2021 Health Literacy Study:

People in NSW Prisons and a High Secure Forensic Mental Health Setting

Justice Health and
Forensic Mental Health Network

NSW GOVERNMENT

Justice Health and Forensic Mental Health Network
1300 Anzac Parade
Malabar NSW 2036

PO Box 150
Matraville NSW 2036

Phone: + 61 2 9700 3000
Fax: + 61 2 9700 3493

www.justicehealth.nsw.gov.au

Copyright © Justice Health and Forensic Mental Health Network

This work is copyright. It may be reproduced in whole or part for study or training purposes subject to the inclusion of acknowledgement of the source. It may not be reproduced for commercial usage or sale. Reproduction for purposes other than those indicated above, require written permission from Justice Health and Forensic Mental Health Network.

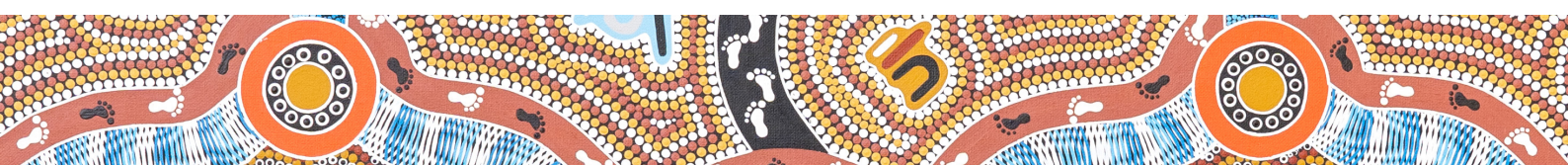
Disclaimer: Content within this publication was accurate at the time of publication, May 2022.

SHPN: (JHFMHN) 210771
ISBNs: 978-1-76081-907-1 (print) 978-1-76081-908-8 (online)

For further copies of this report or queries regarding the content, please contact:

Research Unit
Justice Health and Forensic Mental Health Network
1300 Anzac Parade
Matraville NSW 2036
Phone: + 61 2 9700 3016
Email: JHFMHN-ResearchUnit@health.nsw.gov.au

Design and Print: Pinnacle Design www.pinnacledesign.com.au



2021 Health Literacy Study:

People in NSW Prisons and a High Secure Forensic Mental Health Setting

Table of Contents

Glossary

Aboriginal patient	an individual who identified as Aboriginal, Torres Strait Islander or both
Civil patient	a high-risk civil patient that requires secure treatment beyond what can be provided within civil psychiatric units
Custodial patient	an individual who has been on remand or sentenced and in the custody of Corrective Services NSW
Forensic patient	an individual who: (1) the courts have found unfit to be tried for an offence and have ordered to be detained in a correctional centre, mental health facility or other place; (2) has a nominated limiting term and the courts have ordered to be detained in a prison, hospital or other place; (3) the courts have found the act proven but the individual not criminally responsible due to mental health or cognitive impairment
Health literacy	the cognitive and social skills that determine an individual's motivation and ability to gain access to, understand and use information to promote and maintain good health
Life sentence	a custodial sentence that is served to the length of an individual's natural life
Patients	any individual (inmate, prisoner or forensic patient) who is provided care by the Justice Health and Forensic Mental Health Network

Abbreviations

95% CI	95% confidence interval
ABS	Australian Bureau of Statistics
BOCSAR	NSW Bureau of Crime Statistics and Research
CSNSW	Corrective Services New South Wales
HLQ	Health Literacy Questionnaire
MDT	multidisciplinary team
NiC	nurse in charge
NSW	New South Wales
NSW Health	New South Wales Health
PAS	Patient Administration System
PEaPS	Patients' Experiences and Perceptions Study
SD	standard deviation

List of Tables

List of Figures

Acknowledgements

We are indebted to the following individuals and organisations for their support, input and assistance in developing and implementing the *2021 Health Literacy Study: People in NSW Prisons and a High Secure Forensic Setting* and preparing this report:

Investigators

Dr Julia Bowman, Scott Gill, Panayiota Zingirlis, Dr Reem Zeki, Dr Sharlene Goodhew, Amy Lewandowski, Vicki Archer, Grantley Creighton and Matthew Trindall.

Operational support

Wendy Hoey, Rajiv Anand, Michelle Eason, Rowena Stanley, Keeley Smith, members of the Patients' Experiences and Perceptions Study Phase 2 Aboriginal Community Reference Group and all Justice Health and Forensic Mental Health Network Nurse Managers, Nursing Unit Managers and staff for supporting the research team.

Corrective Services NSW

Peter Severin, Kevin Corcoran and all the Corrective Services NSW General Managers, Managers of Security and their staff on the ground for assisting in coordinating and implementing the study.

Participants

Most importantly, we gratefully acknowledge the participants, without whom this study would not have been possible.

Foreword

The Justice Health and Forensic Mental Health Network (the Network) is committed to delivering evidence-based, quality and safe healthcare. Therefore, the Network has continued to conduct high-quality research to inform decision-making, service delivery and planning, patient care and policy development.

The *2021 Health Literacy Study: People in NSW Prisons and a High Secure Forensic Setting (2021 Health Literacy Study)* is the first comprehensive profile of the health literacy strengths and weaknesses of Network patients detained in New South Wales's publicly operated correctional centres and at a high secure Forensic Hospital. This report is the first of its kind globally in these contexts using a multidimensional instrument to investigate the health literacy of these two vulnerable population groups.

The patient-centred approach of engaging with patients and including them in evaluating healthcare services provides the Network with the opportunity to collect data on key performance indicators and patient experience data relevant and useful to monitor its patient population. Additionally, it helps the Network design health care that is directly associated with improving the patients' outcomes. This report is part of a broader initiative by the Network to provide information about patients' experiences as part of the Patients' Experiences and Perceptions Study (PEaPS).

In 2016, the Research Unit commenced a two-phase mixed methods study to redesign how the Network measured and reported patients' health care experiences. Phase 1 of the PEaPS (PEaPS Phase 1), a qualitative study, was used to inform the development of a contemporary survey with direct input from patients as research participants to help the Network better understand its patients' experiences with healthcare services while in custody. Findings from PEaPS Phase 1 were used to develop a quantitative questionnaire for PEaPS Phase 2. Throughout the development process, a gap in patients' health literacy was identified. The concepts identified in Phase 1 were linked to not only the patients' experiences of healthcare services, but also perceived understanding, access and motivation to engage with the healthcare system.

With the Network's vision of *returning healthier patients to their communities* and strategic directions, the use of a validated health literacy instrument, the Health Literacy Questionnaire (HLQ), as a means of collecting data is an effective way of partnering and engaging with patients to drive improvements in health care. Results from the *2021 Health Literacy Study* identified that the Network's patients have several health literacy strengths and weaknesses, particularly compared to the health literacy of the general Australian population.

The Network's commitment to providing the best possible health care to its patients remains the key focus. The Network is confident that by using the evidence from the *2021 Health Literacy Study* to inform policies and practices, it will be able to continue to deliver improved health outcomes for patients in secure settings in New South Wales.

Wendy Hoey
Acting Chief Executive

Executive Summary

The *2021 Health Literacy Study: People in NSW Prisons and a High Secure Forensic Setting* report *(2021 Health Literacy Study)* is the first study that aims to investigate and generate a health literacy profile of people in New South Wales prisons and a forensic mental health setting. The study uses the Health Literacy Questionnaire (HLQ), which is a multidimensional health literacy tool developed and validated in an Australian health context (Osborne et al., 2013).

A total of 1222 custodial patients were invited to participate in the *2021 Health Literacy Study*, of which 533 (43.6%) agreed to participate in the study. Of all the approached custodial patients, 473 (38.7%) completed the interview, with two participants excluded from data analysis due to missing data. A total of 94 Forensic Hospital patients were invited to participate in the *2021 Health Literacy Study*, of which 49 (52.1%) patients agreed to undertake an interview. Of all the approached forensic patients, 35 (37.2%) completed the interview.

Results are presented separately for the two participant samples, gender and Aboriginal identity (Aboriginal or non-Aboriginal). The current report presents a descriptive analysis of data only because the intention is to provide an overall profile of the participant samples. Custodial and forensic participant results have not been compared due to the fundamental differences between the prison and The Forensic Hospital environments. Further statistical analysis is planned to examine relationships between variables and comparisons between the current participant samples and proposed community samples.

