Health literacy is a human rights concern

A needs assessment and gap analysis of health literacy challenges and human rights

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HEALTH LITERACY IS A HUMAN RIGHTS CONCERN:
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HEALTH LITERACY CHALLENGES AND HUMAN RIGHTS
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Executive Summary

Health literacy has gained significant attention in recent years as a crucial factor in improving public health outcomes, reducing healthcare costs, and promoting health equity. The pandemic helped to bring health literacy to the forefront, as people needed to understand complex health information and follow rapidly changing guidelines. Countries with higher health literacy fared better in terms of public compliance with preventive measures and vaccine uptake. The crisis also highlighted the need to improve both general and digital health literacy to manage public health emergencies effectively.

This report provides a gap analysis of the impact of low health literacy on human rights. viewing health literacy through the human rights lens, offering insights into the specific barriers to effective health literacy and actionable recommendations for improvement. Health literacy, defined as the capacity to access, understand, appraise and apply information to maintain and improve health, is essential for empowering individuals to make informed and shared decisions about their health. It enables better disease prevention, management, and engagement with healthcare systems. However, health literacy is unevenly distributed across populations, affected by factors such as socioeconomic status, education level, language, and geographic location.

The study applied a human rights-based approach to conduct a vulnerability scan of low health literacy in population at risk and with regards to availability, accessibility, acceptability, and quality of resources and services. These principles, rooted in human rights, offered a comprehensive tool for identifying gaps and making recommendations to ensure that health literacy support is equitable and inclusive.

The human rights-based needs assessment of health literacy revealed significant challenges, particularly among marginalized and vulnerable populations. The gaps were recorded for a wide range of human rights mandates including the Universal Declaration of Human Rights, the International Covenant on Economic, Social, and Cultural Rights, the European Convention on Human Rights, the Convention on the Protection of Children against Sexual Exploitation and Sexual Abuse, the Istanbul Convention on preventing violence of women, the European Convention on the Prevention of Torture and Inhuman or Degrading Treatment or Punishment, the European Social Charter and the Convention on Human Rights and Biomedicine.

Closing the gaps in health literacy for vulnerable populations is not only a public health priority but a human rights imperative. By addressing the structural, cultural, and educational barriers that prevent these populations from accessing and understanding health information and services, equity and social justice can be promoted to ensure that all individuals can exercise their right to health. Addressing this challenge is not only a public health imperative but a moral obligation to uphold the human rights of those most vulnerable in the societies.

Introduction

Human rights are essential for ensuring the dignity, freedom, and equity of all individuals. They provide a framework for justice and fairness, mandating that societies uphold these rights for everyone. As such, human rights encompass the basic rights and freedoms to which every person is entitled, including the right to health. This right is firmly established in the 1948 Constitution of the World Health Organization, which underscores that health is fundamental to attaining peace and security. This principle, articulated over seven decades ago, remains as relevant today as it was then, affirming that the highest attainable standard of health is a fundamental right of every human being.:

> *The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition (WHO, 1948).*

Central to this conversation is the right to accessible health information and healthcare, the ability to make informed choices, and the right to be treated with dignity and not to be marginalised. In this regard, health literacy may be seen as a unifying factor that empowers individuals, enabling them to manage their health, understand and make informed choices, navigate health services and engage with healthcare systems.

> *Health literacy is linked to literacy and entails people's knowledge, motivation, and competences to access, understand, appraise, and apply information to make judgments and decisions in everyday life concerning healthcare, disease prevention, and health promotion to maintain or improve quality of life throughout the life course (Sørensen et al., 2012).*

Health literacy is a social determinant of health

Health literacy has been recognized as a crucial social determinant of health, influencing individuals' ability to make informed decisions, access healthcare services, and achieve positive health outcomes (Nutbeam and Lloyd, 2021). Health literacy is more than just the ability to read and comprehend health information; it encompasses a broader set of competencies that allow individuals to access, understand, appraise, and apply health information in ways that promote and maintain good health (World Health Organization, 2021). This multidimensional approach situates health literacy as both an individual and systemic attribute that interacts with various social, economic, and environmental factors (Sørensen et al, 2012).

The integrated conceptual model of health literacy (Sørensen et al., 2012) highlights that health literacy develops during the life course and is embedded in the social context, shaped by personal, situational and societal factors such as education, social support, economic stability, and the healthcare system itself. Besides, health literacy is associated with health service use and costs, health behaviour and health status, participation and empowerment, as well as equity and sustainability. The model underscores that low health literacy can exacerbate health disparities, as individuals with inadequate health literacy are more likely to face challenges in navigating health services, prevent illnesses, engage and cope with health issues and build resilience to withstand socio-economic hardship.

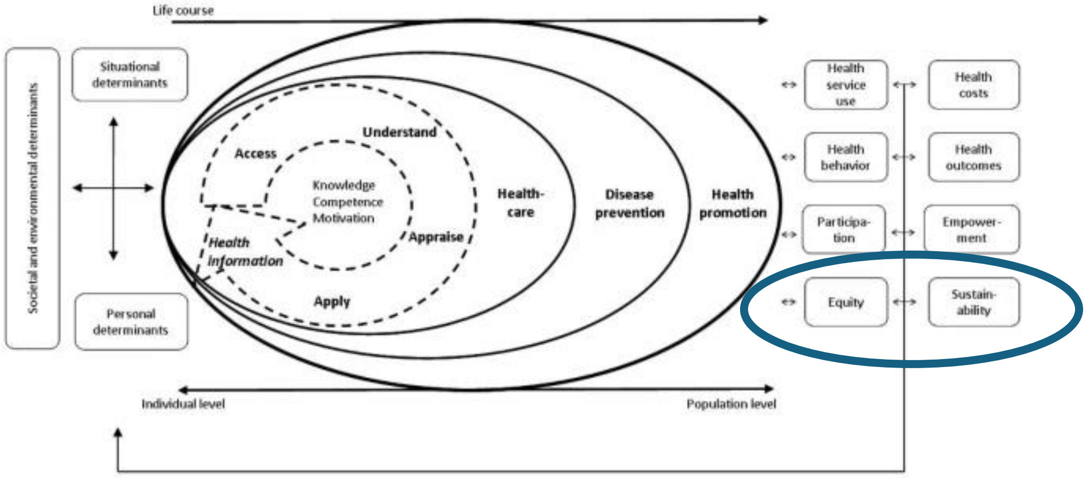

Figure 1: The integrated model of health literacy including equity (Sørensen et al., 2012).

Low health literacy - a public health concern

The COVID-19 pandemic highlighted the critical importance of health literacy, as individuals needed to understand complex health information and adapt to rapidly changing guidelines. Countries with higher levels of health literacy experienced better public compliance with preventive measures and higher vaccine uptake. This crisis underscored the urgent need to improve both general and digital health literacy to effectively manage public health emergencies (Paakkari and Okan, 2020).

Improving health literacy is vital for reducing health inequalities, enhancing disease prevention, and ensuring equitable access to healthcare across Europe. However, health literacy levels vary significantly within and across populations, influenced by factors such as socioeconomic status, education, language, age, and geographic location (Sørensen et al., 2015).

The European Health Literacy Surveys represent the most comprehensive assessments of health literacy in Europe. The initial survey, conducted across eight countries (Austria, Bulgaria, Germany, Greece, Ireland, the Netherlands, Poland, and Spain), revealed that an average of 47% of participants had inadequate or problematic health literacy (Sørensen et al., 2015). A subsequent survey in 2019, encompassing 17 countries, confirmed these trends. The findings indicate that nearly half of the European population continues to struggle with accessing, understanding, appraising, and using health-related information. While progress has been made in some countries, significant disparities persist among different socio-economic and demographic groups (Sørensen et al., 2015; MPOHL, 2021).

Low health literacy has considerable public health implications. Individuals with low health literacy are more likely to struggle with managing chronic conditions such as diabetes, cardiovascular disease, and asthma. Health literacy also influences the ability to navigate healthcare systems and access preventive care, such as screenings and vaccinations. Poor health literacy contributes to worse health outcomes and higher healthcare costs and deepens health inequalities between socio-economic groups and regions (Berkman et al., 2011; MPOHL, 2021).

The increasing use of digital platforms in healthcare, such as online consultations, health apps, and electronic medical records, has made digital health literacy more critical than ever. Unfortunately, many Europeans, particularly older adults and those living in rural areas, lack the digital skills needed to fully benefit from these tools. This digital divide exacerbates health disparities and restricts access to essential health services and information (van der Vaart and Drossaert, 2017).

To address these challenges, several European countries have taken steps to improve health literacy. For instance, Germany, Austria, and Portugal have developed targeted health literacy policy strategies and action plans aimed at promoting health literacy through educational initiatives, healthcare system reforms, and community-based programs (Norwegian Directorate of Health, 2019; Directorate-General of Health, 2019; Schaeffer et al., 2021). These efforts represent a move towards more inclusive and equitable healthcare systems, ensuring that all individuals have the necessary health literacy to manage their health and well-being and receive the appropriate and timely support needed.

Low health literacy – a human rights concern?

The role of health literacy is rooted in the broader right to health, as outlined in international human rights instruments such as the Universal Declaration of Human Rights (UDHR) and the International Covenant on Economic, Social, and Cultural Rights (ICESCR). Article 25 of the UDHR affirms that everyone has the right to a standard of living adequate for health and well-being, including access to medical care (United Nations, 1948). The ICESCR builds on this by emphasizing the principles of availability, accessibility, acceptability, and quality of healthcare services (United Nations, 1966).

In this way, health literacy plays a crucial role in realising the right to health since health literacy empowers individuals to participate actively in decisions regarding their health and navigate the healthcare system effectively (Kickbusch, 2001).

> *Health literacy is the ability to make sound health decisions in everyday life, encompassing situations at home, in the community, the workplace, healthcare systems, marketplaces, and political arenas (Kickbusch et al., 2005).*

Without adequate health literacy, individuals may struggle to access the necessary information to exercise their rights, leading to health disparities and violations of their right to health. Conversely, individuals with higher health literacy are better equipped to make informed choices and advocate for their health rights (Kickbusch, 2004).

Intergovernmental organisations, such as the Council of Europe, recognise health literacy as essential for upholding health and human rights (Council of Europe, 2023). The Council of Europe plays a pivotal role in safeguarding these rights across its 46 member states by providing legal frameworks, monitoring mechanisms, and advocacy. Its mission includes ensuring equitable access to healthcare, protecting vulnerable populations, and maintaining human dignity in healthcare settings. Through its conventions, committees, and judicial bodies, the Council emphasises that health is a fundamental human right.

The Council of Europe's mandate is grounded in the European Convention on Human Rights (ECHR) (Council of Europe, 1950), which serves as the primary legal instrument for protecting basic human rights, including health-related rights. Key articles include:

- Right to life (Article 2), requiring governments to protect life by providing access to life-saving healthcare and responding to health emergencies.
- Prohibition of torture and inhuman treatment (Article 3), which protects individuals from degrading treatment, including abuse in healthcare facilities or denial of medical care in detention.
- Right to privacy (Article 8), which ensures the protection of personal data, including sensitive medical information, and privacy in medical settings.

The Council of Europe has also developed specific mandates to protect the health rights of vulnerable populations. For example:

- The Convention on the Protection of Children against Sexual Exploitation and Sexual Abuse addresses the rights of children.
- The Istanbul Convention focuses on preventing violence against women.
- The European Convention on the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (1987) aims to protect individuals in places of detention, such as prisons, psychiatric hospitals, and migrant centres, ensuring they receive proper healthcare and are safeguarded from abuse (Council of Europe, 1987, 2007, 2011).

Additionally, the European Social Charter (1961) is a policy instrument guaranteeing social and economic rights, including health-related provisions such as:

- Right to protection of health (Article 11), mandating governments to adopt measures to eliminate the causes of ill-health, provide health education, and ensure accessible and effective healthcare.
- Right to social security (Article 12) and social welfare services (Article 13), which protect individuals' access to healthcare through social protection systems.
- Rights of the elderly (Article 23) and persons with disabilities (Article 15), which ensure special attention to the health needs of these vulnerable groups, including adequate healthcare services.

Lastly, the Convention on Human Rights and Biomedicine (Oviedo Convention) (Council of Europe, 1997) is particularly significant for protecting human rights in biomedicine, with provisions that include:

- Informed consent, mandating that medical interventions only occur after patients give free and informed consent.
- Prohibition of discrimination, which prevents discrimination based on genetic heritage or health conditions.
- Medical confidentiality, ensuring the right to privacy in relation to medical data and treatment.

These frameworks collectively highlight the integral role of health literacy and human rights in ensuring that health services are inclusive, equitable, and effective for all members of society.

Exploring health literacy gaps and needs using a human rights-based approach

Despite the ongoing efforts to enhance health literacy in populations, there is a clear need to address more attention towards people in vulnerable situations. However, the gaps of health literacy from a human rights approach are less clear. Recognising the importance of health literacy as a determinant of people's health and well-being and equitable access to healthcare, a needs assessment is, therefore, suggested to explore the state of the art of health literacy and human rights.

The needs assessment of health literacy and human rights can help to understand how well existing health systems and policies support individuals' health literacy, for instance, the ability to access, understand, appraise and apply information for making informed health decisions—as a fundamental enabler of human rights.

Aim and objectives

The gap analysis aims to spotlight areas where individuals may face barriers due to low health literacy, limited health literacy response and systemic inequities related to health literacy and human rights.

The objectives include to explore health literacy and needs of people in vulnerable situations from a human rights perspective and provide recommendations to bridge the gaps.

