer insights it needs to be capable of multi-lingual use. Thus, consideration should be given by service providers to adding a translation function to the app; this might be possible in a larger project (in terms of time and finance).

Research Question Four: What are the prevailing support needs amongst survivors of Modern Slavery?

Key findings and recommendations:

As well as demonstrating that technology can provide a useful tool to address modern slavery, project RESTART used innovation to understand the prevailing support needs of survivors in Reach-In support; our findings are presented in previous sections, and here we outline our recommendations per theme:

Access to legal advice and assistance

- More resources should be allocated by the Home Office to Reach-In support organisations to provide increased legal support for survivors, including access to competent and specialised legal advice, in particular regarding entitlement to compensation and possible entitlement to international protection for non-British survivors.
- Competent legal advice should be available to all non-British survivors of MSHT regarding their possible entitlement to international protection. Additional resources should be allocated to enable this. Attention is drawn in particular to the findings of the Modern Slavery PEC on this issue: "Access to Legal Advice and Representation for Survivors of Modern Slavery"
 - (https://modernslaverypec.org/resources/access-legal-advice) and "Impacts of Lack of Legal Advice on Modern Slavery Survivors"
 - (https://modernslaverypec.org/resources/lack-access-legal-advice).
- Specialised programmes should be developed to facilitate navigation of the legal system for survivors of MSHT.

- There should be increased and improved collaboration between governmental and non-governmental entities to ensure comprehensive support for survivors seeking legal assistance.

Access to advice on essential services and entitlements

- More advice should be readily available regarding financial benefits and entitlements for survivors, as a means of alleviating financial pressures. Specifically, responsible Government Departments and civil society organisations should seek to improve awareness about entitlement to financial support and other benefits. Where the State has devolved its responsibility to provide advice, it must ensure that the relevant providers are adequately funded.

Access to mental health services and support

- The provision of medical services should be a priority in the assistance programmes across services supporting survivors (including those in reach-in support), and should address both physical and mental wellbeing.
- To improve their mental wellbeing, all survivors should have access to quick, adequate, and long-term mental health support/counselling. Offering regular mental health drop-in sessions with a specialist at specific charities and safe houses should be considered. Survivors should be matched with a medical professional with experience in working with people who suffer from severe trauma and PTSD. Some survivors may also appreciate professionals with a similar background (ethnicity, gender, nationality).
- To tackle feelings of isolation, loneliness and boredom, survivors should have access to a wide range of social activities, including free access to sport facilities and art programmes (such as art classes and the gyms).
- Survivors should be provided with guidance on how and where to access these opportunities, including volunteering opportunities. This will promote integration into the community and society. The forming of survivor support groups should also be encouraged and facilitated. In addition, free or reduced fares for public transport to facilitate travel/commuting should be considered.
- There should be improved access to, and improved availability of, mental health services for survivors who have exited the NRM. Relevant Government Departments (Home Office and the Department of Health and Social Care, DHSC) should ensure that mental health services tailored to anxiety disorders are available and accessible to survivors. This includes trauma-informed therapies and treatments specifically designed for individuals with a history of exploitation.
- The DHSC should equip mental health professionals with specialized training to understand and treat anxiety in the context of modern slavery trauma, with a view to increasing the efficacy of therapeutic interventions.

- The DHSC should ensure that mental health services tailored to the specific needs of male survivors are available and accessible, taking into account that their experiences and responses to trauma might differ from female survivors, and adapt therapeutic interventions accordingly.
- The DHSC should provide mental health professionals with training focused on the unique challenges faced by male survivors, in particular in enhancing their skills in detecting and intervening in cases of potential suicide.

Opportunities to attain professional skills

 Whilst our data was from those in the Reach-In cohort of survivors, they also reflected on their entire journey, from which this recommendation arises.
 Consideration should be given by the relevant Government Department to integrate access to vocational training into NRM support services to prepare survivors for easier integration into employment markets when they feel able and are permitted to work.

Access to support groups

 Civil society organisations providing post-NRM support, and their funders, should promote the establishment and accessibility of support groups for survivors, where they can share experiences and coping mechanisms in a safe and understanding environment.