Results were weighted to account for the over-representation of non-Aboriginal and female participants recruited. The weighting ensured that findings in this report for the total population, Aboriginal people or gender groups reflect all data gathered but avoid the potential for bias by disproportionate numbers of participants in specific demographic groups.

Key Findings

Custodial Participants

Sociodemographic

The median age of custodial participants was 38 years. Four out of five (81.3%) custodial participants were male, with 20.6% identifying as Aboriginal. English was the primary language for 86.2% of participants, and more than half (62.2%) reported leaving school in Year 10 or earlier.

Self-Reported Health Status

Over half (53.9%) of custodial participants rated their health as good or very good, and 52.4% reported that they had a health condition that required regular medical treatment.

Health Literacy

Custodial participants had lower HLQ mean scores for all nine domains compared to the mean scores reported for the general Australian population (Australian Bureau of Statistics [ABS], 2019c). Domain 9 (Understand health information well enough to know what to do) represented the highest mean score among both the custodial participants and the general Australian population (custodial participants = 4.00; general population = 4.27) (ABS, 2019c).

Aboriginal and Non-Aboriginal Custodial Participants

Aboriginal and non-Aboriginal custodial participants had similar mean scores for the HLQ domains, except Domains 7 (Navigating the healthcare system) and 9 (Understand health information well enough to know what to do).

Male and Female Custodial Participants

Male custodial participants had a higher mean score for seven of the nine HLQ domains (Domains 2 to 4 and 6 to 9) compared to females. Conversely, in comparison to males in the general population, male custodial participants had a lower mean score for all nine HLQ domains (ABS, 2019c). Similar to male participants, female custodial participants had a lower mean score for all nine HLQ domains compared to females in the general population (ABS, 2019c).

Forensic Participants

Sociodemographic

The median age of forensic participants was 41 years. Male participants represented 85.7% of the total forensic sample. Of the forensic participants, 11.4% identified as Aboriginal. The majority (85.7%) reported English as their primary language. More than half (51.4%) of the forensic participants had left school in Year 10 or earlier, with just under three quarters reporting high school as their highest level of education.

Self-Reported Health Status

Of the forensic participants, 74% rated their health as good or very good, and 65.7% reported they had a health condition that required regular medical treatment.

Health Literacy

Compared to the general population (ABS, 2019c), forensic participants had a lower mean score for eight of the nine HLQ domains. Domain 3 (Actively managing my health) was the only domain in which the forensic participants' mean score was higher than reported in the general population (3.24 v. 3.19) (ABS, 2019c).

Aboriginal and Non-Aboriginal Forensic Participants

In seven out of the nine HLQ domains, Aboriginal forensic participants had lower mean scores than non-Aboriginal participants. Aboriginal forensic participants had a higher mean score in Domain 3 (Actively managing my health) and Domain 5 (Appraisal of health information) compared to non-Aboriginal forensic participants (3.38 v. 3.22 and 2.85 v. 2.68, respectively).

Male and Female Forensic Participants

Compared to females, male forensic participants had higher mean scores for six of the nine HLQ domains (Domains 1, 2, 4 and 6 to 8). Compared to males in the general population (ABS, 2019c), male forensic participants had lower mean scores for seven of the nine HLQ domains (Domain 2 and 4 to 9). However, male participants had higher mean scores than males in the general population in Domains 1 (Feeling understood and supported by healthcare professionals) and 3 (Actively managing my health) (3.19 v. 3.14 and 3.21 v. 3.06, respectively) (ABS, 2019c).

Female forensic participants had lower mean scores for eight of the nine HLQ domains (Domains 1, 2 and 4 to 9) compared to females in the general population (ABS, 2019c). The only exception was Domain 3 (Actively managing my health), in which female forensic participants had a higher mean score than females in the general population (3.50 v. 3.10) (ABS, 2019c).

Conclusion

The results of this study have generated a health literacy profile identifying the strengths and weaknesses of people in New South Wales prisons and a forensic mental health setting.
Two key recommendations have been made moving forward:

1. Collaboration is needed between all stakeholders to identify solutions to improve access to health information, health care and navigation of the healthcare system.
2. Further statistical analysis needs to be conducted to inform future research, allowing for confirmation of findings and co-designed interventions to address the health literacy weaknesses and build upon identified strengths.

1. Introduction

The Justice Health and Forensic Mental Health Network (the Network) is a specialty health network for New South Wales Health (NSW Health). The Network provides a comprehensive range of healthcare services to adults and juveniles in contact with the criminal justice and forensic mental health systems. Any individual in contact with the criminal justice and forensic mental health systems and in the Network's care is referred to as a patient. The Network provides health services to over 30,000 patients annually, a health community that is diverse and unique in New South Wales (NSW) (Justice Health and Forensic Mental Health Network [JHFMHN], 2020).

Over the past two decades, the Network has undertaken a range of large-scale studies within custodial and forensic mental health environments. These studies have focused and reported on patients' health and their experiences of the healthcare provided by the Network. Since 2001, several iterations of patient experience studies have occurred, each building upon the methodology of the previous study. In 2016, a comprehensive review was undertaken of how patient experience surveys were conducted within the Network. The review resulted in the Network's Research Unit undertaking a two-phase mixed methods study to adapt and change how patients' experiences were measured and reported.

Phase 1 was a qualitative patient experience study (Patient Experiences and Perceptions Study [PEaPS] Phase 1). It used adult patient focus groups that helped identify a range of common themes in patient responses to questions about their experiences of the healthcare received in custody. The overarching key theme that emerged from this study was patients' access to healthcare services while in prison (Capon et al., 2020; JHFMHN, 2019). Three subcategories underpinned this theme: their prison construct, their health system construct and personal factors (Capon et al., 2020; JHFMHN, 2019). Each subcategory may not reflect the 'actual' prison and healthcare system constructs; however, they represent how the patients perceive the system (Capon et al., 2020; JHFMHN, 2019).

A series of concepts derived from the overarching theme and subcategories drove the development of a questionnaire for the quantitative secondary phase (PEaPS Phase 2). Key concepts that arose from the patient focus groups included communication, information and trust, staff interactions (from both Corrective Services NSW [CSNSW] officers and NSW Health staff), time to attend healthcare appointments, classification, waiting times, treatment and medication (Capon et al., 2020; JHFMHN, 2019). Throughout the development of the PEaPS Phase 2 questionnaire, it became apparent that the concepts were linked to not only the patients' experiences of healthcare services, but also their perceived understanding, access and motivations to engage with the healthcare system. The Network's Research Unit identified this link as representing part of an individual's health literacy and recognised a need to identify and include an appropriate health literacy scale in PEaPS Phase 2 to understand further and quantify patients' needs.

Health literacy is defined by the World Health Organization as 'the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health' (Nutbeam, 1998; World Health Organization, 1998, p. 10). Over the past three decades, health literacy has been an emerging research field. Systematic reviews have identified a large number of validated tools for measuring the health literacy of healthcare consumers worldwide (Altin et al., 2014; Haun et al., 2014). Historically, health literacy has been measured using tools that investigate the functional literacy and numeracy levels of patients (e.g., Rapid Estimate of Adult Literacy in Medicine [Murphy et al., 1993] and Test of Functional Health Literacy in Adults [Parker et al., 1995]) or the health literacy of patients with a specific disease (e.g., Diabetes Numeracy Test [Huizinga et al., 2008] and Cancer Health Literacy Scale [Chou et al., 2020]). Such tools have a narrow focus and limited application to large, non-homogeneous populations with varying levels of health literacy, such as those in prisons (Guzys et al., 2015).

As the concept of health literacy continues to evolve, recent measurement approaches with a multidimensional focus have been developed. One approach is the Health Literacy Questionnaire (HLQ) developed and validated in community health and hospital settings by Osborne et al. (2013) within an Australian health context. Osborne et al. (2013) describe the HLQ as a multidimensional instrument designed to generate a profile of an individual or population's health literacy strengths and weaknesses. The HLQ has been translated into over 30 languages and used in 50 countries (Rademakers et al., 2020; Swinburne University of Technology, n.d.), creating a growing evidence base for this instrument. Such evidence can be translated to inform policies, procedures and service deliveries in a health organisation.