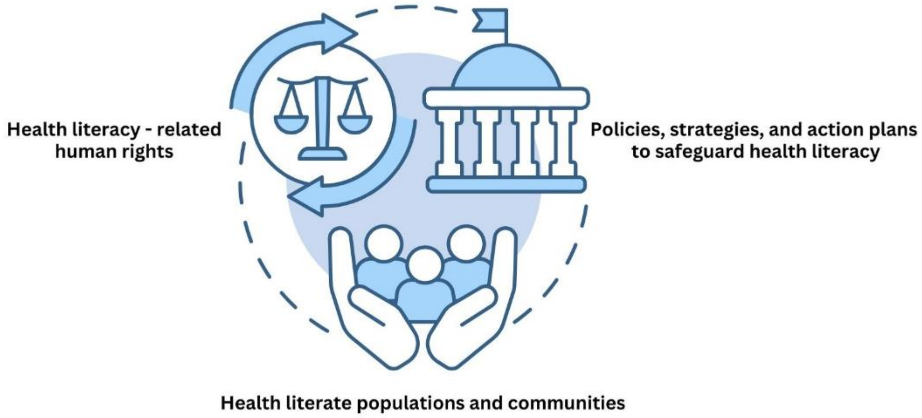

Figure 2: Gap analysis to explore health literacy needs of people in vulnerable situations from a human rights perspective.

Applying the human rights-based approach

This needs assessment applies **the human rights approach** (Gruskin et al., 2010). Conducting a health literacy needs assessment from this perspective entails understanding health literacy as a fundamental enabler, essential for the realisation of human rights such as the right to health, information, education, and participation. Importantly, this approach shifts the focus from individual responsibility to the broader societal, governmental, and institutional responsibilities in upholding the principles of equality, non-discrimination, and access to information, particularly for marginalised and vulnerable groups.

Using a human rights-based approach provides a framework for developing policies, programs, and interventions that integrate human rights principles at every stage of planning and implementation. The approach emphasises the fulfillment of human rights as central to sustainable development, aiming to empower individuals as rights-holders and hold governments and institutions accountable as duty-bearers (United Nations Development Programme, 2006). This perspective ensures that every policy or program not only addresses immediate health literacy needs but also strengthens long-term societal structures that promote equitable access to health information and services.

The human rights-based approach is particularly critical for addressing inequality and marginalisation, ensuring that everyone has the opportunity to participate in and benefit from development processes. For instance, applying a rights-based approach to access to healthcare would guarantee that all individuals, regardless of socio-economic status or geographic location, can receive necessary health services. This may involve establishing mobile health units to serve rural or remote areas, providing free or subsidised health services, and involving local communities in the design and implementation of health programs to ensure their relevance and effectiveness.

The human rights-based approach emphasises that healthcare, disease prevention and health promotion must not only be available but also *accessible, affordable, and acceptable to all, with attention to health literacy, cultural appropriateness, language barriers, and the removal of financial obstacles.*

By applying this framework, health systems can promote inclusive, equitable care and prevention that reflects the dignity and rights of every individual, fostering an environment where health literacy contributes to better health outcomes and broader social equity.

Addressing 'people in vulnerable situations'

This gap analysis and needs assessment particularly address people in vulnerable situations. 'People in vulnerable situations' refers to individuals or groups who face higher risks of discrimination, exclusion, or harm due to specific personal characteristics, socio-economic conditions, or environmental factors. These vulnerabilities might arise from age, gender, disability, ethnicity, migration status, poverty, social exclusion, or health status, among others (United Nations, 2015).

The group of people in vulnerable situations are often referred to in various ways as listed in Table 1 for the purpose of this report.

Table 1: Descriptions of 'people in vulnerable situations'.

Descriptions of 'people in vulnerable situations'.	
Hard-to-reach	Hard to find
Hidden populations	Those who do not wish to be found, groups that are difficult to identify or engage, often due to stigma or secrecy (e.g., drug users, undocumented immigrants).
Seldom-heard	Those who are often not included in recruitment
Underserved populations	groups with limited access to resources or services
Marginalised groups	Communities that are excluded or discriminated against in societal systems.
Vulnerable groups	Populations at higher risk of harm or with special needs for care and attention.
Disadvantaged communities	Groups that face economic, social, or political disadvantages.
At-risk populations	People more likely to experience negative outcomes due to various factors like poverty or poor health.
Non-engaged communities	Groups that are difficult to engage with due to lack of trust or awareness of available services.
Descriptions from a justice perspective of people in vulnerable situations	
Individuals with lived experiences of injustice	Highlighting their experiences of systemic inequity or harm.
Persons at risk of discrimination	Emphasising their exposure to unfair treatment due to factors like race, gender, disability, or socioeconomic status.
Justice-impacted individuals	Those affected by the legal or criminal justice system, often including formerly incarcerated individuals.
Persons in precarious situations	Highlighting instability in aspects of life such as housing, employment, or safety.
Rights-holders in vulnerable circumstances	Emphasising that these individuals have rights that must be upheld, despite their vulnerable situations.

Socially excluded populations	People who face exclusion from full participation in society due to systemic barriers
Equity-seeking groups	Communities that actively seek fair treatment, often because they have been historically marginalised or disadvantaged.
Equity-deserving communities	Communities that have been historically marginalised or disadvantaged.
People in vulnerable situations	
Specific population groups in vulnerable situations	• Women and girls • Children • Refugees • Internally displaced persons • Stateless persons • National minorities • Indigenous peoples • Migrant workers • Persons with disabilities • Older persons • HIV positive persons and AIDS victims • Roma /Sinti, Travellers • Lesbian, gay and transgender people (LGBTI+)
Socio-economic disparities of groups in vulnerable situations	• Low education • Poor • Homeless • Persons with substance use disorders • Unemployed • High morbidity, multiple diseases

Study design and methods

The study design consisted of two main components, each focusing on critical aspects of vulnerability and equity in relation to health literacy and human rights. The insights were then analysed regarding several human rights conventions to identify gaps and needs.

Data collection

The data was collected deductively and iteratively by Kristine Sørensen in August – September 2024 guided by the 17 identified populations at risk for the vulnerability scan and the themes of the AAAQ framework. The data collection and reporting took place using PubMed, Google Scholar, Web of Science, ChatGPT, policy documents and data from global health organisations, government health literacy initiatives, and case studies from various countries.

Data analysis

The first component involved conducting a health literacy vulnerability scan to identify and understand the specific challenges faced by people in vulnerable situations. This scan aimed to highlight the areas where health literacy gaps most affect these groups, thereby identifying the populations at highest risk and the barriers they encounter in accessing and utilising health information.

The second component was an equity analysis using the AAAQ framework developed by the Danish Institute of Human Rights (2014). This framework is grounded in human rights principles and examines health systems through the lenses of 'Availability, Accessibility, Acceptability, and Quality'. The equity analysis assessed how well these principles are upheld, ensuring that health services and information are not only present but are accessible without discrimination, culturally appropriate, and of sufficient quality to meet the needs of all individuals, particularly those in marginalised groups.

Together, the vulnerability scan and the analysis of availability, accessibility, acceptability, and quality, resulted in a vulnerability map and a schematic overview of barriers and impact related to low health literacy. The insights were used to analyse the implications of low health literacy in relation to various human rights mandates. The analytical methods are described in more detail below.

The health literacy vulnerability scan

A **health literacy vulnerability scan** focused on specific target groups in vulnerable situations is a nuanced approach aimed at understanding and addressing the unique human rights and health literacy challenges faced by these populations.

In this case, vulnerability refers to the state or condition of being exposed to the possibility of harm—whether physical, emotional, social, or economic. It is characterised by a higher risk of experiencing negative outcomes due to a lack of resources, resilience, or protection. Vulnerability can result from a variety of factors, including socioeconomic status, age, health conditions, environmental circumstances, and social exclusion.

In the context of public health and social sciences, vulnerability is often defined as the degree to which an individual or group is unable to anticipate, cope with, resist, or recover from the impacts of adverse events or situations (WHO, 2021). The concept is essential for understanding how certain populations may face greater difficulties accessing resources or opportunities that support health, safety, and well-being.

Understanding vulnerability is critical for developing targeted policies and interventions that provide support and mitigate risks for those who are most at risk of harm or disadvantage. By examining the specific health literacy vulnerabilities of these groups, this gap analysis provides valuable insights in barriers and tailored strategies that hinder or uphold their human rights.

In this comprehensive gap analysis, the assessed at-risk population groups included women and girls, children, refugees, internally displaced persons, stateless persons, national minorities, indigenous peoples, migrant workers, persons with disabilities, older persons, persons living with HIV/AIDS, Roma/ Sinti/Travellers, LGBTI+ individuals, people with low education levels, economically disadvantaged individuals, homeless persons, persons with substance use disorders, the unemployed, and those with high morbidity or multiple chronic diseases.

The Availability, Accessibility, Acceptability, and Quality (AAAQ) framework

The AAAQ framework focusing on ‘Availability, Accessibility, Acceptability, and Quality’ is based on international human rights standards and is integral to ensuring that everyone can fully exercise their rights to essential services. The AAAQ principles are relevant to evaluate whether essential services are provided equitably and effectively, especially in assessing state obligations to meet human rights (Danish Institute of Human Rights, 2014). For example, in the context of healthcare, the AAAQ principles help determine if a government is fulfilling its duty to provide accessible, acceptable, high-quality care for all its citizens. The lessons learned may guide policymakers, service providers, and advocates in creating policies and evaluating services to ensure they meet human rights standards, especially for marginalised and vulnerable populations.

In this case, the AAAQ framework is chosen as it offers a comprehensive tool for identifying gaps and making recommendations to ensure that health literacy resources are equitable and inclusive. The four principles are defined below (Danish Institute of Human Rights, 2014).

- **Availability** refers to the presence of sufficient facilities, goods, services, and programs to meet the needs of the population. This means that healthcare facilities, goods, and services, including trained personnel, are available in sufficient quantity. For instance, a health system should have enough clinics, hospitals, and healthcare workers to serve the community.
- **Accessibility** is further divided into four subcategories. First, non-discrimination which means that services must be accessible to all without discrimination, irrespective of race, gender, age, socioeconomic status, or disability. Second, services should be within safe and reasonable reach of all people. This includes ensuring that physical barriers do not prevent access (e.g., ramps for wheelchair users, clinics within reach of rural communities). Third, services should be affordable to all. Payment for services should not lead to financial hardship or prevent people from accessing services. Finally, people should have access to information regarding the service and their rights, such as knowledge of where services are provided, the costs, and any special requirements.
- **Acceptability** relates to the cultural, ethical, and social appropriateness of services. Services should respect local values, beliefs, and social norms. Healthcare must respect medical ethics and be culturally appropriate. For example, patients should feel safe and respected when receiving care, and services should be sensitive to gender and cultural considerations.
- **Quality** means that services should be scientifically and medically appropriate and of good quality. They should be effective and safe. This includes having skilled healthcare personnel, up-to-date medical equipment, and medications that meet regulatory standards.

Gaps and needs concerning low health literacy and human rights

The results of the vulnerability scan and equity analysis yielded new insights in the gaps and needs related to health literacy and human rights. First, the findings from the vulnerability scan are presented for each population group at risk and in an overview mapping the barriers, impact and recommendations. Second, the findings from the equity analysis are outlined. Thirdly, these findings are summarised with regards to their implications for several human rights conventions.

Mapping health literacy vulnerability and human rights

The health literacy vulnerability scan resulted in an overview mapping the barriers and impact of low health literacy on human rights concerning 17 population groups at risk. The assessed at-risk population groups included women and girls, children, refugees, internally displaced persons, stateless persons, national minorities, indigenous peoples, migrant workers, persons with disabilities, older persons, persons living with HIV/AIDS, Roma/ Sinti/Travellers, LGBTI+ individuals, people with low education levels, economically disadvantaged individuals, homeless persons, persons with substance use disorders, the unemployed, and those with high morbidity or multiple chronic diseases. The abridged findings for each population group at risk are highlighted in Table 2 and described in detail in the text below.

Table 2: Vulnerability map of low health literacy's impact on human rights.

No.	**Population groups at risk**	**Barriers**	**Impact**	**Recommendations**
1	**Women**	Gender-based discrimination, limited access to healthcare in some regions, and cultural norms that restrict access to health information.	Reduced autonomy over health decisions, lower health literacy rates, and higher rates of untreated health issues.	Promote gender-sensitive health education, support women's health rights, and offer community-based health resources.
2	**Children**	Dependence on adults for health information, limited cognitive ability to process complex health information, and restricted access to preventive care.	Reduced autonomy over health decisions, lower health literacy rates, and higher rates of untreated health issues.	Introduce health and well-being as a subject in educational curricula, support children's physical, social and mental health through conducive environments.
3	**Refugees and internally displaced persons**	Language barriers, trauma, limited access to healthcare, and unfamiliarity with the healthcare system.	Increased mental health issues, delayed treatment, and poor management of chronic diseases.	Provide translation services, culturally sensitive care, mental health support, and accessible healthcare information.
4	**Stateless people**	Lack of legal status, exclusion from public health systems, and socioeconomic challenges.	Limited access to healthcare, higher mortality rates, and untreated chronic conditions.	Advocate for inclusive health policies, provide legal assistance, and support mobile health clinics for outreach.