Housing

The NLP analysis identified significant accommodation needs amongst survivors of MSHT, specifically secure and suitable housing arrangements that contribute to a stable living environment. Local authorities should make specific provision for the accommodation needs of survivors of Modern Slavery, taking into account their particular circumstances, in their housing plans, in order to enhance their security, promote long-term recovery and, where appropriate, integration.

Reintegration

- There needs to be increased and improved support to assist survivors to reintegrate into society, considering that some may have few or even no personal contacts or support networks. This could include partnering with educational institutions, vocational training spaces and businesses to create tailored programmes that address survivors' specific interests and aptitudes.
- We recommend increased collaboration between social workers, community organisations, and experts in life skills training to develop workshops and training sessions. These programmes should cover essential life skills including

job searching, resume building, interview techniques, budgeting, grocery shopping for healthy foods and socialising in a community. Of particular use would be practical sessions, role-playing and real-world scenarios to build confidence and competence in these areas. Additionally, we propose the facilitation of community engagement activities to help survivors connect with others, make friends and build a supportive network. These tasks should be acknowledged as a core part of the State's protection and support obligations towards survivors of MSHT, derived from the Council of Europe Convention in Action against Trafficking in Human Beings and under Article 4 of the European Convention on Human Rights, and funded accordingly, so as to provide the best possible support, whether directly or indirectly.

Suggestions for further research

One limitation of the timeframe of this project was that the team was not able to fully identify the benefit of real-time insight coming from modern slavery survivors - for example, via use of the mobile app or from live case note data. Further research could, with significant potential benefits, explore this potential over a longer timeframe, to monitor the following outcomes which were alluded to during RESTART:

- The positive impacts on survivors' wellbeing in using an app to record needs, goals and reflections in their own time and space.
- Incorporating the recommendations on being able to have proactive follow-up from caseworkers or monitoring of journaling/question responses in real-time.
- The potential for this kind of real-time insight from survivors to feed into
 adaptation of support to better meet their needs (and to result in faster
 outcomes, such as a survivor finding employment, or getting medical/financial
 support) as well as to feed into faster/more nuanced decisions around policy.
- Further research should be conducted into exploring the use of an app with increased functionality, including interactivity with caseworkers and more curated signposting resources (for example, by region, or for different stages in the NRM process).
- Access to data was a limitation of NLP work. With more training data, there is
 potential for the NLP model to increasingly learn the context around different
 classes, or types, of information and thereby improve performance. This might
 be the subject of a future research project.
- Any future projects using sources and methodology similar to RESTART should, if possible, be carried out on a larger scale and over a longer time frame, using data from several different organisations, in order to be able to provide more accurate general recommendations. Ideally, such projects should be conducted with a view to enabling comparison of support provision amongst the relevant organisations.



The Modern Slavery and Human Rights Policy and Evidence Centre (Modern Slavery and Human Rights PEC) works to enhance understanding of modern slavery and transform the effectiveness of law and policies designed to address it. The Centre funds and co-creates high-quality research with a focus on policy impact, and brings together academics, policymakers, businesses, civil society, survivors and the public on a scale not seen before in the UK to collaborate on solving this global challenge.

The Centre is hosted by the Humanities Division at the University of Oxford. The Centre is a consortium of three universities consisting of the Wilberforce Institute at the University of Hull, the University of Liverpool, and the Bonavero Institute of Human Rights at the University of Oxford. Between 2019 and March 2024, the period when this project was awarded funding, the Centre was led by the Bingham Centre for the Rule of Law (part of the British Institute of International and Comparative Law (BIICL)) and was a consortium of six organisations consisting of the Rights Lab at the University of Nottingham, the Wilberforce Institute at the University of Hull, the University of Liverpool, the Bonavero Institute on Human Rights at the University of Oxford and the Alan Turing Institute.



The Modern Slavery and Human Rights Policy and Evidence Centre is funded and actively supported by the Arts and Humanities Research Council (AHRC), part of UK Research and Innovation (UKRI).