Understanding the health literacy of people in secure environments is an important first step to comprehending the opportunities to improve and ways to remove barriers to healthcare. Health literacy has increasingly become recognised as an important factor in helping individuals engage with and navigate the healthcare system. Previous literature has reported that between 25% and 60% of the Australian population has low health literacy (ABS, 2008; Barber et al., 2009). Lower health literacy has been associated with poorer health outcomes, poorer health services utilisation (Berkman et al., 2011), lower educational levels and lower socio-economic backgrounds (Beauchamp et al., 2015; van der Heide et al., 2013). It has been reported that large numbers of Australian prisoners have low education levels and, on average, come from lower socio-economic backgrounds (Australian Institute of Health and Welfare [AIHW], 2019; JHFMHN, 2017). Previous literature has also shown that people in custodial and forensic settings have a high prevalence of health conditions (AIHW, 2019; JHFMHN, 2017, 2018) and poor health outcomes (AIHW, 2019; JHFMHN, 2018). Thus, it is essential to determine the role of health literacy in access to and utilisation of health care in these settings.

Patients are uniquely positioned to provide insights about their care and health management, including the problems they may have encountered, coordination of their care and treatment they wish to receive (Bombard et al., 2018; Vahdat et al., 2014). Understanding health literacy as a multidimensional construct by using the HLQ will allow the Network to gain deeper insights into the patient experience of healthcare and areas that need review or improvement. The 2018 National Health Survey: Health Literacy (2018 NHS) (ABS, 2019a) used the HLQ in a cross-sectional household survey of Australian adults, creating a HLQ evidence base for the general Australian population. Therefore, using the HLQ in this study addresses patient-identified areas for investigation, quantifying the complex concepts identified in PEaPS Phase 1, and enables comparisons between the health literacy profiles of the Networks' patients and the general population.

The current report presents the novel findings of the *2021 Health Literacy Study: People in NSW Prisons and a High Secure Forensic Setting* study (2021 Health Literacy Study). Results are presented by participant sample, gender and Aboriginal identity (Aboriginal and non-Aboriginal). In line with NSW Health guidelines, the term 'Aboriginal' is used inthis report in preference to 'Aboriginal and Torres Strait Islander' in recognition that Aboriginal Peoples are the original inhabitants of NSW (Centre for Aboriginal Health, 2019). Where possible, comparisons have been made with the general population.

1.1. Purpose

The purpose of the 2021 Health Literacy Study is to generate a profile of health literacy strengths and weaknesses within the NSW custodial and forensic patient population. Further, this profile will identify the differing health literacy needs within the participant subgroups. Information collected in this study will enable the Network to use evidence from patients to inform clinical and non-clinical practices, policies and procedures. To date, no research has been conducted on the health literacy of people who are in contact with criminal justice and forensic mental health systems in Australia. This report will provide evidence-based knowledge of patients' health literacy profiles at adult metropolitan prisons and a high secure forensic mental health hospital in NSW using the HLQ.

2. Methods

2.1. Study Design

A large cross-sectional survey of adult participants in NSW metropolitan prisons and a high secure forensic mental health setting was undertaken through structured face-to-face interviews. In-depth one-on-one interviews were undertaken with participants by a study investigator from the Network's Research Unit or Aboriginal Strategy and Culture Unit (interviewer). Interviews were undertaken to recruit, consent and verbally administer the questionnaire to all study participants. Participation in the study was voluntary, and participants could withdraw their consent or refuse to answer questions at any time. Participants did not receive any payments for their participation in the study.

Interviewers were required to have up to date CSNSW Security Awareness training and have completed the Network's Code of Conduct and Respecting the Difference — Aboriginal Cultural Awareness training. Interviewers were also required to read and understand relevant Network policies and procedures. Before data collection, interviewers took part in project-specific orientation training sessions covering security awareness, research ethics, participant rights, informed consent procedures, interview techniques, data collection familiarisation, referring patients of concern and culturally appropriate research skills. When an interviewer felt that the potential participants had an unmet health need that had not been previously disclosed to a health staff member, a referral was made to the health clinic or Nursing Unit Manager for review and action. A total of 41 referrals were made, two for approached potential participants and 39 for study participants (custodial participants: n = 40; forensic participants: n = 1). All referrals were non-urgent.

2.2. Ethics

The current study was approved by the Justice Health and Forensic Mental Health Network Human Research Ethics Committee (Ref: 2019/ETH00415), Aboriginal Health and Medical Research Council Human Research Ethics Committee (Ref: 1664/20) and Corrective Services Ethics Committee (Ref: D20/001384).

2.3. Measures

2.3.1. Health Literacy Questionnaire

The HLQ comprises 44 items across nine independent but complementary conceptual domains (see Table 2.1) that represent the health literacy concept from the differing perspectives of consumers, healthcare providers and policymakers that form the overall health system (Osborne et al., 2013). It obtains information about how people find, understand and use health information and how they manage their health and interact with the health system and healthcare providers (ABS, 2019b). Each HLQ item is measured on a Likert scale. Mean scores for items in Domains 1 to 5 range from 1 to 4, with higher mean scores (≥ 3) indicating that an individual agrees with the statements for items within each domain. Mean scores for items in Domains 6 to 9 range from 1 to 5, with higher mean scores (≥ 4) indicating that the individual considers the tasks within each domain easy. The HLQ does not provide a total score for health literacy. Instead, mean scores and response percentages (e.g., agreement/disagreement and ease/difficulty levels) for each domain are calculated and interpreted individually. Individualisation of each domain allows these to be independent indicators of the multidimensional concept of health literacy (Osborne et al., 2013).

TABLE 2.1

Nine Domains of the Health Literacy Questionnaire

Domain	Strongly disagree to strongly agree (ordinal scale 1–4)
1	Feeling understood and supported by healthcare providers
2	Having sufficient information to manage my health
3	Actively managing my health
4	Social support for health
5	Appraisal of health information

	Cannot do or always difficult to always easy (ordinal scale 1–5)
6	Ability to actively engage with healthcare providers
7	Navigating the healthcare system
8	Ability to find good health information
9	Understand health information well enough to know what to do

Note: Adapted from Muscat et al. (2019, p. 5).

2.3.2. Self-Reported Demographic Data and Health Status

Alongside the HLQ, participants were asked additional questions regarding specific demographic characteristics and perceived health statuses. Self-reported demographic and health status data were collected from participants about their highest year of high school completed (Year 7 to Year 12); their highest level of education attained (high school, diploma, bachelor, masters or doctoral degree); their primary language spoken at home (English or another language), whether they identified as Aboriginal, Torres Strait Islander or both; their own perceived health rating (very good to very poor); and the prevalence of health conditions requiring regular medical attention (yes or no).

2.3.3. Routinely Collected and Demographic Data

Participants were asked to allow researchers to access their medical and justice records held by the Network and CSNSW. Routinely collected custodial data for participants (location, security classification, correctional status and sentence length) was extracted from the Offender Integrated Management System operated by CSNSW, and demographic data (age and gender) was extracted from the Patient Administration System (PAS) operated by the Network.

Routinely collected data were used to replace self-reported demographic data for a small number of forensic participants (n = 3). This occurred if self-reported demographic data could not be collected from the participant. Where possible, these data were extracted from the PAS.

2.4. Sampling

2.4.1. Sample Size Calculation

2.4.1.1. Custodial Participants

Custodial participants were recruited based on a stratified random sample design. Stratification occurred based on the correctional centre and health clinic. After stratification, participant lists were stratified for Aboriginal identity (25%). A stratified random sampling approach with proportional allocation to Aboriginal identity was used to ensure adequate representation of Aboriginal Peoples in the participant sample. It is acknowledged that within the custodial setting, Aboriginal people are over-represented compared to the general population. As of June 2020, 25.1% of individuals in custody within NSW identified as Aboriginal (NSW Bureau of Crime Statistics and Research [BOCSAR], 2020a).

The sample size per centre was calculated using a sample size calculation with finite correction for proportions as described by Israel (1992). The calculations were based on a 95% confidence level (95% CI), a margin of error of ± 15% and an assumed (conservative) probability proportion of 0.5. A Cochran formula sample size of n_0 = 42.7 was used. The finite correction for proportions formula was as follows (Israel, 1992):

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

Where n is the adjusted sample size, n_0 is the Cochran formula sample size (n_0 = 42.7), and N is the population size (per correctional centre).

The sample size in this study was calculated based on the unpublished bed capacity of each correctional centre as of 24 September 2020, provided by CSNSW. It should be noted that the custodial population is constantly in a state of change, with new patients either entering custody, being released from custody or being transferred between different correctional centres. Thus, this approach was taken to provide a conservative estimate of the sample size needed per strata. Target stratum numbers by correctional centre and Aboriginal identity are shown in Table 2.2.