5	**National minorities and indigenous peoples**	Historical discrimination, language differences, and cultural misunderstandings in healthcare.	Higher rates of preventable diseases, mistrust of healthcare providers, and lower overall health outcomes.	Train healthcare providers in cultural competence, collaborate with community leaders, and provide healthcare in native languages.
6	**Migrant workers**	Limited access due to transience, language barriers, and fear of losing employment.	Higher rates of workplace injuries, untreated conditions, and lack of preventive care.	Offer mobile health services, protect employment rights regarding healthcare access, and provide language assistance in health services.
7	**Persons with disabilities**	Physical and sensory barriers to accessing healthcare, lack of accessible health information, and social isolation.	Increased risk of untreated health issues and poor mental health outcomes.	Ensure accessible facilities, provide health information in multiple formats, and offer specialised training for healthcare providers.
8	**Older persons**	Cognitive decline, sensory impairments, and lower digital literacy.	Higher rates of chronic conditions and medication mismanagement.	Provide health information in simple language and large print, offer in-person support, and conduct regular health literacy assessments.
9	**Persons living with HIV/AIDS**	Stigma, discrimination, and lack of comprehensive health literacy materials.	Poor adherence to treatment, mental health challenges, and increased mortality.	Conduct public awareness campaigns to reduce stigma, provide peer support groups, and ensure confidential access to information.
10	**Roma/Sinti/Travellers**	Discrimination, transience, language barriers, and lack of trust in healthcare systems.	Higher mortality rates, low immunisation coverage, and limited access to preventive care.	Create culturally appropriate healthcare programs, involve community mediators, and provide mobile health units.
11	**LGBTI+ individuals**	Stigma, discrimination, lack of LGBTI+ knowledgeable providers.	Higher rates of mental health issues, substance abuse, and avoidance of healthcare.	Train providers in LGBTI+ sensitivity, provide supportive resources, and create LGBTI+ inclusive healthcare spaces.
12	**Low education**	Limited understanding of health information and poor health-related decision-making.	Higher rates of chronic illness and preventable diseases.	Simplify health materials, offer community-based education programs, and integrate visual aids into health information.
13	**Poor** **(low-income populations)**	Financial barriers, limited access to health resources, and competing life demands.	Poor health outcomes, high rates of unmanaged health issues.	Expand access to affordable healthcare, offer sliding-scale services, and provide health education at accessible locations.
14	**Homeless individuals**	Lack of stable housing, limited access to healthcare, and high rates of mental illness.	Increased mortality, higher rates of infectious disease, and chronic conditions.	Provide nonjudgmental health and social services, and lower barriers within relevant sectors to support housing and sustainable living.
15	**Persons with substance use disorders** **(substance use disorder)**	Stigma, legal fears, and lack of healthcare engagement.	Increased mortality, higher rates of infectious disease, and chronic conditions.	Provide nonjudgmental healthcare access, integrate addiction treatment with primary care, and expand harm reduction services.
16	**Unemployed**	Financial insecurity, mental health challenges, and lack of employer-provided healthcare.	Poor mental and physical health outcomes.	Provide mental health support, ensure accessible healthcare regardless of employment, and

				connect to community support programs.
17	**High morbidity / multiple diseases**	Complexity of managing multiple health issues and limited time with healthcare providers.	Increased healthcare costs, higher mortality rates, and quality of life decline.	Offer case management services, improve care coordination, and provide personalised health education.

Health literacy and human rights of women

The distribution of health literacy is not uniform across populations, with gender being a significant factor influencing disparities in health literacy levels and their impact on health. The gender differences in health literacy stem from a complex interplay of social, cultural, and economic determinants.

Women, for example, often play key roles in family health management and caregiving, which may necessitate higher health literacy skills. However, they may also face unique barriers, such as lower educational opportunities, socioeconomic disadvantages, and gender-based health disparities, which can impede their ability to access and comprehend health information and services. Conversely, men may exhibit different patterns of health literacy influenced by social norms that discourage seeking healthcare or engaging with health information proactively (Sørensen, 2017). Although, the vulnerability of men is acknowledged this analysis pays special attention to vulnerability of women since women in many countries are at a higher risk than men (United Nations, 2015).

Health literacy is closely linked to literacy (Sørensen et al., 2012). However, globally, women have historically had less access to education compared to men, which can contribute to lower literacy levels overall. In regions where gender inequality in education persists, women may lack the foundational reading and comprehension skills necessary to build health literacy. Even in more equitable educational systems, women from low-income or minority communities often face barriers that prevent them from completing their education.

Low health literacy can limit women's understanding of preventive health services, such as cancer screenings and vaccinations. For instance, women with inadequate health literacy are less likely to participate in regular screenings for breast and cervical cancer, leading to delayed diagnoses and treatment (Kosir and Sørensen, 2024). This impacts their right to timely and effective healthcare and exacerbates existing health disparities.

Low health literacy may also impede women's right to protection from harm and violence. Women with limited health literacy may not be aware of available support services for survivors of domestic violence or may not understand their rights within legal and health systems. This increases their vulnerability and reduces their ability to seek help and protection (Fage-Butler, 2019).

Certain groups of women, such as ethnic minorities, immigrants, refugees, and women with disabilities, face compounded vulnerabilities. Language barriers, discrimination, and limited access to culturally appropriate information further impede their ability to acquire and use health information effectively. These women often struggle to navigate healthcare systems that do not cater to their specific needs or that may not offer translation or interpretation services (Ward et al., 2019).

The increasing reliance on digital platforms for health information and services exacerbates health literacy challenges for women who may lack access to technology or digital skills (Coughlin et al, 2016). Older women, those living in rural areas, or women with lower socioeconomic status are particularly affected by this digital divide.

During pregnancy and maternal health care, women with low health literacy are at higher risk for complications. They may struggle to understand prenatal and postnatal care instructions, recognise warning signs of complications, or adhere to medical advice (Nawabi et al., 2021, Kim et al., 2024). This vulnerability can lead to negative outcomes for both mothers and children, emphasising the critical need for targeted health literacy interventions during reproductive years.

The study by Dehlendorf et al. (2016) found that women with lower health literacy were less likely to use effective contraceptive methods due to misconceptions or incomplete understanding of how these methods work. This highlights the importance of tailored, clear communication in healthcare settings to ensure women can make informed reproductive choices, thus upholding their right to autonomy and self-determination.

In summary, women's vulnerability to low health literacy stems from a confluence of factors that intersect education, economics, social norms, and systemic inequalities. Addressing these challenges requires a comprehensive approach that includes improving educational opportunities, ensuring equitable access to health services, promoting gender-sensitive communication, and addressing barriers unique to marginalised and disadvantaged groups. By focusing on these areas, public health systems can empower women, improve their health outcomes, and reduce gender-based health disparities.

Health literacy and human rights of children

Health literacy plays a pivotal role in the well-being and development of children. Despite its significance, low health literacy remains a pervasive issue that has profound implications on the human rights of children. Notably, disparities in child health literacy are evident in high-income and low- and middle-income countries and research shows that child health literacy is distributed unequally across sociodemographic groups (Meherali and Mevawala, 2020, Naccarella and Guo, 2022).

Access to quality education plays a significant role in developing health literacy. Children from lower socioeconomic backgrounds, marginalised communities, or regions with limited educational resources may not receive the same level of health education as their peers. This disparity can exacerbate health inequalities and leave children and adolescents from vulnerable backgrounds at a greater risk of low health literacy (Sørensen and Okan, 2020, Nash et al., 2021).

Although schools are essential venues for fostering health literacy, many educational systems do not prioritise comprehensive health education. When health literacy programs are not integrated into school curricula, students miss out on learning opportunities that could empower them to make informed health decisions. Schools that do include health education may not do so in a way that encourages critical engagement or practical application of health knowledge (Dadaczynski et al., 2020)

Low health literacy during childhood and adolescence can have long-lasting effects. The habits, knowledge, and skills developed during these formative years set the foundation for lifelong health behaviours. Children and adolescents with low health literacy are more likely to become adults who struggle with understanding and managing their health, leading to poorer health outcomes, higher healthcare costs, and greater dependence on healthcare systems (McDaid et al., 2020).

The role of parents and caregivers should also be recognised with regards to children's health literacy. High expectations are placed on parents and children to achieve effective disease management and positive health outcomes in the context of complex health-care systems and disease treatment regimens. However, research shows that 1 in 4 parents have low health literacy, greatly affecting their ability to use health information to make health decisions for their child (Sanders et al., 2009). Low health literacy affects parent acquisition of knowledge, attitudes, and behaviours. The effect of low health literacy is wide ranging, including 1) poor nutrition knowledge and behaviours, 2) higher obesity rates, 3) more medication errors, 4) more emergency department use, and 5) poor asthma knowledge, behaviours, and outcomes (Morrison et al., 2019).

Addressing these vulnerabilities requires comprehensive approaches, including integrating health literacy into school curricula, supporting parents and caregivers, promoting critical thinking skills, and ensuring equitable access to health information. By fostering health literacy from a young age, societies can empower children and adolescents to make informed health decisions and build healthier futures.

Health literacy and human rights of refugees and internally displaced persons

Refugees and internally displaced persons (IDPs) are both categories of people who have been forced to leave their homes due to conflict, persecution, or other crises, but they differ in terms of their legal status and the nature of their displacement.

Refugees are individuals who have been forced to flee their country of origin due to well-founded fear of persecution based on race, religion, nationality, membership in a particular social group, or political opinion to seek safety and protection in another country. The legal status and protection for refugees are defined under international law, primarily through the Refugee Convention (UNHCR, 1951, 1967).

Internally displaced persons (IDPs) are individuals who have been forced to flee their homes for reasons similar to those affecting refugees, such as armed conflict, human rights violations, natural disasters, or other crises. However, unlike refugees, IDPs do not cross an international border and remain within their own country.

For refugees and internally displaced persons (IDPs), who are already among the most vulnerable populations globally, low health literacy exacerbates existing challenges and significantly impacts their human rights. These populations often face unique barriers due to displacement, trauma, language differences, and socioeconomic hardships, which can impede their access to essential health information and services. The result is a severe limitation on their ability to achieve a standard of health and well-being that is recognised as a basic human right under international law (World Health Organization, 2013; UNHCR, 2020).

The impacts of low health literacy among refugees and internally displaced are multifaceted (Wångdahl et al., 2014). Refugees and IDPs often live in overcrowded, resource-limited environments where accessing reliable health information can be difficult. In these contexts, low health literacy can lead to poor health outcomes, increased vulnerability to misinformation, and reduced uptake of preventive measures. Women and children within these populations are particularly at risk, as low health literacy can lead to inadequate maternal and child healthcare and insufficient protection against violence and exploitation (Pottie et al., 2011).

Managing chronic conditions like diabetes, hypertension, and mental health disorders is challenging for any population, but refugees and IDPs with low health literacy face additional obstacles. Limited understanding of medication instructions and lifestyle modifications can lead to poor disease management, exacerbating health disparities (Pottie et al., 2011).

Low health literacy impedes the dissemination and comprehension of vital health information, affecting the ability of individuals to protect themselves and their families. The dissemination of health information often relies on written and verbal communication in dominant national languages, which refugees and IDPs may not speak fluently. A study by Mårtensson et al. (2020) found that language barriers and unfamiliarity with medical terminology significantly reduce comprehension, leading to gaps in understanding that can impact decision-making. Moreover, refugees and IDPs are more susceptible to misinformation due to low health literacy, especially during public health crises.

Low health literacy among refugees and IDPs can compromise their right to safety and protection. In the context of health emergencies or outbreaks, such as the COVID-19 pandemic, low health literacy poses a significant risk. Refugees and IDPs with limited understanding of preventive measures, such as hygiene practices, mask-wearing, and social distancing, are more vulnerable to contracting and spreading infectious diseases (Kassem & Jaafar, 2020). This endangers not only their own safety but also that of the broader community.

The stress of displacement, coupled with low health literacy, can exacerbate mental health challenges. Without adequate understanding of available mental health resources or the ability to recognise the symptoms of psychological distress, refugees and IDPs are at increased risk for untreated mental health conditions (Silove et al., 2017). This infringes on their right to mental health support and protection from harm.

Women and children among refugee and IDP populations are particularly affected by low health literacy, which amplifies existing vulnerabilities and human rights concerns. For example, women and children may not understand where to report cases of gender-based violence or how to access support services, leaving them vulnerable to abuse and exploitation (UNHCR, 2020).

Refugees and IDPs have the right to participate in decisions that affect their health and well-being, as recognised in international human rights frameworks. However, low health literacy and systemic barriers may restrict their ability to engage in meaningful participation (Gele et al., 2017).

In summary, low health literacy among refugees and internally displaced persons poses significant challenges that impact their human rights, including the rights to health, safety, information, and participation. Addressing health literacy barriers is essential for empowering these vulnerable populations and ensuring their access to the resources and services necessary for a dignified and secure life (Al-Adhami et al., 2021).

Health literacy and human rights of stateless people

The Convention relating to the Status of Stateless Persons (United Nations, 1954) is the key international treaty that defines and addresses the status and rights of stateless people. This convention provides the legal definition of a stateless person as someone "who is not considered as a national by any State under the operation of its law" (Article 1).

The research concerning health literacy of stateless is scarce. However, findings on general health affairs stress that there are compounded vulnerabilities affecting the ability of stateless individuals to access healthcare, advocate for their health rights, and engage meaningfully with health systems.

Barriers include socioeconomic marginalisation, lack of formal education, language differences, and discrimination. Stateless individuals may live in isolated or impoverished communities with limited access to healthcare facilities or health education programs (Sköld, 2023). These conditions perpetuate a cycle where low health literacy exacerbates poor health outcomes, deepening inequality and infringing on basic human rights.

Moreover, stateless individuals often experience restricted access to formal education, significantly impacting their ability to attain even basic health literacy. Research indicates that education is a primary determinant of health literacy; without it, individuals struggle to understand health information, medical instructions, or preventive care measures (Nutbeam, 2008).

Poverty and lack of employment opportunities are also prevalent among stateless communities. Economic instability limits access to healthcare, preventive services, and essential medications. Without financial means, individuals may prioritise immediate survival needs over health literacy and healthcare, perpetuating poor health and vulnerability (Badewa, 2022).

Stateless groups often belong to ethnic minorities or indigenous communities with unique languages and cultural practices. Health information and services are frequently provided in dominant national or international languages, making comprehension challenging. This linguistic gap further limits stateless individuals' ability to understand health information and advocate for their needs (Wångdahl et al., 2014, 2015).

The right to receive and disseminate information is essential for health literacy (Article 19, UDHR). However, stateless people often lack access to reliable health information due to geographic, political, or technological barriers. This deprivation infringes upon their right to information, preventing them from making informed health decisions. Limited access to health education materials tailored to cultural and linguistic needs exacerbates this issue, leaving stateless individuals at a significant disadvantage in managing their health and well-being.

Stateless people are often at risk of exploitation and discrimination (Badewa, 2022). Low health literacy further compounds their vulnerability by hindering their ability to recognise and report abuse or seek help. For instance, women in stateless communities may lack information about reproductive health services, leading to higher maternal and infant mortality rates. The lack of knowledge about available healthcare and protective services also increases their exposure to violence and exploitation, infringing upon their rights to safety and dignity (UNHCR, 2020).

The Rohingya, a stateless Muslim minority primarily residing in Bangladesh and Myanmar, face extreme challenges. Limited access to health education and language barriers hinders their support from health services and preventive measures, resulting in high rates of disease and poor health outcomes, for instance with regards to mental health (Jahar et al., 2024).

Many individuals of Haitian descent in the Dominican Republic are stateless, facing limited access to healthcare and health education. Their low health literacy, combined with legal and economic challenges, has led to disparities in health outcomes and significant barriers to basic health services (Amnesty International, 2015).

Participation in decision-making processes related to health is a fundamental aspect of human rights. Low health literacy limits stateless individuals’ ability to participate in discussions about health policies and services that affect their communities. This exclusion perpetuates a cycle of marginalisation, where stateless people remain underserved and their voices unheard (Gele et al., 2017). Empowering stateless communities with health literacy not only improves individual health outcomes but also fosters a sense of agency and inclusion in society.

Multidimensional approaches involving education, policy changes, and community engagement are necessary to empower stateless individuals, mitigate health disparities, and uphold their fundamental human rights.

Health literacy and human rights of minorities and indigenous peoples

Health literacy has profound implications for the human rights of national minorities and indigenous peoples, influencing their access to healthcare, the ability to manage health conditions, and their overall quality of life. Indigenous populations worldwide often face unique challenges due to historical injustices, socioeconomic marginalisation, and cultural discrimination that exacerbate health disparities and limit health literacy (Anderson et al., 2016; World Health Organization, 2013).

One of the primary reasons indigenous populations face lower health literacy levels is the legacy of colonialism and systemic discrimination. Historical policies of forced assimilation, land dispossession, and suppression of cultural practices have disrupted traditional knowledge systems and eroded trust in state institutions (Gracey & King, 2009). This legacy has led to enduring socioeconomic disadvantages, including limited access to formal education, poverty, and insufficient healthcare infrastructure, all of which directly impact health literacy (Kirmayer et al., 2014).

Indigenous communities may also often face educational disparities because they have lower educational attainment due to systemic barriers and culturally inappropriate schooling systems (Wagner et al., 2018). Moreover, indigenous peoples often also face economic inequalities with severe impact. High rates of poverty in many Indigenous communities restrict access to healthcare services and health information. The stress of economic insecurity also prioritises immediate survival over proactive health measures, contributing to low health literacy (Anderson et al., 2016).

Cultural differences in understanding health and wellness can create significant barriers to health literacy for Indigenous peoples. Many indigenous communities hold holistic views of health that incorporate physical, mental, spiritual, and environmental well-being. When health communication is presented through a purely biomedical lens without considering cultural context, it can be misunderstood or rejected (Smylie & Firestone, 2015). Besides, indigenous populations may speak unique languages that differ from the dominant language used in public health materials and clinical settings. The lack of translated health resources in indigenous languages may limit comprehension and effective communication, compounding health literacy challenges.

Due to the past and ongoing discrimination, indigenous peoples may often report mistrust toward healthcare institutions which can prevent individuals from seeking care or engaging with public health initiatives, further limiting health literacy (Kirmayer et al., 2014). In this regard, low health literacy contributes to poorer health outcomes among indigenous peoples by affecting their ability to access preventive care, adhere to treatment plans, and engage in health-promoting behaviours (Reading & Wien, 2009). Mental health literacy is also often impacted among indigenous peoples. Indigenous communities already face higher rates of mental health challenges due to historical trauma, social exclusion, and discrimination. Yet, low health literacy exacerbates these challenges by limiting awareness and access to mental health resources (Kirmayer et al., 2014).

Australian Aboriginal and Torres Strait Islander Peoples: These communities face disproportionately high rates of chronic diseases, which are exacerbated by low health literacy. Studies indicate that culturally tailored health education programs are more effective in improving health outcomes, yet such programs are often underfunded or inconsistently implemented (Nash & Arora, 2021).

First Nations in Canada: National Collaborating Centre for Aboriginal Health in British Columbia highlights that education is a critical determinant of health literacy to improve health outcomes. Culturally appropriate resources and community engagement is vital for closing health gaps. However, barriers persist due to funding disparities and limited access to Indigenous-focused health services (National Collaborating Centre for Aboriginal Health, 2017).

Without adequate health literacy, Indigenous individuals may struggle to identify accurate health information, increasing stress and susceptibility to misinformation, particularly during public health crises . Misunderstandings about diseases and health conditions can lead to social stigma within communities, reducing support for those affected and impacting their psychological well-being (Smylie & Firestone, 2015). Meaningful participation in health decision-making processes is essential for health equity, low health literacy may restrict the ability of indigenous individuals to advocate for their needs or participate in community health initiatives, diminishing their agency and autonomy (Smylie & Firestone, 2015).

Essentially, low health literacy among indigenous peoples is both a cause and a consequence of health inequities, impacting their human rights. Addressing these challenges requires a holistic approach that acknowledges historical and cultural contexts and empowers indigenous communities.

Health literacy and human rights of migrant workers

For migrant workers, health literacy may have profound implications for their ability to navigate healthcare systems, understand preventive measures, and make informed decisions about their health and safety. Limited health literacy not only impacts their health outcomes but also infringes on their fundamental human rights, including the right to health and safety.

Migrant workers are often employed in labour-intensive and hazardous industries, such as agriculture, construction, and manufacturing, where understanding safety protocols is critical. Research on migrant agricultural workers in the United States revealed that many workers had difficulty comprehending safety instructions due to language barriers and low literacy levels. This increased their risk of work-related injuries and exposure to hazardous chemicals (Arcury & Quandt, 2007). Without adequate health literacy, these workers are less likely to know their rights to safe working conditions or how to access compensation for work-related injuries.

A study by Ward et al., 2019 found that migrant workers in Europe often struggle to access healthcare due to language barriers, cultural differences, and limited understanding of how healthcare systems function. These barriers contribute to delays in seeking care, reduced use of preventive services, and poor management of chronic conditions. Migrant workers with low health literacy may also face challenges understanding health insurance policies or navigating complex healthcare bureaucracies, limiting their ability to receive adequate care.

Migrant workers also often face systemic barriers that exacerbate low health literacy, such as limited access to culturally and linguistically appropriate health information. Health materials are frequently provided in the dominant language of the host country, making it difficult for non-native speakers to understand vital health and safety information (Ward et al., 2019). This can lead to misunderstandings about health practices, medication use, and preventive care, contributing to poorer health outcomes.

Stressful living and working conditions, compounded by social isolation, discrimination, and language barriers may be part of part of everyday life experiences of migrant workers. Migrant domestic workers, who often work long hours in isolated environments, are particularly vulnerable to mental health challenges due to the dual burden of low health literacy and limited social support. A study on migrant workers in the Middle East found that many women were unaware of available mental health services or did not understand their rights to seek help, resulting in high rates of stress and emotional distress (Jureidini, 2010). Hence, mental health literacy is important to cope with potential stress. However, low health literacy can prevent them from understanding and accessing mental health resources, leading to untreated mental health issues such as depression and anxiety (DeWalt & Hink, 2009). The stigma surrounding mental health in many cultures further discourages seeking help, exacerbating the issue.

Low health literacy can affect migrant workers' ability to understand their legal rights, making them more susceptible to exploitation and abuse. Without clear knowledge of health and labour rights, migrant workers are less likely to report unsafe conditions, wage theft, or mistreatment by employers. This undermines their rights to fair treatment and protection from harm as outlined in international human rights agreements (ILO, 2016). In summary, low health literacy may have significant impacts on the human rights of migrant workers

Health literacy and human rights of persons with disabilities

Research has shown that individuals with disabilities frequently encounter barriers when accessing healthcare, including complex medical information that is difficult to understand (Horner-Johnson et al., 2013). For example, people with cognitive disabilities may have difficulty processing written health information, leading to poor management of chronic conditions and higher rates of preventable health complications. These barriers infringe upon their right to health and contribute to health disparities. For persons with disabilities, these barriers are often compounded by additional challenges such as limited mobility, communication difficulties, and social stigma.

Persons with disabilities are often at increased risk of secondary health conditions, making preventive care crucial for maintaining overall health. However, studies have shown that individuals with disabilities may miss preventive care due to misunderstandings about its importance or how to access it (Krahn et al., 2015). This can lead to late diagnoses, poorer health outcomes, and a greater reliance on emergency care services, which further strains healthcare systems and reduces quality of life.

Low health literacy often means that persons with disabilities do not have access to information that is tailored to their specific needs. For example, health materials may not be available in formats such as Braille, large print, or easy-to-read versions, making it difficult for individuals with visual or cognitive impairments to engage with health information effectively (Harris et al., 2023).

A study by McKee et al. (2015) highlighted that deaf individuals who primarily communicate using sign language face unique barriers when seeking healthcare. Medical appointments conducted without interpreters or appropriate communication tools can lead to misunderstandings about diagnoses and treatments. This lack of accessible information not only compromises their right to health but also their right to information, limiting their ability to make informed health decisions.

For persons with disabilities, low health literacy can limit their ability to participate in shared decision-making with healthcare providers (WHO, 2013). This can result in treatments or interventions that do not align with their preferences or values, infringing upon their right to autonomy and participation.

People with intellectual and developmental disabilities often face difficulties understanding health information, leading to reduced compliance with treatment plans and poorer health outcomes. A study by Lennox et al. (2016) found that caregivers and family members play a critical role in bridging these health literacy gaps. However, when caregivers themselves have low health literacy, the situation becomes more complex, further exacerbating the vulnerability of individuals with cognitive disabilities and impacting their right to health and informed decision-making.

It is important to ensure that health information is available in multiple formats, such as Braille, sign language, audio, and simplified text, to cater to different types of disabilities. Moreover, inclusive health policies are important that prioritise the accessibility of health information and services for persons with disabilities, ensuring their rights to health, information, and participation are protected.

Finally, low health literacy can have significant impacts on the mental health and well-being of persons with disabilities. The stress of navigating complex healthcare systems, understanding medical information, and managing health conditions can contribute to anxiety and depression. This is particularly concerning for individuals with disabilities who already face higher rates of mental health challenges due to social isolation and stigma (Horner-Johnson et al., 2013).

Health literacy and human rights of older persons

As individuals age, they often face an increased prevalence of chronic diseases such as diabetes, cardiovascular disease, and dementia, which require ongoing management and interaction with healthcare providers. Low health literacy complicates this management and can lead to poorer health outcomes and increased healthcare costs (MPOHL, 2021).

A study by Gazmararian et al. (2006) found that older adults with low health literacy are more likely to have difficulty adhering to prescribed medication regimens. Misunderstandings about medication instructions can result in improper dosing, missed doses, or harmful interactions, potentially leading to adverse health events. This inability to follow treatment plans infringes on their right to health and contributes to preventable hospitalisations and a decline in quality of life. Along these lines, a study by Wolf et al. (2010) found that elderly patients with limited health literacy were more likely to have poor glycaemic control and higher rates of diabetes-related complications. This not only affects their physical health but also their ability to maintain independence and engage in social activities, impacting their quality of life and well-being.

Health literacy is crucial for understanding and utilising preventive healthcare services, such as screenings and vaccinations. However, a study by Scott et al. (2002) found that elderly patients with limited health literacy were less likely to participate in preventive health screenings such as mammograms and colonoscopies. This reduced engagement compromises their right to health by increasing the risk of late-stage disease detection and poorer health outcomes.

Despite the right to information, health information is often presented in formats that may not be accessible or comprehensible to older adults, especially those with cognitive decline, visual impairments, or other age-related conditions. Complex medical jargon, fast-paced communication in clinical settings, and reliance on digital technology can exacerbate health literacy challenges for the elderly (Smith et al., 2023).

The rise of digital healthcare solutions and telehealth services has created additional barriers for older adults with low health literacy. Many elderly individuals are less familiar with digital technology, making it difficult for them to access online health information or use telehealth platforms effectively. A study by Choi and DiNitto (2013) found that elderly patients with low digital literacy were less likely to use online resources for managing their health, further widening the gap in health access and infringing on their right to information.

Health literacy and human rights of persons living with HIV/AIDS

Despite advancements in treatment and prevention, the persistent issue of health literacy gaps poses significant challenges to the global fight against HIV/AIDS. Understanding the link between health literacy and HIV/AIDS HIV/AIDS continues to disproportionately affect marginalised populations, including those with limited access to education, healthcare, and socioeconomic stability. Low health literacy compounds these vulnerabilities, limiting individuals' ability to comprehend their diagnosis, adhere to treatment regimens, and navigate complex healthcare systems (Kalichman et al., 2008).

Treatment adherence is paramount for individuals living with HIV/AIDS to achieve viral suppression and maintain health. However, the intricacies of antiretroviral therapy (ART)—from understanding dosing schedules to recognising potential side effects—require a level of health literacy that many patients may not possess. Studies have shown that people with low health literacy are more likely to miss doses, face difficulties following treatment plans, and experience worse health outcomes (Kalichman et al., 2008). This non-adherence can lead to viral resistance, higher rates of opportunistic infections, and increased risk of transmission, undermining both individual and public health efforts.

The stigma surrounding HIV/AIDS is a double burden as it exacerbates the impact of low health literacy. People with low health literacy may face difficulty navigating conversations about their condition, avoiding seeking treatment due to fear of exposure or discrimination (DeMarco & John, 2021). This fear perpetuates a cycle where low health literacy and stigma feed into each other, driving individuals further away from essential care and support services. This infringement on the right to information (Article 19, UDHR) prevents individuals from exercising autonomy over their health and reinforces systemic inequalities.

Low health literacy can also take a significant toll on the mental health of individuals living with HIV/AIDS. Understanding complex health information, adhering to lifelong treatment, and dealing with the social stigma can be overwhelming, contributing to stress, anxiety, and depression (DeMarco & John, 2021). Individuals who struggle to understand health information may experience heightened feelings of helplessness and isolation, impacting their overall well-being and quality of life. These mental health challenges, if unaddressed, can lead to poorer physical health outcomes and further marginalise individuals.