TABLE 2.2

Calculated Sample Size by Correctional Centre

Correctional centre	Bed capacity[a]	Sample size	Aboriginal stratification
1. Dawn de Loas	515	39	10
2. Dillwynia	283	37	9
3. Emu Plains	193	35	9
4. Geoffrey Pearce (formerly Outer Metropolitan Multi Purpose Centre)	372	38	10
5. John Morony	441	39	10
6. Long Bay Hospital 2	394	39	10
7. Mary Wade	94	30	7
8. Metropolitan Remand and Reception Centre	1199	41	10
9. Metropolitan Special Programs Centre (MSPC), Area 1 (including Kevin Waller Unit)	491	39	10
10. MSPC, Area 2 (including Additional Support Unit)	349	38	10
11. MSPC Area 3	384	39	10
12. Silverwater Women's	372	38	10
13. South Coast, Sectors 1, 2 & 3	600	40	10
14. South Coast, Sector 4	160	34	8
15. South Coast, Sector 5	200	35	9
Total	**6047**	**562**	**141**

Note: Due to rounding, sample size and Aboriginal stratification may not sum to the totals. [a] unpublished data from CSNSW, 24 September 2020.

Throughout 2020, CSNSW undertook a capacity adjustment program for prison beds. These adjustments resulted in drastic changes in the bed capacities at several centres included in the study. Therefore, the calculated sample size for some centres could not be achieved due to low custodial patient numbers at the time of data collection. The Mary Wade Correctional Centre was excluded from the study because it was closed and repurposed from a male to a female correctional centre at the time of data collection.

2.4.1.2. Forensic Participants

The Forensic Hospital had 117 adult patients at the time of data collection. The research team sought multidisciplinary team (MDT) approval before approaching any potential participants. On the day of data collection, prior to approaching the potential participants, the interviewer received a verbal handover from the nurse in charge (NiC). A handover was conducted to inform the interviewer of the patients' current mental state, informing a risk assessment. If a patient was unwell at the handover point or deemed too high-risk to participate, they were excluded from the study. The research team anticipated approaching at least 80% of the population depending on clinical suitability. Due to the exploratory nature of the study and the small number of patients in The Forensic Hospital, stratification was not undertaken for the forensic participants.

2.4.2. Participant Selection and Recruitment

2.4.2.1. Custodial Participants

Custodial participants were defined as the Network's custodial patients who were on remand or sentenced and in the custody of CSNSW at the time of data collection and met the eligibility criteria below.

Custodial participants were randomly selected via a participant list generated using the PAS of people who had accessed health services (primary health nurses) in the correctional centres during a 12 month period (1 October 2019 to 31 September 2020). Eligibility criteria included the participants' ability to speak English, comprehend and consent to the study procedures and use of prison primary nurse healthcare services within the specified 12-month period (1 October 2019 to 31 September 2020). Participants who had insufficient English fluency or capacity to provide informed consent were excluded from the study.

2.4.2.2. Forensic Participants

Under the *Mental Health and Cognitive Impairment Forensic Provisions Act 2020* (NSW), a forensic patient is an individual who:

1. the courts have found unfit to be tried for an offence and have ordered the individual to be detained in a correctional centre, mental health facility or other place
2. has a nominated limiting term and the court have ordered the individual to be detained in a prison, hospital or other place
3. the courts have found the act proven but the individual not criminally responsible due to mental health impairment or cognitive impairment.

In addition to forensic patients, The Forensic Hospital admits high-risk civil patients that require secure treatment beyond what can be provided within civil psychiatric units and correctional patients who are custodial patients in need of psychiatric treatment within secure hospital settings (JHFMHN, n.d.).

Forensic participants are defined as patients of The Forensic Hospital who were in the care of the Network and met the eligibility criteria below.

Forensic participants were approached if they were deemed clinically suitable by their MDT and were a patient in The Forensic Hospital during May 2021. Eligibility criteria included the participants' ability to speak English, approval from their MDT to be approached, no risks identified in the NiC handover before approaching and the ability to comprehend and consent to study procedures. Participants who were under the age of 18 or posed too great of a risk due to their mental state, had insufficient English fluency, or lacked the capacity to provide informed consent, were excluded from the study.

2.4.2.3. Informed Consent Procedure

The study investigators were responsible for ensuring that all interviewers obtaining consent were appropriately trained to explain the research and assess the participant's comprehension. Each participant was provided with a Participant Information Sheet. The interviewers then explained the purpose, the voluntary nature of participating in the survey and the consent procedure. Participants were then assessed for comprehension by the interviewer. Comprehension was assessed through engagement with the participant and by asking open-ended, non-directive questions about their understanding of the study.

If participants could adequately answer these questions, the interviewer assumed that they had the capacity to proceed with the informed consent process. Participants were asked to provide written consent by signing an individual Participant Consent Form. Throughout the interview, if it became apparent that a participant did not have the capacity to understand the questions, the interview was terminated, and the participant was excluded from the study.

2.5. Data Collection

Data collection for custodial participants occurred over seven months from October 2020 to April 2021, and for forensic participants, over four months from May 2021 to August 2021.

Data were collected via structured face-to-face interviews (15 to 50 minutes in length) at 14 NSW metropolitan adult correctional centres (custodial participants) or The Forensic Hospital (forensic participants) in Malabar, NSW, Australia. Interviews were undertaken by study investigators to recruit, consent and verbally administer the questionnaire to all study participants. Interviews in correctional centres were conducted in consulting rooms of the prison health clinics, in prison wings or in general visitor areas under the oversight of CSNSW officers. Forensic participants were interviewed in designated interview rooms within The Forensic Hospital. Interviews with some forensic participants were conducted with a nursing staff member present due to the observation requirements of the unit and that patient's placement in the hospital, as determined by The Forensic Hospital's policies and procedures.

2.5.1. Qualtrics Procedure

All participant responses, except those from two correctional centres, were recorded directly on a laptop device via an offline electronic survey platform provided by Qualtrics[1]. Laptop based data collection has been known to reduce errors, increase ease of use, increase the flexibility of collection (Wilcox et al., 2012) and speed up data entry (Walther et al., 2011). Paper based recording occurred at two correctional centres prior to laptop approval being provided by CSNSW. Paper-based data were subsequently entered into the Qualtrics platform.

All information uploaded to Qualtrics was de-identified, with a unique identification number assigned to each participant. Each day, after completing the data collection, the interviewers uploaded de-identified data to secure Qualtrics servers. Upon completing the data collection, the data were downloaded and stored on the Network's secure servers for analysis.

2.6. Data Analysis

All data were analysed using IBM SPSS Version 27[2]. Results are presented separately for the two participant groups within the sample:

1. custodial participants
2. forensic participants

Findings in this report have been weighted to account for the over-representation of both non-Aboriginal people and females in the recruited participant samples. The weighting ensured that findings for the total population, Aboriginal people and gender groups reflect all data gathered but avoid the potential for bias by disproportionate numbers of participants in specific demographic groups. Weighting calculations are provided in Tables 2.3 and 2.4 for the custodial participant sample. Weighting calculations for the forensic participant sample were undertaken using the same methodology as the custodial participant sample; however, due to confidentiality risks associated with re-identifying participants, forensic participant weighting calculations have been omitted from this report.

1 https://www.qualtrics.com

2 https://www.ibm.com/au-en/analytics/spss-statistics-software

2.6.1. Custodial Participants

TABLE 2.3

Weighting Calculations for Custodial Participants

Demographic group	Number in custody on 31 December 2020[b]	Number of participants
Aboriginal male	2971	71
Non-Aboriginal male	8933	312
Aboriginal female	282	26
Non-Aboriginal female	580	62
Total	**12766**	**471**

Note: [b] Adapted from the *New South Wales Custody Statistics, Quarterly Update December 2020* (BOCSAR, 2021).

TABLE 2.4

Weighting of Findings for Custodial Participants, 2021

Demographic group	Per cent of population	Per cent of participants	Weighting for gender findings	Weighting for Aboriginal identity findings	Weighting for total population findings
Aboriginal male	23.27	15.07	1.35	1.25	1.54
Non-Aboriginal male	69.97	66.24	0.92	1.13	1.06
Aboriginal female	2.21	5.52	1.11	0.32	0.40
Non-Aboriginal female	4.54	13.16	0.96	0.37	0.34

The Network is responsible for providing healthcare services for remand and sentenced custodial patients across adult correctional and adolescent youth justice health centres in NSW as well as forensic patients in a high secure forensic hospital. The Network is a statutory health corporation within NSW Health and, as such, is separate from CSNSW. This separation means healthcare workers are financially and clinically independent from the prison system. The separation between the healthcare and prison systems allows healthcare workers to provide care to people in NSW publicly operated prisons independently. However, it can also raise barriers because the day to day environment and security are managed by CSNSW. Conversely, The Forensic Hospital is managed solely under the jurisdiction of the Network and NSW Health, removing potential environmental and security barriers that may arise while providing healthcare. The difference between the two environments must be understood and considered when interpreting the results of this report. Comparisons have deliberately not been made between custodial and forensic participants in this report due to these fundamental environmental differences.

The current report presents a descriptive analysis of data (e.g., presentation of percentages, means and standard deviation [SD]) only because the intention is to provide an overall profile of the sample. Further statistical analysis is planned to examine relationships between variables and comparisons between the current sample and proposed community samples.

Due to rounding, percentage totals in this report may not add up to 100.0%, and subtotals may not sum to the percentages for the categories. Some percentages in the tables appear as 0.0% where the numbers were small.

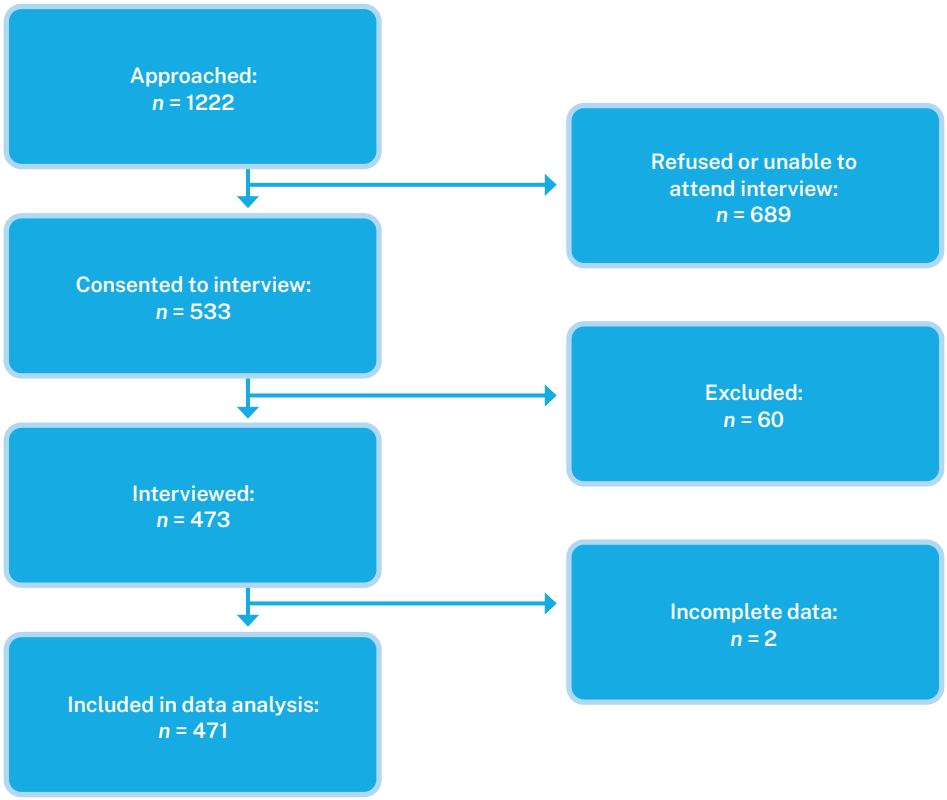
3. Findings

3.1. Custodial Participants

A total of 1222 custodial patients were approached to participate in the health literacy study (see Figure 3.1). Over half (56.4%) of the custodial patients approached either refused (*n* = 266) or were unable to attend the interview (*n* = 423). The reasons for being unable to participate included being transferred to another facility (*n* = 221), being released from custody (*n* = 102), attending work (*n* = 56), exclusion by CSNSW or the Network's centre staff due to security classification or placement within the centre (*n* = 39) or being unwell at the time of the interview (*n* = 5).

FIGURE 3.1

Custodial Participant Recruitment Flow Chart



Of the custodial patients approached, 533 (43.6%) agreed to participate in the study, 60 of whom were subsequently excluded during the consent process. Reasons for exclusion included insufficient English comprehension (*n* = 36) and being assessed by the interviewer as unable to provide informed consent (*n* = 24). Of all the approached custodial patients, 38.7% completed the interview. Two participants were excluded from data analysis due to missing data.

A total of four (0.9%) participants described themselves as Torres Strait Islanders, while six (1.3%) reported they were both Aboriginal and Torres Strait Islander. These participant groups were too small to allow separate reporting without creating a risk that individual respondents could be identified. Their responses are included in the results for Aboriginal participants. Aforementioned in Section 1, the term 'Aboriginal' is used in this report in preference to 'Aboriginal and Torres Strait Islander' in recognition that Aboriginal Peoples are the original inhabitants of NSW (Centre for Aboriginal Health, 2019). Table 3.1 outlines the participants' characteristics for the custodial participant sample.

TABLE 3.1

Custodial Participants' Characteristics

Characteristics	*n*	Per cent
Gender		
Male	383	81.3
Female	88	18.7
Aboriginal identity		
Aboriginal	97	20.6
Non-Aboriginal	374	79.4

As described in Section 2.4.1.1, participant lists were stratified to represent Aboriginal Peoples in the data accurately. As of 30 June 2020, Aboriginal people accounted for 25.1% of the NSW custodial patient population, including 32.3% of female prisoners and 24.6% of male prisoners (BOCSAR, 2020b). Stratification targets (25%) for Aboriginal people were unmet, with 20.6% of custodial participants describing themselves as Aboriginal in this study. A larger proportion of female participants (29.5%) described themselves as Aboriginal compared to the male participants (18.5%) (see Table 3.2). The report's findings were weighted to account for the under-sampling so that the results are as representative as possible of the whole prison population.

TABLE 3.2

Custodial Participants' Aboriginal Identity

Identity	Male %	Female %	Total %
Aboriginal	18.5	29.5	20.6
Non-Aboriginal	81.5	70.5	79.4

Over four fifths (86.2%) of participants reported that English was the primary language spoken at home (see Table 3.3). The percentage is notably higher than the *2015 Network Patient Health Survey Report (2015 NPHS)* (JHFMHN, 2017), which reported 82.5% (males = 82.6%; females = 82.8%) of participants reporting English as the primary language spoken at home (JHFMHN, 2017). A high proportion of English-speaking participants was expected in this study because individuals with insufficient English to complete the interview were excluded. This approach was undertaken to ensure participants could adequately provide informed consent and comprehend the survey questions.

TABLE 3.3

Custodial Participants' Primary Language Spoken at Home

Language spoken	Male %	Female %	Total %
English	86.9	83.0	86.2
A language other than English	12.8	17.0	13.6
Not stated	0.3	0.0	0.2

The custodial participants ranged in age from 19 to 91 years. The median age for all custodial participants was 38.0 years (males = 39.0 years; females = 36.0 years). The median age of custodial participants in this study was higher than that of NSW prison populations previously reported. The ABS (2020) reported the median age of the prison population as 35.7 years (males = 35.8 years; females = 34.8 years). Similarly, the *2015 NPHS* (JHFMHN, 2017) reported the median age as 35.0 years (males = 39.0 years; females = 33.0 years). The difference in median age can be attributed to a higher number (11.0%) of custodial participants aged 60 years or older taking part in this study. Participants who were 60 years or older made up 5.1% of the Australian prison population in 2020 (ABS, 2020) and 6.1% of the *2015 NPHS* study participants (JHFMHN, 2017).

Custodial participants by age group are outlined in Table 3.4. A relatively even age distribution for participants was demonstrated across six age categories, including the five categories from 25 to 49 years and over 60 years, with fewer participants in the 18 to 24 years and 50 to 59 years categories (see Table 3.4). Over two thirds (69.8%) of the custodial participants were in the 25 to 49 years categories, slightly lower than the 2020 Australian prisoner population sample (73.0%) (ABS, 2020). A greater percentage of older participants in this study could also be attributed to the study design. First, study participants had to have used the prison health clinic during the designated 12 month period, with research showing that older prisoners have an increased need of such services compared to their younger counterparts (Baidawi et al., 2011). Second, unlike the *2015 NPHS* (JHFMHN, 2017) conducted in NSW prisons, participant lists were not stratified by age group for this study. Lastly, the reported median age of prisoners by the ABS (2020) represented all people who were in custody within Australian prisons as of 30 June 2020.