Some global initiatives have shown that tailored health literacy programs can bridge the gap and empower people living with HIV/AIDS (Gunha et al., 2017). Community-based education programs that use peer support, visual aids, and simplified health communication have been effective in improving treatment adherence and understanding These programs emphasise the importance of culturally and linguistically appropriate materials to address the diverse needs of people living with HIV/AIDS.

Health literacy training should be an integral part of HIV/AIDS prevention and treatment programs to empower patients and improve adherence. Community organisations should be supported to deliver health education programs that resonate with local populations and break down stigma, fostering a supportive environment for people living with HIV/AIDS.

Low health literacy continues to pose a significant barrier to achieving equitable health outcomes for individuals living with HIV/AIDS, infringing upon their right to health, information, and dignity. By prioritising health literacy, people may be empowered to take control of their health, reduce transmission rates, and improve overall quality of life with support of caregivers and professionals around them.

Health literacy and human rights of Roma, Sinti and Travellers

Roma, Sinti, and Traveller are descriptions of diverse groups of people with distinct cultures and histories who share some common experiences, particularly regarding their nomadic traditions and social marginalisation.

The Roma is an ethnic group with origins tracing back to the Indian subcontinent, who migrated to Europe around 1,000 years ago. Today, they are one of the largest minority groups in Europe, with significant populations spread across countries such as Romania, Bulgaria, Hungary, and Spain. The Roma have their own language, known as Romani, and a rich cultural heritage. Despite being a widely dispersed and diverse group, they share common experiences of discrimination, social exclusion, and economic marginalisation.

The Sinti are a subgroup of the Roma people, primarily found in Germany, Austria, and surrounding countries. The Sinti have a distinct identity within the broader Roma population and have been present in Europe since at least the 14th century. Like the Roma, the Sinti have historically faced persecution, including targeted atrocities during the Holocaust, where many were victims of genocide under Nazi rule.

Travellers are a separate ethnic group often associated with Ireland and the United Kingdom. Irish Travellers have their own unique language (Shelta), customs, and traditions that distinguish them from the Roma and other groups. Travellers in the UK may include various nomadic groups, including Romani and Scottish Travellers. Despite their differences, Travellers also face challenges similar to those of the Roma, such as discrimination, social exclusion, and limited access to education and healthcare.

The Roma, Sinti and Traveller communities have long faced discrimination, social exclusion, and economic marginalisation across Europe and beyond. These challenges manifest in numerous aspects of life, with health being one of the most profoundly affected areas. Among the factors that exacerbate health disparities within these communities is low health literacy (McFadden et al., 2018).

The barriers to health literacy within Roma, and Traveller communities are multifaceted and rooted in social and structural inequalities (Jarcuska, 2013). These communities often experience limited access to formal education due to systemic discrimination, socioeconomic barriers, and frequent mobility. According to a report by the European Union Agency for Fundamental Rights (FRA), Roma children are significantly less likely to complete secondary education compared to their non-Roma peers, which impacts their ability to understand health information (FRA, 2016). Many Roma communities speak Romani or other dialects, which may not align with the languages used in mainstream healthcare communications. This linguistic gap limits the ability to access and understand health information effectively, leading to poorer health outcomes (Vacková et al., 2020).

Historical and ongoing discrimination has led to a pervasive mistrust of healthcare providers among Roma, and Traveller communities. This mistrust can result in delayed healthcare seeking, reduced participation in preventive care, and reluctance to disclose health issues to medical professionals (Van Cleemput, 2010).

A survey conducted by the European Public Health Alliance (EPHA) found that Roma women are significantly less likely to participate in routine health screenings, such as mammograms and Pap tests, due to a combination of low health literacy, distrust in the medical system, and cultural barriers (EPHA, 2018). The lack of preventive care leads to late-stage diagnoses of preventable diseases, resulting in higher morbidity and mortality rates. This failure to engage in preventive health measures compromises the right to health and underscores the urgent need for tailored health literacy interventions.

The Right to Non-Discrimination is often jeopardised. A report by the World Health Organization (WHO) highlights that discriminatory attitudes among healthcare providers exacerbate health disparities and contribute to the marginalisation of Roma patients (WHO, 2010). When combined with low health literacy, this creates significant barriers to equitable healthcare access and undermines their human rights. Notably, low health literacy compounds the effects of discrimination that Roma, and Traveller communities face.

Low health literacy also contributes to mental health disparities among Roma, and Traveller communities. The stress and uncertainty of navigating complex healthcare systems without sufficient information can exacerbate existing mental health challenges, such as anxiety and depression. The stigma attached to seeking mental health support within these communities, coupled with low literacy, further impedes access to necessary care (Van Cleemput et al., 2007). The cumulative effect is a cycle of poor mental and physical health that reinforces social exclusion and violates their right to health and well-being.

To overcome stigma, it is of importance to develop health education programs that are linguistically and culturally appropriate, using plain language and visual aids to cater to the needs of Roma communities. Community health workers who are trusted members of Roma, and Traveller communities can also help to deliver health information and facilitate access to services. From a systemic point of view, policies that prioritise the health literacy needs of Roma, and Traveller communities as part of broader health equity strategies are needed.

Health literacy and human rights of LGBTI+ individuals

In recent years, strides have been made in recognising and protecting the rights of LGBTI+ individuals, but significant challenges remain in ensuring their access to equitable healthcare and overall well-being. One of the most pressing yet often overlooked issues facing LGBTI+ communities is low health literacy. This issue not only affects their health outcomes but also jeopardises their fundamental human rights, including the right to health, information, and protection from discrimination.

For LGBTI+ individuals, low health literacy can be exacerbated by systemic discrimination, stigma, and limited access to culturally competent healthcare. These factors create barriers to understanding health information, navigating healthcare systems, and seeking appropriate care, leading to poorer health outcomes (Mayer et al., 2008). Such disparities not only compromise individual well-being but also violate their rights as outlined in international human rights instruments.

Barriers to health literacy in LGBTI+ communities are many (Sørensen et al., 2017). Experiences of discrimination in healthcare settings deter many LGBTI+ people from seeking care, contributing to gaps in health knowledge and lower health literacy (Hafeez et al., 2017). For example, transgender individuals report higher rates of mistreatment by healthcare providers, leading to a reluctance to engage with medical services (Grant et al., 2011).

Health information that specifically addresses the needs of LGBTI+ individuals is often scarce or difficult to access. Standard health communication materials may not cover issues such as hormone therapy, mental health specific to LGBTQ+ experiences, or HIV prevention in a way that resonates with this population (Mayer et al., 2008).

Due to historical and ongoing discrimination, many LGBTI+ individuals harbor mistrust toward medical professionals. This mistrust can result in a lack of engagement with healthcare services and diminished opportunities to receive health education, impacting overall health literacy (Fredriksen-Goldsen et al., 2014).

Research indicates that LGBTI+ individuals are at a higher risk for certain health issues, including mental health disorders, substance abuse, and sexually transmitted infections, particularly HIV/AIDS (Mayer et al., 2008). Without adequate health literacy, these risks are exacerbated, leading to higher rates of illness and mortality in these communities.

The HIV epidemic has disproportionately impacted gay and bisexual men, transgender women, and other LGBTI+ subgroups. Despite advances in prevention methods such as PrEP (pre-exposure prophylaxis), low health literacy continues to hinder the understanding and uptake of these tools (Golub, 2018). Studies show that individuals with lower health literacy are less likely to know about or access PrEP, contributing to preventable HIV transmission (Mayer et al., 2008). This highlights how low health literacy can impact on the right to health and perpetuate health disparities.

Low health literacy can have significant consequences for mental health, an area where LGBTI+ individuals already face disproportionate challenges. The National Alliance on Mental Illness (NAMI) reports that LGBTI+ individuals are at least twice as likely to experience mental health conditions compared to their heterosexual counterparts. Limited understanding of mental health resources and stigma around mental health care can prevent LGBTI+ individuals from seeking support, exacerbating conditions like anxiety, depression, and suicidal ideation (Fredriksen-Goldsen et al., 2014).

Transgender individuals often require specialised healthcare related to hormone therapy, surgery, and mental health. However, studies indicate that transgender people frequently face barriers to obtaining accurate health information and competent care (Grant et al., 2011). This can lead to self-medication or seeking treatment from unregulated sources, which poses significant health risks and infringes on their right to safe, informed healthcare (Hafeez et al., 2017).

Notably, low health literacy has significant and multifaceted impacts on the human rights of LGBTI+ individuals. Addressing this issue is critical for reducing health disparities and ensuring that LGBTI+ communities can fully exercise their right to health.

Health literacy and human rights of people with low education

Health literacy, literacy and education are intrinsically linked (Sørensen et al., 2012). Individuals with lower educational attainment are more likely to have limited health literacy, which in turn affects their capacity to manage health conditions, comprehend treatment instructions, and engage in preventive care (Berkman et al., 2011). For those with limited education, the challenge is twofold: understanding health information and asserting their right to healthcare in a system that may seem complex and inaccessible.

The right to health is not just about access to medical treatment but includes timely, acceptable, and affordable healthcare of appropriate quality. For people with low education, low health literacy creates barriers to understanding health needs and navigating available healthcare options. Studies indicate that individuals with low health literacy are more likely to have worse health outcomes, such as higher rates of hospitalisations and greater prevalence of chronic diseases, compared to those with higher health literacy levels (Sørensen et al., 2015). This discrepancy highlights a critical gap in the realisation of the right to health.

Chronic diseases such as diabetes and hypertension require continuous management and adherence to treatment protocols. However, for those with limited education, understanding complex medical instructions and lifestyle modifications can be daunting. Health materials frequently use medical jargon or complex language that is difficult for the average person, let alone someone with limited educational attainment, to understand. This limits their ability to make informed health decisions and compromises their right to information.

The COVID-19 pandemic has been a stark illustration of how low health literacy affects public health. Misinformation and vaccine hesitancy were particularly prevalent among populations with lower education levels, driven by a lack of access to clear, understandable information (Kricorian et al., 2021). This not only endangered individual health but also the broader community, highlighting the essential role of health literacy in public health initiatives and the protection of human rights.

Schools provide a structured environment for developing not only functional health literacy but also interactive and critical health literacy according to Nutbeam (2000). With the increasing reliance on digital tools for accessing health information, schools play a vital role in teaching digital literacy as part of health education. Research by van der Vaart and Drossaert (2017) indicates that students need to develop skills to use digital resources effectively to find, evaluate, and apply health information. Schools that incorporate digital literacy training help students bridge the gap between traditional and digital health literacy.

Disparities in health literacy often correlate with disparities in general education (Sørensen & Okan, 2020). Hence, schools are critical for ensuring that health literacy education is equitable and accessible to all students, regardless of socioeconomic background. By embedding health literacy into the core curriculum, schools can help mitigate these disparities and provide all students with the tools needed to lead healthier lives.

School-based health literacy programs can extend beyond the classroom to engage parents and the wider community. Research suggests that when schools partner with parents in health education efforts, the benefits of increased health literacy extend to the family unit (Okan et al., 2020). This community-based approach can foster an environment that values and supports health literacy as part of everyday life. Hands-on experiences help reinforce health literacy skills by allowing students to practice accessing and using health information in practical settings (Dadaczynski et al., 2020).

In essence, low health literacy, particularly among those with low educational attainment, is a barrier to achieving health equity and upholding human rights.

Health literacy and human rights of poor (low-income) populations

The relationship between poverty and health is well-documented. People living in poverty face an array of challenges, from inadequate housing to food insecurity, that negatively impact their health. However, one of the most overlooked yet critical factors exacerbating health inequities among the poor is low health literacy. For those living in poverty, low health literacy presents significant barriers to achieving and maintaining good health.

Research shows that people with lower incomes are disproportionately likely to struggle with health literacy, resulting in worse health outcomes (Sørensen et al., 2015). The gradient underscores the link between social determinants of health, such as socioeconomic status, and disparities in healthcare access and quality.

For children living in poverty, clinicians can play a role in addressing various social determinants of health, including child maltreatment, access to child care and education, family financial stability, physical living conditions, social support within the family, intimate partner violence, maternal depression and family mental health issues, household substance abuse, exposure to firearms, and parental health literacy (Chung et al., 2016).

Low health literacy exacerbates barriers to accessing and navigating healthcare systems, which are already challenging for those facing financial hardship. This can lead to late-stage diagnoses, increased healthcare costs, and poorer prognoses, further entrenching the cycle of poverty and poor health (Berkman et al., 2011).

Barriers to accessing health care services may include treatment costs, beliefs and values related to health, limited health literacy, poor quality health care, provider stigma, and difficulties that made travel challenging (Abraham et al., 2020). Low health literacy among people living in poverty is more than just a public health challenge—it is a human rights issue.

Health literacy and human rights of homeless persons

Low health literacy among homeless populations is a significant yet under-researched barrier to achieving health equity. For homeless persons, low health literacy exacerbates existing barriers and as such it is a profound social challenge that intersects with health, economic stability, and human rights.

Homelessness inherently brings challenges that impede health literacy. Factors such as lack of formal education, high levels of stress, and limited access to healthcare and information resources create a perfect storm for low health literacy (Baggett et al., 2010). Even when homeless individuals do seek care, their interactions with healthcare providers are often rushed or inadequate, with little attention paid to ensuring comprehension. This dynamic leaves them less informed and less capable of managing their health effectively (Wen et al., 2007).

Chronic health issues, such as diabetes and cardiovascular disease, are prevalent among homeless populations. Effective management of these conditions requires understanding complex treatment plans, recognising symptoms, and adhering to medication regimens. For homeless individuals with low health literacy, these tasks are daunting. A study by Baggett et al. (2010) found that homeless individuals often struggle with adherence to medical treatments due to a lack of understanding and limited access to consistent care. The result is a cycle of poor health, increased emergency room visits, and preventable complications, highlighting the gap between their right to health and their lived reality.

Preventive care is essential for early detection and treatment of health issues, but low health literacy significantly reduces the likelihood that homeless individuals will engage in preventive measures. The inability to understand when and where to seek care leads to delayed diagnoses and increased severity of illnesses (Wen et al., 2007). For example, routine screenings and vaccinations are often neglected due to both a lack of awareness and logistical challenges such as transportation. This delay in preventive care not only worsens health outcomes but also places additional strain on public health systems, illustrating the far-reaching consequences of low health literacy.

Low health literacy can have profound effects on mental health, an area where homeless populations already face significant challenges. The stress of living on the streets, combined with the difficulties of accessing and understanding health information, can exacerbate mental health issues such as anxiety, depression, and post-traumatic stress disorder (PTSD). The inability to access mental health resources or understand how to seek help further isolates homeless individuals, impacting their mental well-being and infringing on their right to health and dignity (Biederman et al., 2019).

The COVID-19 pandemic starkly highlighted the vulnerabilities of homeless populations. Misinformation, low health literacy, and the difficulty of accessing accurate health information left many homeless individuals without the knowledge needed to protect themselves effectively. Social distancing, hygiene practices, and vaccine information were harder to disseminate and understand, leading to higher rates of infection and mortality within this group (Tsai & Wilson, 2020). This example underscores how low health literacy not only impacts individual health but can have public health consequences, highlighting the urgent need for inclusive health communication strategies.

Health literacy and human rights of persons with substance use disorders

Substance use disorders (SUDs) represent a significant public health crisis, affecting millions of individuals globally. Yet, a key barrier often overlooked in addressing the health and well-being of individuals struggling with addiction is low health literacy. For individuals dealing with addiction, health literacy is critical for understanding the nature of their disorder, available treatment options, and strategies for maintaining recovery. Understanding medical information related to addiction treatment, such as medication-assisted therapies (MATs) and harm reduction strategies, is essential for effective care. However, low health literacy among people with SUDs can lead to poor treatment adherence, higher relapse rates, and inadequate use of health services (Degan et al., 2019).

There are numerous barriers to health literacy among those struggling with addiction. For instance, the stigma surrounding addiction can make individuals hesitant to seek information or care, further isolating them from vital resources. This lack of engagement can perpetuate low health literacy and prevent people from learning about treatment options or harm reduction practices (Van Boekel et al., 2013). Furthermore, many individuals with SUDs come from disadvantaged backgrounds, where education and economic stability are limited. This socioeconomic disparity often correlates with lower health literacy levels.

The opioid crisis in the United States and other countries serves as a stark example of how low health literacy can exacerbate an already severe public health issue. The rapid proliferation of misinformation and misunderstanding about opioid use, treatment options, and overdose prevention has contributed to a surge in deaths. Studies have shown that individuals with limited health literacy are less likely to understand the risks of opioid use or the availability of lifesaving interventions like naloxone (Wagner, 2021). This gap in understanding not only endangers individuals but also impacts public health by increasing the spread of misinformation and reducing the efficacy of intervention programs.

Low health literacy among individuals with substance use disorders is a pressing issue that impacts their health outcomes, recovery potential, and human rights. Addressing this problem requires targeted health communication, community support, and policies that prioritise health literacy as part of comprehensive addiction treatment. By improving health literacy, it may empower persons with substance use disorders with the knowledge and skills they need to manage their health, improve treatment engagement, promote recovery.

Health literacy and human rights of unemployed

Unemployment poses significant challenges to individuals' health and well-being. It affects income, living standards, and access to necessities. Moreover, population groups not working and receiving economic public support have higher odds of inadequate health literacy competencies compared to those active in the labour force, considering age and socioeconomic factors (Svendsen et al., 2021).

Unemployed individuals are more likely to experience poor mental and physical health due to stress, financial insecurity, and social isolation (Paul & Moser, 2009). However, there is need to address health literacy needs of long-term unemployed persons that go beyond mental health literacy. Public health interventions should not only aim at improving health literacy scores, but also focus on how to help participants translate health literacy into practice. Moreover, population groups of interest should also be involved in all processes of designing interventions (Samkange-Zeep et al., 2022).

Health literacy and human rights of people with high multiple diseases

People with multiple diseases, also known as individuals with multimorbidity, are particularly vulnerable to low health literacy due to a range of interrelated factors that can significantly impact their health outcomes, access to care, and overall quality of life.

Living with multiple diseases is challenging due to the complexity of managing different treatments, appointments, and potential medication interactions.

Preventive measures, such as regular screenings and lifestyle adjustments, are also crucial for managing chronic conditions. However, people with poor health have higher risk of low health literacy according to the European health literacy surveys (Sørensen et al, 2015; MPOHL, 2021).

For people with multiple chronic diseases, understanding each individual disease and the pathological link between diseases, lifestyle changes, and collective treatment regimens to undertake effective self-management is a complex and challenging requirement (Dinh and Bonner., 2023). Effective management of multiple diseases often requires coordination among various healthcare providers. Low health literacy can make it difficult for individuals to understand the roles of different specialists and communicate effectively with their healthcare team. This lack of coordination can result in fragmented care, duplicative tests, and contradictory medical advice.

Importantly, the impact of low health literacy extends beyond physical health; it also affects mental well-being (Pedersen et al., 2023). Managing multiple diseases can be overwhelming, and low health literacy compounds the stress, anxiety, and feelings of helplessness that patients often experience. These mental health challenges are not only detrimental to overall health but also hinder the ability to engage proactively in one's care. The psychological toll of low health literacy contributes to a cycle where poor mental health further reduces the capacity to understand and manage health information, perpetuating vulnerability and poor outcomes.

Extensive health-related needs among people with multimorbidity may relate not only to the number of chronic diseases they suffer from, but also to their patient characteristics such as level of health literacy (Hopman et al., 2016). This should be taken into account, when identifying target groups for comprehensive support programmes.

Low health literacy might be considered an invisible barrier that hinders individuals with high morbidity and multiple diseases from accessing their right to health and participating fully in their care. This crisis calls for a collaborative approach, involving healthcare providers, policymakers, and community organisations to prioritise health literacy as a cornerstone of health equity. Addressing this issue not only improves individual health outcomes but also reinforces the fundamental human rights of some of society's most vulnerable members.

The cumulated findings in the vulnerability mapping showed how low health literacy is a cross-cutting concern of human rights in all 17 population groups at risk.

Health literacy and human rights regarding the AAAQ framework

The AAAQ framework —Availability, Accessibility, Acceptability, and Quality—provided a comprehensive approach for assessing the extent to which health systems uphold individuals' rights to health. The AAAQ framework emphasised that healthcare services and information must be available in sufficient quantity, accessible without discrimination, acceptable in terms of cultural appropriateness, and of high quality. Analysing the health literacy data generated as part of the vulnerability scan with use of the AAAQ framework highlighted both the gaps and opportunities in ensuring that populations, especially marginalised and at-risk groups, can fully exercise their right to health. The analysis also revealed important insights into how health systems can be restructured to better serve vulnerable populations. The four areas are described in detail below.

Table 3: Review of low health literacy concerning the human rights principles of availability, accessibility, acceptability, and quality.

Human right principle	**Current status**	**Gaps identified**	**Recommendations**
Availability Availability refers to the presence of sufficient health literacy resources and programs, including health information materials, educational programs, and training for healthcare providers.	Health literacy resources are available in many developed countries through public health systems, community organisations, and online platforms. However, in low- and middle-income countries, there is often a lack of dedicated health literacy programs and resources, particularly in rural areas and underserved communities.	Many health systems lack the resources to address health literacy directly. Health education materials may be scarce in areas with limited healthcare infrastructure, while information on preventive health measures is often unavailable outside major healthcare centres.	Investment in developing and distributing health literacy resources in underserved areas is essential. This could involve partnerships with community organisations, schools, and non-governmental organisations (NGOs) to create and disseminate locally relevant materials.
Accessibility Accessibility involves ensuring that health literacy resources are reachable and usable by all individuals, regardless of physical, economic, or informational barriers.	Although digital platforms have improved access to health information, digital literacy and internet access vary widely. Socioeconomic factors limit accessibility for low-income groups, the elderly, and those in remote locations. Language barriers also impede access to health information for non-native speakers, while disabilities (e.g., visual or hearing impairments) can make standard resources inaccessible.	Digital health literacy disparities are a significant barrier, as many online resources assume a baseline of digital access and competence. Additionally, a lack of health information in minority languages or formats for people with disabilities limits reach.	Accessibility could be improved by providing health information in multiple formats (e.g., print, audio, video) and languages, alongside digital literacy programs targeting low-access communities. Policies to support affordable internet access in underserved areas would also enhance accessibility.
Acceptability Acceptability refers to the cultural and social appropriateness of health literacy resources, ensuring they are respectful of local values, beliefs, and preferences.	Health literacy materials are often designed from a one-sise-fits-all perspective, which may not account for cultural, linguistic, or community-specific nuances. For example, health messages regarding family planning, nutrition, or mental health might conflict with local beliefs and practices, reducing acceptability and uptake.	Health literacy resources are sometimes perceived as culturally insensitive or irrelevant. Additionally, traditional health beliefs may conflict with messages conveyed in mainstream health literacy materials, leading to scepticism or non-adherence.	Health literacy initiatives should engage community leaders and culturally competent professionals to ensure that materials are tailored to the specific needs of the population. Co-designing resources with community input can enhance cultural relevance and acceptability.
Quality Quality ensures that health literacy resources are scientifically accurate, current, and presented in a way that facilitates understanding and practical application.	The quality of health literacy materials varies significantly. Many publicly available resources are evidence-based and regularly updated, but low-quality information (e.g., misinformation) is also prevalent, particularly online. Additionally, materials are often overly complex, lacking readability for those with low literacy levels.	Health literacy materials are frequently too technical, with limited efforts to simplify content or provide practical, actionable guidance. The spread of misinformation on social media further complicates the landscape, making it difficult for individuals to discern credible sources.	Health literacy materials should be reviewed by qualified professionals to ensure accuracy, with a focus on clear, concise language that meets health literacy standards. Simplifying complex concepts through visuals, infographics, and straightforward language can make information more accessible.

Availability of health resources and services

Availability referred to the presence of sufficient health literacy resources and programs, including health information materials, educational programs, and training for healthcare providers. Currently, health literacy resources are available in many developed countries through public health systems, community organisations, and online platforms. However, in low- and middle-income countries, there is often a lack of dedicated health literacy programs and resources, particularly in rural areas and underserved communities. However, many health systems lack the resources to address health literacy directly and in a tailored manner. Therefore, investment in developing and distributing health literacy resources in underserved areas is essential. This could involve partnerships with community organisations, schools, and non-governmental organisations (NGOs) to create and disseminate locally relevant materials.

Accessibility of health resources and services

Accessibility involved ensuring that health literacy resources and services are reachable and usable by all individuals, regardless of physical, economic, or informational barriers. Although digital platforms have improved access to health information, digital literacy and internet access vary widely. Socioeconomic factors limit accessibility for low-income groups, the elderly, and those in remote locations. Language barriers also impede access to health information for non-native speakers, while disabilities (e.g., visual or hearing impairments) can make standard resources inaccessible. Hence, digital health literacy disparities are a significant barrier, as many online resources assume a baseline of digital access and competence. Additionally, a lack of health information in minority languages or formats for people with disabilities limits reach. Therefore, accessibility could be improved by providing health information in multiple formats (e.g., print, audio, video) and languages, alongside digital literacy programs targeting low-access communities. Policies to support affordable internet access in underserved areas would also enhance accessibility.

Accessibility of health resources and services

Acceptability referred to the cultural and social appropriateness of health literacy resources, ensuring they are respectful of local values, beliefs, and preferences. Presently, health literacy materials are often designed from a one-size-fits-all perspective, which may not account for cultural, linguistic, or community-specific nuances. For example, health messages regarding family planning, nutrition, or mental health might conflict with local beliefs and practices, reducing acceptability and uptake. Moreover, health literacy resources are sometimes perceived as culturally insensitive or irrelevant. Additionally, traditional health beliefs may conflict with messages conveyed in mainstream health literacy materials, leading to scepticism or non-adherence. Importantly, health literacy initiatives should engage community leaders and culturally competent professionals to ensure that materials are tailored to the specific needs of the population. Co-designing resources with community input can help enhance cultural relevance and acceptability.

Quality of health resources and services

Quality ensured that health literacy resources are scientifically accurate, current, and presented in a way that facilitates understanding and practical application. The quality of health literacy materials varies significantly. Many publicly available resources are evidence-based and regularly updated, but low-quality information (e.g., misinformation) is also prevalent, particularly online. Additionally, materials are often overly complex, lacking readability for those with low literacy levels. Additionally, health literacy materials are frequently too technical, with limited efforts to simplify content or provide practical, actionable guidance. The spread of misinformation on social media further complicates the landscape, making it difficult for individuals to discern credible sources. Therefore, health literacy materials should be reviewed by qualified professionals to ensure accuracy, with a focus on clear, concise language that meets health literacy standards. Simplifying complex concepts through visuals, infographics, and straightforward language can make information more accessible.

Health literacy is also interconnected with other rights, such as the right to education and the right to information. Addressing health literacy through the AAAQ framework underscores the importance of supporting broader educational and informational rights to create a foundation for understanding health information. Tailored interventions that address these specific challenges can bridge the gap and ensure equitable access to health information. Sustainable health literacy programs that provide continuous education and support are essential for long-term improvements, especially in communities facing ongoing challenges, such as the poor and unemployed.

Low health literacy jeopardises human rights

Synthesising the insights from the vulnerability mapping and the analysis of 'availability, accessibility, acceptability, and quality' it becomes clear that low health literacy jeopardises the realisation and protection of human rights as outlined in several key international and regional human rights instruments. A summary is provided in Table 4 and described below.