TABLE 3.4

Custodial Participants' Age by Age Groups

Age groups (years)	Male %	Female %	Total %
18–24	5.7	10.2	6.6
25–29	14.6	19.3	15.5
30–34	16.2	17.0	16.3
35–39	15.9	14.8	15.7
40–44	10.2	12.5	10.6
45–49	11.7	11.4	11.7
50–54	7.3	5.7	7.0
55–59	6.3	2.3	5.5
60+	12.0	6.8	11.0

3.1.1. Incarceration Status

More than two thirds (68.2%) of participants were serving a custodial sentence at the time they were interviewed; the remainder (31.8%) were on remand. A larger proportion of females (72.7%) were serving a custodial sentence than males (67.1%). A small proportion (1.3%) of participants serving a custodial sentence were serving life sentences (e.g., to the length of their natural life) and do not have the opportunity for release in the community. Table 3.5 outlines the incarceration statuses of custodial participants. The median sentence length was 5.8 years, with males having a slightly higher median sentence length than females (6.0 years and 4.5 years, respectively). The median time spent in custody at the time of interview for sentenced participants was 2.1 years (males = 2.2 years; females = 1.4 years), compared to remanded participants with 0.7 years (males = 0.8 years; females = 0.5 years).

TABLE 3.5

Custodial Participants' Incarceration Statuses

Incarceration status	Male %	Female %	Total %
Sentenced	65.8	71.6	66.9
Life	1.3	1.1	1.3
Remand	32.9	27.3	31.8

All offenders in NSW have a designated security classification that can be grouped as minimum, medium or maximum. Classification is a principal factor, among other considerations, in determining a custodial patient's placement at a correctional centre (CSNSW, 2019). The highest proportion of custodial participants (43.5%) was held in a minimum-security classified correctional centre. A higher proportion of females (69.3%) were classified as medium-or maximum-security prisoners (patients) compared to males (53.3%). Table 3.6 shows the percentage of custodial participants by security classification.

TABLE 3.6

Breakdown of Custodial Participants' Security Classifications

Security classification	Male %	Female %	Total %
Minimum	46.5	30.7	43.5
Medium	13.6	37.5	18.0
Maximum	39.9	31.8	38.4

3.1.2. Self-Reported Health Status

Over half (53.9%) of participants rated their health as being good or very good, with a notable higher proportion of males (55.9%) rating their health as being good or very good than females (45.4%). Table 3.7 shows that both male and female participants similarly rate their health rated as poor or very poor (males = 11.7%; females = 11.4%).

TABLE 3.7

Custodial Participants' Self-Reported Health Ratings

Health rating	Male %	Female %	Total %
Very good	14.9	10.2	14.0
Good	41.0	35.2	39.9
Fair	32.4	38.6	33.5
Poor	8.1	9.1	8.3
Very poor	3.7	2.3	3.4
Don't know	0.0	4.5	0.8

Despite rating their perceived health status highly, over half (52.4%) of the custodial participants in the current study reported a health condition that required regular medical attention. Female participants were more likely to report having a medical condition than male participants (55.7% and 51.7%, respectively) (see Table 3.8). The prevalence of health conditions among the participants of this study was slightly higher than the general population, 47.3% of the Australian population reporting having one or more chronic health conditions (ABS, 2018).

TABLE 3.8

Custodial Participants' Self-Reported Health Conditions

Health condition	Male %	Female %	Total %
Yes	51.7	55.7	52.4
No	47.8	42.0	46.7
Don't know	0.5	2.3	0.8

Participants in this study reported a lower prevalence of health conditions than previous studies of the NSW prison population. For example, the *2015 NPHS* (JHFMHN, 2017) reported that 75.6% of participants had one or more health conditions. This difference may reflect variations in study methodologies and the fluctuating nature of the NSW prison population.

3.1.3. Education

Nearly three fifths (59.5%) of participants left school in Year 10 or earlier (see Table 3.9), lower than the 72.1% reported in the *2015 NPHS* (JHFMHN, 2017). The total proportion of participants leaving school in Year 8 or earlier (15.3%) was consistent with *The health of Australia's prisoners 2018* report (AIHW, 2019) finding that 17% of prisoners had attained this education level. Less than one third (31.1%) of participants reported completing Year 12.

TABLE 3.9

Custodial Participants' Highest Levels of Schooling

Schooling year	Male %	Female %	Total %
Year 7	6.8	8.0	7.0
Year 8	8.4	8.0	8.3
Year 9	12.0	11.4	11.9
Year 10	31.9	34.1	32.3
Year 11	7.8	8.0	7.9
Year 12	31.3	30.7	31.2
Don't know/not stated	1.8	0.0	1.5

High school was the highest level of education obtained by nearly two thirds (62.2%) of participants. Very few participants (2.7%) reported that they had completed postgraduate level education (see Table 3.10). Approximately one third (33.1%) of participants reported completing tertiary education, with a greater percentage of females than males attaining this level of education (38.6% and 31.9%, respectively). The tertiary education level attained in this cohort was lower than previously reported by the Network in 2017, with 57.7% of participants (males = 57.7%; females = 56.7%) completing tertiary education.

TABLE 3.10

Custodial Participants' Highest Levels of Education Attained

Education level	Male %	Female %	Total %
High school	65.3	48.9	62.2
Diploma	20.9	26.1	21.9
Bachelors degree	7.8	11.4	8.5
Masters degree	2.9	1.1	2.5
Doctoral degree	0.3	0.0	0.2
Don't know/not stated	2.9	12.5	4.7

3.2. Custodial Participants' Health Literacy Questionnaire Domains

As described in Section 2.3.1, the HLQ is a multidimensional health literacy tool for measuring health literacy across nine independent but complementary domains. A total score is not generated, with a mean score for each domain calculated and interpreted separately. Table 3.11 presents the overall HLQ domain mean scores, SD and 95% CI for custodial participants. For the first five domains, the highest overall mean score was demonstrated in Domain 3, and the lowest mean score was shown in Domain 5. For the last four domains, the highest mean score was found in Domain 9, and the lowest mean score was shown in Domain 7. The mean scores for individual domains for the custodial participants, as a total sample and by gender and Aboriginal identity, will be discussed in further detail in Sections 3.2.1 to 3.2.9.

TABLE 3.11

Health Literacy Questionnaire Domain Mean Scores of Custodial Participants

	Health Literacy Questionnaire Domain	Mean (SD)	[95% CI]
1.	Feeling understood and supported by healthcare professionals[a]	2.69 (0.58)	[2.64, 2.74]
2.	Having sufficient information to manage my health[a]	2.73 (0.51)	[2.68, 2.78]
3.	Actively managing my health[a]	3.03 (0.45)	[2.99, 3.07]
4.	Social support for health[a]	2.59 (0.50)	[2.54, 2.63]
5.	Appraisal of health information[a]	2.57 (0.49)	[2.53, 2.62]
6.	Ability to actively engage with healthcare professionals[b]	3.37 (0.89)	[3.29, 3.45]
7.	Navigating the healthcare system[b]	3.11 (0.87)	[3.03, 3.19]
8.	Ability to find good health information[b]	3.13 (0.84)	[3.05, 3.20]
9.	Understand health information enough to know what to do[b]	4.00 (0.70)	[3.94, 4.06]

Note: [a] Scale range = 1 (lowest) to 4 (highest), a higher score indicates greater ability or more support; [b] Scale range = 1 (lowest) to 5 (highest), a higher score indicates greater ability or more support.

Table 3.12 outlines the overall HLQ domain mean scores, SD and 95% CI for the Aboriginal and non-Aboriginal custodial participants. For the first five domains, the highest overall mean score for Aboriginal participants was found in Domain 3, and the lowest mean score was demonstrated in Domain 5. For the last four domains, the highest mean score was found in Domain 9, and the lowest mean score was observed in Domain 8. For the first five domains, the highest overall mean score for non-Aboriginal participants was shown in Domain 3, and the lowest mean score was found in Domain 5. For the last four domains, the highest mean score was found in Domain 9, and the lowest mean score was observed in Domain 7.