Table 4: Health literacy is a human rights concern

Human rights mandate	Focus	Health literacy is a human right concern
Universal Declaration of Human Rights **UDHR**	The right to a standard of living adequate for health and well-being, including access to medical care (United Nations, 1948).	Yes
International Covenant on Economic, Social, and Cultural Rights **ICESCR**	The principles of availability, accessibility, acceptability, and quality of healthcare services	Yes
European Convention on Human Rights	Right to life (§ 2) Prohibition of torture and inhuman treatment (§ 3)	Yes

ECHR	Right to privacy (§ 8) Prohibition of discrimination (§ 14)	
The Convention on the Protection of Children against Sexual Exploitation and Sexual Abuse	Sexual exploitation and abuse	Yes
The Istanbul Convention on preventing violence of women	Prevention of violence against women	Yes
The European Convention on the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (1987)	Prevention of torture and inhuman or degrading treatment of punishment.	Yes
European Social Charter	Right to protection of health (§ 11) Right to social security (§ 12) Right to social welfare services (§ 13) Rights of the elderly (§ 23) Rights of persons with disabilities (§ 15)	Yes
Convention on Human Rights and Biomedicine (Oveido Convention)	Informed consent (§ 5) Prohibition of discrimination (§ 11) Medical confidentiality (§ 10)	Yes

Universal Declaration of Human Rights (UDHR)

The UDHR, adopted in 1948, asserts in Article 25 that everyone has the right to a standard of living adequate for health and well-being, including medical care and social services. Low health literacy undermines this right by limiting individuals' ability to access, comprehend, and act on essential health information, leading to disparities in healthcare access and outcomes. This gap in understanding compromises individuals' ability to make informed health decisions, violating their right to the highest attainable standard of health and well-being.

International Covenant on Economic, Social, and Cultural Rights (ICESCR)

The ICESCR emphasises the right to health in Article 12, which obligates states to ensure that health services and information are available, accessible, acceptable, and of high quality (AAAQ framework). Low health literacy directly impacts these principles by creating barriers to understanding health services and navigating healthcare systems, thus impeding an individual's ability to seek and receive appropriate care. Without targeted measures to improve health literacy, individuals are unable to fully exercise their rights as outlined in the covenant.

European Convention on Human Rights (ECHR)

Although the ECHR primarily protects civil and political rights, low health literacy can intersect with rights such as the right to life (Article 2) and prohibition of inhuman or degrading treatment (Article 3). Inadequate health literacy may prevent individuals from understanding life-saving information or from knowing their rights when faced with substandard healthcare, contributing to situations that may lead to preventable harm or inadequate medical treatment.

The Convention on the Protection of Children against Sexual Exploitation and Sexual Abuse

This convention aims to safeguard children from sexual exploitation and abuse by ensuring their protection, rights, and well-being. Low health literacy among caregivers, educators, or children themselves can hinder awareness and preventive measures against such exploitation. Without the ability to understand relevant information and access support systems, children and their guardians may not recognise or respond appropriately to risks, jeopardising the effectiveness of the convention’s protective measures.

The Istanbul Convention on Preventing Violence Against Women

The Istanbul Convention focuses on preventing and combating violence against women. Low health literacy can obstruct women’s ability to understand their rights and the resources available to protect them from violence. If women cannot comprehend legal and healthcare options due to inadequate health literacy, it compromises their ability to seek help, assert their rights, and access protective services, undermining the convention’s goal of safeguarding women against violence.

European Convention on the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (1987)

This convention ensures that individuals are protected from inhumane treatment, particularly in places of detention. Low health literacy among detainees can prevent them from understanding their rights and the means to report or challenge mistreatment, putting them at a higher risk of suffering from abusive or degrading treatment without recourse.

European Social Charter

The European Social Charter guarantees social and economic rights, including the right to protection of health (Article 11). Low health literacy impedes individuals' ability to access and benefit from social services and healthcare, compromising their protection under the charter. It exacerbates health disparities, affecting vulnerable populations disproportionately and preventing them from enjoying the right to health and well-being as mandated by the charter.

Oviedo Convention (Convention on Human Rights and Biomedicine)

The Oviedo Convention specifically addresses human rights in the context of biomedicine, with provisions such as informed consent and prohibition of discrimination. Low health literacy compromises the principle of informed consent because individuals may not fully understand medical procedures, risks, or treatment options. This gap undermines their ability to make voluntary and informed decisions, which is a core component of the right to health and personal autonomy safeguarded by the convention.

Discussion

TThe gap analysis and needs assessment provided valuable new insights into the scope of low health literacy and its implications for human rights. It became clear how limited health literacy poses significant challenges to the fulfillment and protection of human rights as outlined in these key international and regional instruments.

Firstly, the vulnerability scan revealed that inadequate health literacy among vulnerable populations has significant human rights implications, such as the lack of access to understandable and accessible health information. This lack constitutes a violation of an individual's right to the highest attainable standard of health. The scan also highlighted substantial health disparities that exacerbate existing inequalities, leading to poor health outcomes and perpetuating cycles of poverty and vulnerability. People within these vulnerable groups remain marginalised in health systems, resulting in their exclusion from essential healthcare services and further entrenching their disadvantaged status.

Secondly, although health literacy is recognised as a key component of public health and an essential element of the right to health, the AAAQ (Availability, Accessibility, Acceptability, and Quality) analysis underscored that health literacy resources are still not fully meeting these criteria for all. Marginalised populations, in particular, face compounded barriers across all dimensions of the AAAQ framework. If individuals are unable to access, understand, evaluate, and apply health information, their capacity to make informed health choices is severely compromised. This limitation not only undermines their autonomy but also restricts their ability to exercise their right to health effectively.

Notably, the gap analysis revealed how low health literacy essentially jeopardises a range of human rights conventions such as the Universal Declaration of Human Rights, the International Covenant on Economic, Social, and Cultural Rights, the European Convention on Human Rights, the Convention on the Protection of Children against Sexual Exploitation and Sexual Abuse, the Istanbul Convention on preventing violence of women, the European Convention on the Prevention of Torture and Inhuman or Degrading Treatment or Punishment, the European Social Charter and the Oveido Convention on Human Rights and Biomedicine.

Health literacy is a human rights concern not only a public health concern

While low health literacy is increasingly recognised as a significant public health issue (Sørensen et al., 2012, Nutbeam and Lloyd, 2021) this study emphasised that low health literacy extends beyond public health to become a fundamental human rights concern. At the heart of the matter, low health literacy compromises the right to health, as defined by international human rights instruments such as the Universal Declaration of Human Rights (UDHR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR). The right to health encompasses not only access to healthcare services but also the ability to understand and make informed decisions regarding one's health and treatment. Without adequate health literacy, individuals cannot exercise this right effectively, making them vulnerable to poorer health outcomes and exacerbating existing inequalities.

Low health literacy disproportionately affects marginalised and vulnerable populations, including those with limited education, older adults, minority communities, and non-native speakers. This contributes to a cycle of disadvantage where these groups are unable to access the information they need, understand medical advice, or participate in health-related decision-making. This lack of empowerment can lead to violations of human dignity, autonomy, and equity—core principles enshrined in human rights frameworks.

Moreover, low health literacy impedes individuals' ability to navigate complex healthcare systems, comply with treatment plans, and engage in preventive health behaviours. These challenges result in significant public health consequences, such as increased hospitalisations, poorer health outcomes, and higher healthcare costs, reinforcing the need for systemic interventions that uphold human rights through accessible health education and resources.

Addressing low health literacy as a human rights concern compels governments and institutions to take a rights-based approach, ensuring that health information and services are available, accessible, acceptable, and of high quality for all. By promoting health literacy, societies can empower individuals, reduce health disparities, and fulfill the commitment to equitable healthcare that respects and protects human rights.

In summary, the accumulated findings of the gap analysis indicate that health literacy is not only a public health concern but also a human rights concern. A call to action is needed to strengthen health literacy responsiveness and health literacy of populations and communities by applying a human rights-based approach to overcome vulnerabilities and meet the needs of people at risk. In this way, health literacy and human rights may be safeguarded in the future.

A call to action to bridge the gap

Bearing in mind the serious gap outlined in the analysis with regards to health literacy limitations and human rights it is important to consider how it is possible to move from the current state where low health literacy is a human rights concern to a desired future state where health literacy and human rights are safeguarded.

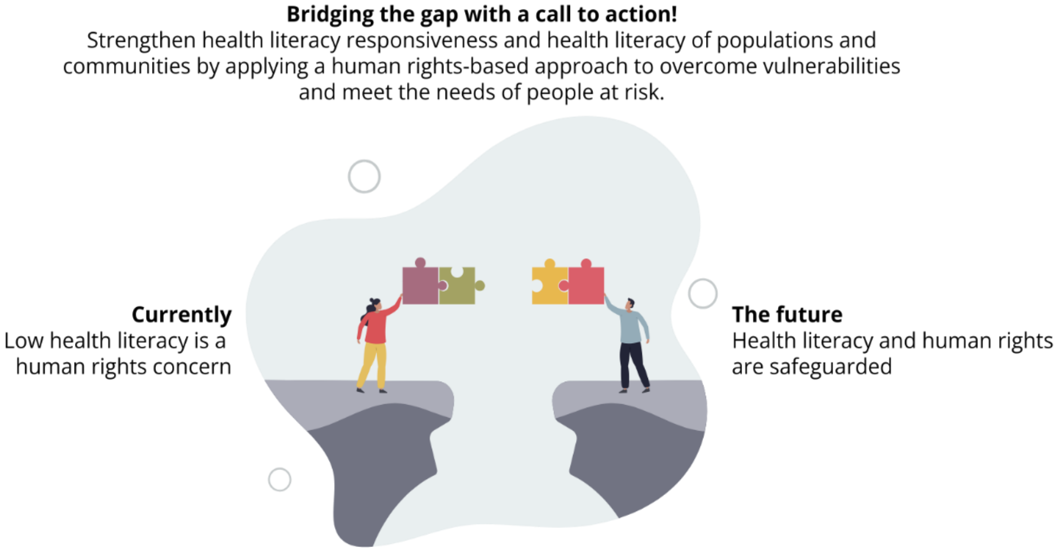

Figure3: Bridging the gap of low health literacy to safeguard human rights.

The current state

Interestingly, in the current state health literacy is widely understood as the ability to obtain, process, and understand basic health information and services needed to make informed health decisions. However, the needs assessment shows that in many vulnerable populations, health literacy is often limited due to barriers such as:

- Limited educational opportunities.
- Cultural and language differences.
- Lack of access to healthcare services.
- Poverty and economic hardship.
- Stigmatisation and discrimination.

Many individuals in these groups face difficulties navigating healthcare systems, understanding medical instructions, or recognising the importance of preventive care, leading to higher rates of preventable diseases, misdiagnoses, and poor health outcomes (Berkman et al., 2011, Sørensen et al., 2015).

The desired future state

In a desired future state, however, health literacy is closely linked to the right to health, as recognised by the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights as well as other human rights mandates. Hence, the desired future state is one where health literacy is safeguarded by:

- Equitable access to health information and services is provided to all, regardless of background.
- Health literacy programs are tailored to the needs of diverse populations, considering cultural and linguistic diversity.

- Healthcare systems are inclusive and accommodate the unique needs of vulnerable populations.
- Empowerment of individuals to make informed health decisions becomes a priority in public health initiatives.

In this ideal future state, all individuals would be able to understand their health rights, access relevant services, and make informed decisions about their health and well-being. This development would imply a progress from functional health literacy to interactive health literacy and critical health literacy outlined by the seminal work of Nutbeam (2000).

- **Functional health literacy**: Basic reading and writing skills to understand health information.
- **Interactive health literacy**: Advanced cognitive and social skills that enable individuals to engage actively in their health.
- **Critical health literacy**: The ability to critically analyse information and use it to exert greater control over life events and situations.

Critical health literacy is essential for safeguarding human rights as it empowers individuals to make informed decisions, challenge injustices, advocate for themselves and others, and engage in efforts to reduce health disparities. It fosters autonomy, promotes social equity, and enhances the ability of individuals and communities to participate meaningfully in their health and well-being, ensuring that human rights are respected and upheld (Nutbeam, 2000, 2008).

Moving from the current state to the desired future state would demand a call to action. Bridging the gap requires a coordinated, multi-sectoral approach that leverages community engagement, inclusive policymaking, and evidence-based interventions. These efforts are essential to ensure that health literacy is recognised as a public health concern as well as a human rights concern.

A rights-based approach is crucial in addressing the challenges, positioning health literacy as an essential entitlement rather than an optional service. Initiatives to enhance health literacy must be inclusive and consider cultural diversity, language barriers, varying literacy levels, and economic obstacles that may limit access to information and healthcare services.

Emerging solutions, such as digital health literacy programs, community-led health education initiatives, and the integration of health literacy into school curricula, show significant potential (Dadaczynski et al., 2020). However, for these strategies to succeed, sustained investments and policies that prioritise vulnerable populations are necessary. Addressing the structural barriers to health literacy is key to creating equitable health systems where everyone, regardless of background, can access, understand, and utilise health information and services effectively (Koh et al., 2013, Sørensen et al., 2021).

Importantly, the move from the current state to the desired state change the focus from limited health literacy being a problem of the individual to being a societal problem of which governments are responsible for seeking solutions according to the conventions on human rights. Moreover, the targeted approaches related specific needs of various population groups must be combined with ‘universal health literacy precautions’ which is a strategy helping all to succeed in their health journeys by systematically reducing complexity and decrease barriers in the healthcare environment and beyond (Brach, 2024).

Health literacy actions for social justice and a sustained impact

Bearing the mind the findings of this study, health literacy action planning and implementation is not just another public health strategy; instead, it should be seen as a crucial mechanism for safeguarding human rights and social justice by reducing inequalities. Implementing comprehensive health literacy strategies is essential for building a society where human rights are protected and upheld with respect for human dignity.

Nutbeam (2008) posits that enhancing health literacy can lead to greater empowerment, enabling individuals to take control of their health and engage more actively in health-related decision-making processes. This empowerment is particularly crucial for vulnerable populations who often face systemic barriers to accessing health information and services.

Freedman et al. (2009) highlight that health literacy interventions can be a means of advancing social justice by addressing the root causes of health inequities. For example, community-based health literacy programs that are culturally and linguistically appropriate can improve access to information and services for marginalised groups, thus supporting their right to health and contributing to broader efforts to reduce health disparities.