TABLE 3.12

Health Literacy Questionnaire Domain Mean Scores of Aboriginal and Non-Aboriginal Custodial Participants

Health Literacy Questionnaire Domain		Aboriginal (*N* = 97)		Non-Aboriginal (*N* = 374)	
		Mean (SD)	[95% CI]	Mean (SD)	[95% CI]
1.	Feeling understood and supported by healthcare professionals[a]	2.66 (0.62)	[2.53, 2.78]	2.70 (0.56)	[2.64, 2.76]
2.	Having sufficient information to manage my health[a]	2.77 (0.50)	[2.67, 2.87]	2.72 (0.52)	[2.67, 2.77]
3.	Actively managing my health[a]	2.97 (0.44)	[2.88, 3.06]	3.05 (0.46)	[3.00, 3.09]
4.	Social support for health[a]	2.56 (0.50)	[2.46, 2.66]	2.60 (0.51)	[2.55, 2.65]
5.	Appraisal of health information[a]	2.54 (0.45)	[2.45, 2.63]	2.59 (0.50)	[2.54, 2.64]
6.	Ability to actively engage with healthcare professionals[b]	3.33 (0.92)	[3.15, 3.52]	3.38 (0.88)	[3.29, 3.47]
7.	Navigating the healthcare system[b]	3.19 (0.91)	[3.01, 3.37]	3.08 (0.85)	[3.00, 3.17]
8.	Ability to find good health information[b]	3.11 (0.87)	[2.93, 3.29]	3.13 (0.83)	[3.05, 3.21]
9.	Understand health information enough to know what to do[b]	3.86 (0.78)	[3.71, 4.02]	4.05 (0.67)	[3.98, 4.11]

Note: [a] Scale range = 1 (lowest) to 4 (highest), a higher score indicates greater ability or more support; [b] Scale range = 1 (lowest) to 5 (highest), a higher score indicates greater ability or more support.

Table 3.13 summarises the overall mean scores, SD and 95% CI for male and female custodial participants. For the first five domains, the highest overall mean score for male participants was found in Domain 3, and the lowest mean score was observed in Domain 5. For the last four domains, the highest mean score was found in Domain 9, and the lowest mean score was shown in Domain 7. For the first five domains, the highest overall mean score for female participants was demonstrated in Domain 3, and the lowest mean score was identified in Domain 4. For the last four domains, the highest mean score was found in Domain 9, and the lowest mean score was shown in Domain 8.

TABLE 3.13

Health Literacy Questionnaire Domain Mean Scores of Male and Female Custodial Participants

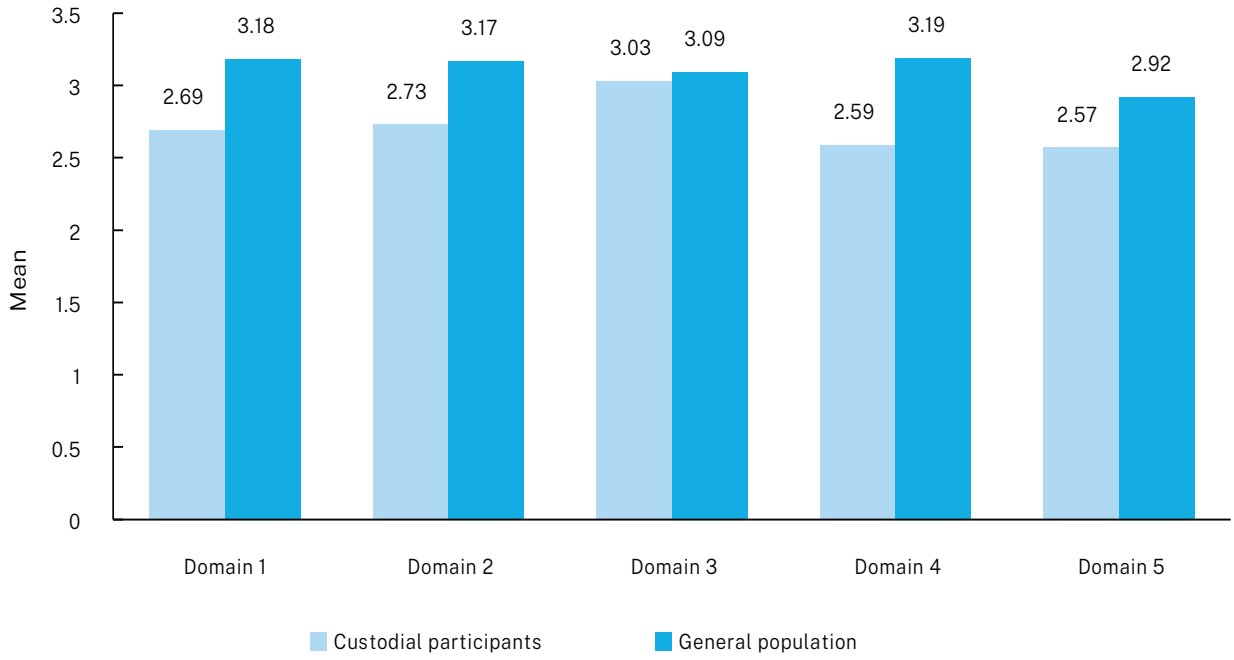
Health Literacy Questionnaire Domain		Male (*N* = 383)		Female (*N* = 88)	
		Mean (SD)	[95% CI]	Mean (SD)	[95% CI]
1.	Feeling understood and supported by healthcare professionals[a]	2.69 (0.58)	[2.63, 2.75]	2.73 (0.61)	[2.60, 2.86]
2.	Having sufficient information to manage my health[a]	2.74 (0.51)	[2.69, 2.79]	2.59 (0.56)	[2.47, 2.70]
3.	Actively managing my health[a]	3.03 (0.45)	[2.98, 3.07]	3.00 (0.50)	[2.89, 3.11]
4.	Social support for health[a]	2.59 (0.50)	[2.54, 2.64]	2.56 (0.55)	[2.45, 2.68]
5.	Appraisal of health information[a]	2.57 (0.49)	[2.52, 2.62]	2.59 (0.48)	[2.49, 2.69]
6.	Ability to actively engage with healthcare professionals[b]	3.39 (0.87)	[3.30, 3.48]	3.12 (1.02)	[2.90, 3.34]
7.	Navigating the healthcare system[b]	3.13 (0.86)	[3.04, 3.21]	2.87 (0.96)	[2.66, 3.07]
8.	Ability to find good health information[b]	3.14 (0.83)	[3.06, 3.23]	2.86 (0.89)	[2.67, 3.05]
9.	Understand health information enough to know what to do[b]	4.00 (0.70)	[3.93, 4.07]	3.97 (0.68)	[3.83, 4.12]

Note: [a] Scale range = 1 (lowest) to 4 (highest), a higher score indicates greater ability or more support; [b] Scale range = 1 (lowest) to 5 (highest), a higher score indicates greater ability or more support.

Compared to the general Australian population (ABS, 2019c), custodial participants scored lower on Domains 1 to 5 (see Figure 3.2). Similarly, custodial participants scored lower on Domains 6 to 9 (see Figure 3.3).

FIGURE 3.2

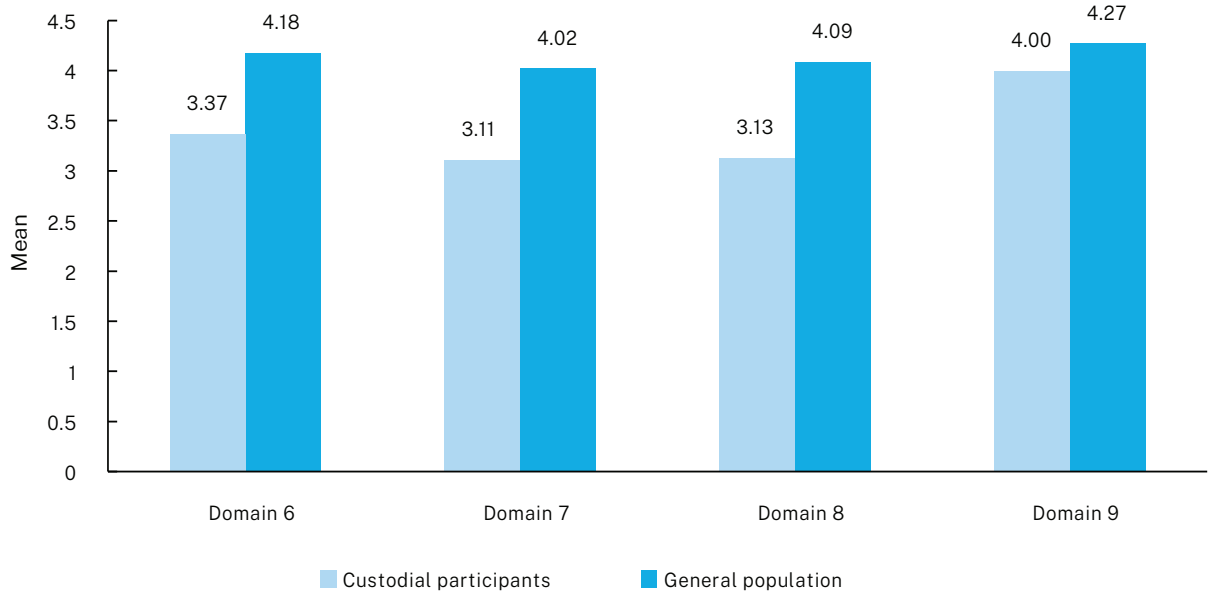
Comparison of Custodial Participants and the Reported Australian General Population Domain Mean Scores for Health Literacy Questionnaire Domains 1 to 5



Note: Australian general population data were adapted from ABS (2019c)

FIGURE 3.3

Comparison Between Custodial Participants' and the Australian General Population's Domain Mean Scores for Health Literacy Questionnaire Domains 6 to 9



Note: Australian general population data were adapted from ABS (2019c).