Brach et al. (2012) introduced the idea of ‘health literate organizations’ to bridge inequity in healthcare environments in a systemic way. This approach has since been developed further to embrace not only healthcare providers but also schools, workplaces and other settings (Brach et al., 2012; Elmer et al., 2021, Hochmut and Sørensen, 2021).

This study revealed how people in vulnerable situations may be discriminated against with regards to health literacy and their human rights. According to Gazard et al., (2018) future research should focus on how differing levels of discrimination (e.g. everyday, major and anticipated) interrelate to influence health and subsequent engagement with health services longitudinally, to understand how inequalities may be generated and perpetuated, particularly among those with multiple disadvantaged statuses. This kind of research would benefit from including the health literacy perspectives to shed light on the scope and scale of limited health literacy in relation to discrimination.

However, this way of systemic improvement of health literacy research, policy and practice requires a long-term plan because it involves comprehensive changes that span multiple sectors, require cultural shifts, and need sustained investment in education, training, and policy. Besides, short-term and medium-term gains are also important to bridge between the current state and the desired future state. Hence, to make a sustained impact actions may be planned with various timeframes in mind as exemplified below.

- **Short-term (0-6 months)**: Public campaigns, workforce training, etc.
- **Medium-term (6-12 months):** Community-based workshops, digital health literacy interventions, etc.
- **Long-term (12-36 months or longer):** Health literacy action plans and strategies, co-designed, culturally appropriate programmes to promote health literacy

Inclusive interventions to bridge health literacy gaps

The World Health Organization has called for a global effort to improve health literacy. The Shanghai Declaration, for instance, emphasised the importance of health promotion in achieving the Sustainable Development Goals (SDGs) and outlines commitments to strengthen health literacy, empower individuals, and foster partnerships for sustainable development (2016).

Inclusive health literacy actions are needed to create meaningful, lasting impact. A list of examples is provided to showcase how health literacy is implemented around the world.

Table 5: Examples of interventions to promote health literacy with sustainable impact.

Health literacy focus	Intervention	Example
Plain language communication initiatives	Implementing plain language policies in healthcare settings to ensure that all written and spoken communication is easy to understand, regardless of a person's literacy level.	The Joint Commission, which accredits healthcare organisations in the United States emphasises the importance of health literacy and clear communication as part of its accreditation standards.
Culturally and linguistically appropriate services (CLAS)	Providing health information and services in multiple languages and culturally appropriate formats to ensure that all individuals, regardless of their cultural or linguistic background, can understand and use health information.	In Australia, the Multicultural Health Communication Service (MHCS) provides translated health information in over 100 languages and culturally tailored health promotion materials. This service helps non-English speaking populations access and understand critical health information, supporting their right to health literacy.
Community health worker (CHW) Programs	Training and deploying community health workers who can provide health education, support, and advocacy within their communities, particularly in underserved areas.	The *Promotores de Salud* program in the United States involves Spanish-speaking community health workers who deliver health education and services to Latino communities. These CHWs help bridge the gap between healthcare providers and patients, improving health literacy and access to care for marginalised populations.
Health literacy education in schools	Incorporating health literacy into school curricula to equip students with the skills needed to navigate the healthcare	In Canada, the "Health and Physical Education" curriculum in Ontario includes health literacy as a key component. Students learn about

	system and make informed health decisions from a young age.	accessing health information, understanding health risks, and making healthy choices, which promotes their long-term health and well-being.
Digital health literacy initiatives	Providing digital tools and training to help individuals, especially those in low-resource settings, access and understand health information online.	The European Union's "Digital Health Literacy" project trains older adults and low-income populations to use digital health resources, such as online health portals and mobile health apps. This initiative improves access to health information and supports individuals in managing their health.
Legal frameworks supporting health literacy	Enacting laws and policies that recognise and promote health literacy as a fundamental human right, ensuring that healthcare systems are accountable for providing accessible and understandable health information.	The United Kingdom’s Equality Act 2010 includes provisions that require public services, including healthcare, to make reasonable adjustments for individuals with disabilities, including those with low health literacy. This ensures that healthcare information and services are accessible to all, supporting their right to health literacy.
Patient-centred care models	: Developing healthcare models that focus on patient engagement, shared decision-making, and personalised communication to improve health literacy.	The "Ask Me 3" program encourages patients to ask three specific questions during medical appointments to ensure they understand their health conditions and treatments. This patient-centred approach empowers individuals to take an active role in their healthcare, improving their health literacy and overall health outcomes.
Health literacy campaigns and public awareness	Launching public awareness campaigns to educate the general population about the importance of health literacy and how to improve it.	The "Health Literacy Month" campaign, observed annually in October, raises awareness about the importance of health literacy through events, workshops, and media outreach. It encourages healthcare organisations and communities to prioritise health literacy and implement strategies to make health information more accessible.
Health information kiosks and centres	Establishing easily accessible health information kiosks or centres in community spaces, such as libraries, malls, and community centres, to provide reliable and understandable health information to the public.	The city of Toronto partnered with local health authorities and non-profit organisations to establish “Community Health InfoPoints”—kiosks and centres strategically located in community spaces such as public libraries, malls, and community centres. These kiosks serve as a bridge between public health services and the community by providing user-friendly, up-to-date health resources.
Inclusive design in health services	Designing healthcare environments and services that are accessible and navigable for all individuals, including those with disabilities or low literacy levels.	The "Accessible Information Standard" in the UK requires all NHS organisations to provide information in formats that can be understood by people with disabilities, including braille, easy-read, and large print. This ensures that health information is accessible to everyone,

		supporting their right to understand and manage their health.
Mental health literacy support in communities	Providing timely, inclusive mental health support when people are in need	“Headspace” in Denmark is an initiative for young people in need of advice on mental health. It is anonymous and youth can join from the street or use the chat or call a hotline. It is free of charge. The initiative meet the young people with guiding support at their own terms.

These examples highlight how health literacy initiatives can serve as vital interventions to uphold human rights, particularly the right to health. Long-term planning ensures that initiatives are thorough, adaptable, and capable of addressing evolving challenges and disparities. By committing to a sustained approach, governments and organisations can create a health-literate society where individuals are better equipped to make informed health decisions, contributing to overall public health and the safeguarding of human rights.

Policy implications regarding health literacy and human rights

Promoting health literacy is increasingly seen as a strategy for achieving social justice and reducing health inequalities. However, acknowledging health literacy as a human rights concern has significant policy implications that shape how governments, institutions, and organisations prioritise and implement public health initiatives. The call to action implies that governments and policymakers are encouraged to integrate health literacy into public health strategies and to ensure that health information and services are accessible to all, particularly vulnerable populations.

Importantly, it would shift the focus from viewing health literacy as a personal responsibility to seeing it as a shared obligation between individuals, healthcare providers, and policymakers. This approach fosters a more equitable, inclusive, and informed society, where everyone has the means to understand and make decisions about their health, contributing to better public health outcomes and the upholding of human dignity and rights. The comprehensive framework for building systemic capacity (Figure 4) may help to support policymakers in the policy development process (Sørensen et al., 2021).

Recognising health literacy as a human right necessitates the development of laws and regulations that guarantee access to clear, comprehensive health information for all individuals. This means enacting policies that mandate plain language in health communication, ensure transparency, and require that health information be accessible to people of varying literacy levels and languages. Governments would need to adopt legislative measures that hold healthcare providers and public health authorities accountable for providing understandable and actionable information.

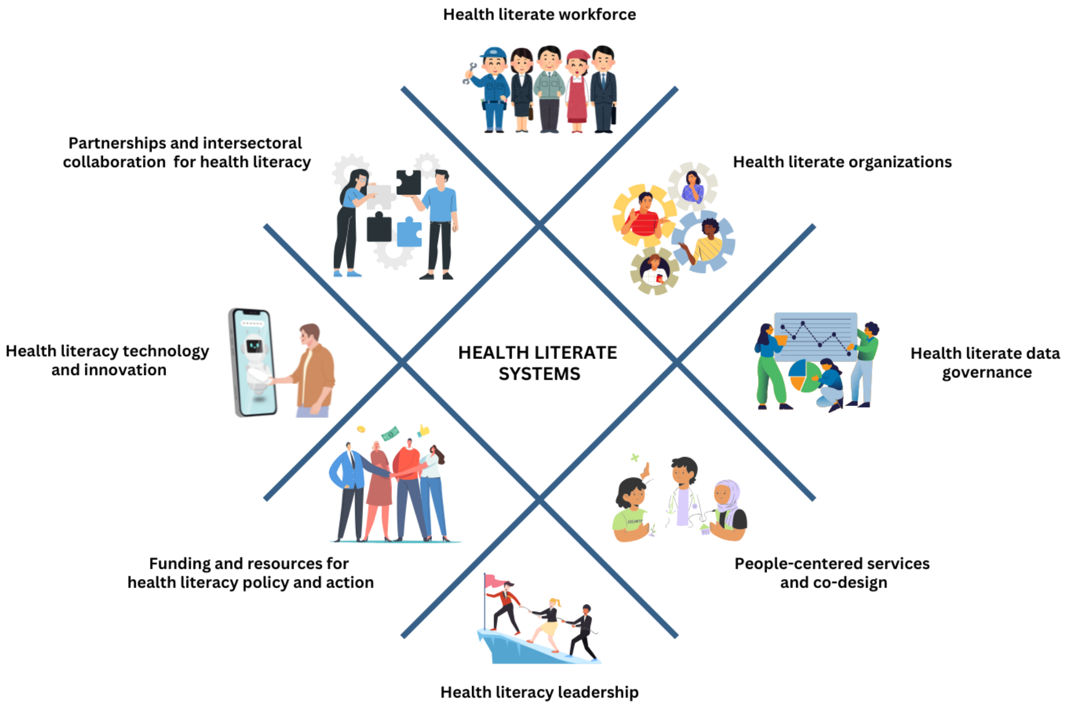

Figure 4: Building systemic health literacy capacity (Sørensen et al., 2021).

As an example, the Government of Australia has been involved in this policy agenda since 2014 where they adopted a statement to improve health literacy. This statement emphasised the importance of health literacy in ensuring safe and high-quality care and outlines strategies for embedding health literacy into healthcare systems, ensuring effective communication, and integrating health literacy into education (Australian Commission on Safety and Quality in Health Care, 2014).

Health system policy reforms would also need to ensure that healthcare systems are designed to be health literate. This includes training healthcare professionals to communicate effectively with patients, use plain language, and employ teach-back methods (Yen and Leasure, 2019) to confirm understanding. Healthcare policies should incorporate health literacy assessments and interventions into standard care practices, emphasising patient-centred communication as a fundamental aspect of healthcare delivery.

In this regard, the Irish Department of Health has collaborated with academic partners as well as community partners such as the National Adult Literacy Agency to develop guidelines and standard for good practices like the comprehensive Literacy Audit for Healthcare Settings to assist healthcare providers in creating more accessible and literacy-friendly environments. This audit serves as a practical guide, offering a toolkit and guidelines to help healthcare settings become health literacy-friendly.

Investment in health literacy requires additional means. Hence, the acknowledgement of health literacy as a human right concern would require governments and institutions to allocate sufficient funding and resources to develop, implement, and sustain health literacy programs along with monitoring mechanisms to follow progress. Unfortunately, so far, only a few governments around the world have provided sustained long-term funding to facilitate health literacy strategies and action plans. More advocacy is warranted to strengthen the buy-in among decisionmakers.

Should health literacy be a human right?

Health literacy is not currently recognised as an independent human right under international law. However, it is considered an essential component of existing human rights, such as the right to health, the right to information, and the right to education. However, the question of whether health literacy should be considered a human right is compelling. The findings in this gap analysis indicate that health literacy is a human rights concern in many different population groups and in many different contexts. Hence, the serious impact on health and human rights may call for a change.

Nevertheless, while recognising health literacy as a human right is aspirational, it may pose challenges in terms of implementation. Governments and institutions would need to invest significant resources in education, community outreach, and health communication strategies. In turn, some argue that health literacy does not need to be a separate right but should be integrated more explicitly into the right to health and the right to education. This approach would reinforce the importance of health literacy without creating new, potentially overlapping legal obligations.

All in all, while health literacy may not currently be recognised as an independent human right, there is a strong case for its acknowledgment as an essential component of the right to health, information, and education. Emphasising health literacy within these existing rights frameworks would help ensure that individuals are equipped with the knowledge and skills necessary to make informed decisions about their health, ultimately promoting health equity and empowering communities. In addition, recognising the importance of health literacy could drive policies and actions that reduce health disparities and protect individuals' rights to health and well-being from a systemic point of view.

The gap analysis suggests that action is needed to change the status quo. Time will show how the political discourse on health literacy and human rights will eventually develop in the future. Based on this needs assessment there is no doubt that action is needed.

Concluding remarks

The human rights-based needs assessment of health literacy revealed significant challenges, particularly marginalised and vulnerable populations. The gaps were recorded for a wide range of human rights mandates including the Universal Declaration of Human Rights, the International Covenant on Economic, Social, and Cultural Rights, the European Convention on Human Rights, the Convention on the Protection of Children against Sexual Exploitation and Sexual Abuse, the Istanbul Convention on preventing violence of women, the European Convention on the

Prevention of Torture and Inhuman or Degrading Treatment or Punishment, the European Social Charter and the Convention on Human Rights and Biomedicine.

The gap analysis was explorative using a methodology that fitted the conditions of a rapid review of data. Nonetheless, it was guided and conducted by health literacy and human rights experts and the data was derived from scientific databases and official policy platforms to inform the comprehensive vulnerability scan and analysis of human rights principles with regards to low health literacy. However, more research is warranted to study associations of health literacy and human rights more in-depth.

Closing the gaps in health literacy for vulnerable populations is not only a public health priority but a human rights imperative including a moral obligation to uphold the human rights of those most vulnerable in the societies. By addressing the structural, cultural, and educational barriers that prevent these populations from accessing and understanding health information and services as well as by applying the strategy of universal health literacy precautions, equity and social justice can be promoted to ensure that all individuals can exercise their right to health.

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