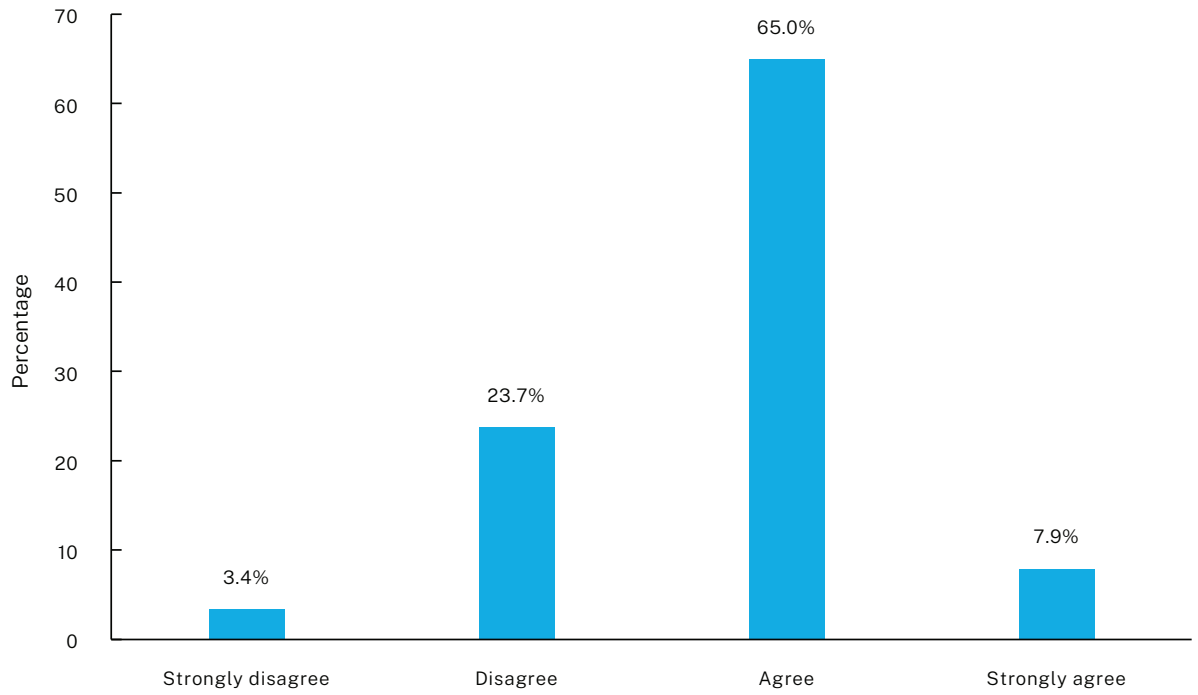
3.2.1. Domain 1: Feeling Understood and Supported by Healthcare Professionals

Domain 1 describes the relationship an individual has with healthcare providers. More specifically, it relates to whether a 'person has a relationship with one or more healthcare providers who they feel they can rely on and/or trust for advice about health' (O'Hara et al., 2018, p. 2). A higher mean score indicates that the individual has an established relationship with a healthcare provider that they can trust to provide health information to make informed decisions regarding their health (Osborne et al., 2013). Individuals with a low score in this domain do not regularly engage with healthcare providers and have difficulty trusting healthcare providers for information and advice when managing their health (Osborne et al., 2013).

Custodial participants had a mean score of 2.69 (see Table 3.11) for this domain, with 72.9% of respondents agreeing or strongly agreeing that they felt understood and supported by healthcare professionals (see Figure 3.4). Compared to the general population of Australians over the age of 18 in the 2018 NHS (ABS, 2019c), the mean score of custodial participants was lower in Domain 1 (2.69 v. 3.18) (see Figure 3.2). A greater proportion of the custodial population (27.1%) disagreed or strongly disagreed that they felt understood and supported by healthcare professionals compared to the general population (4%) (ABS, 2019a). This difference is hypothesised to be attributed to custodial participants having controlled access to healthcare due to their environment, leading to restricted freedom of choice regarding healthcare providers.

FIGURE 3.4

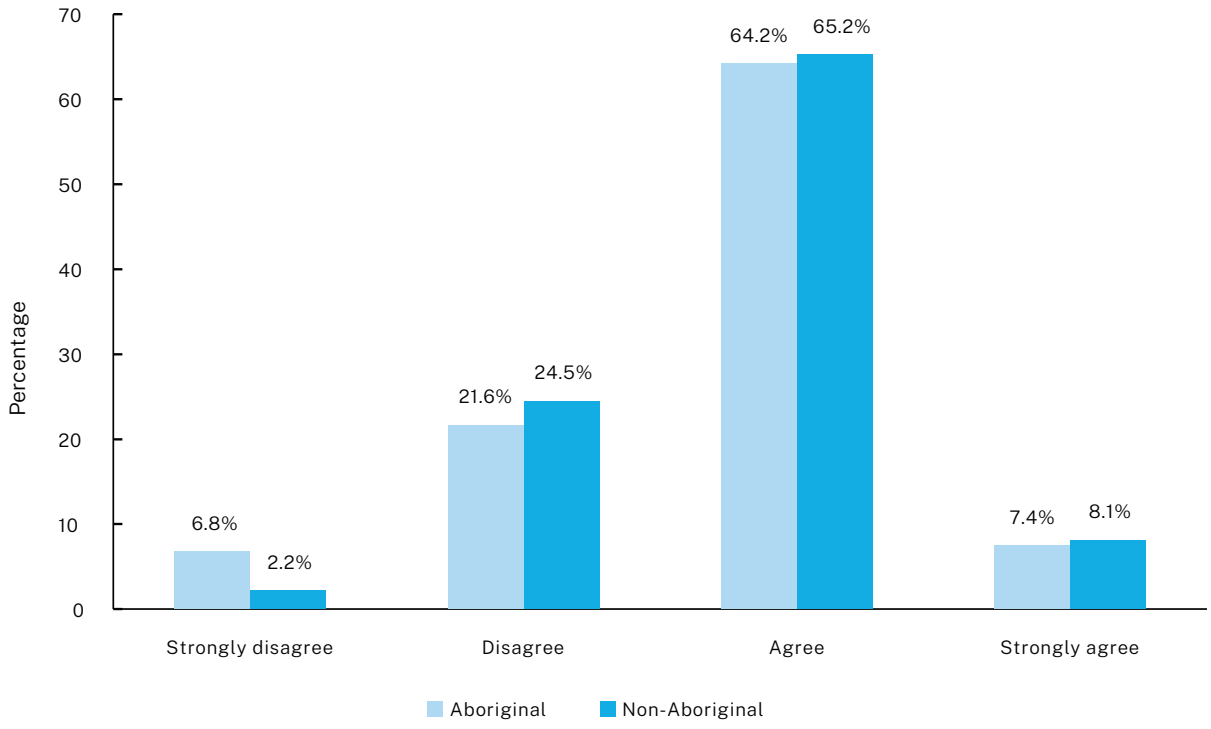
Custodial Participants' Reported Levels of Agreement With Domain 1 (Feeling Understood and Supported by Healthcare Professionals)



Similar mean scores for Aboriginal and non-Aboriginal participants were found in Domain 1 (2.66 v. 2.70) (see Table 3.12). Fewer Aboriginal participants (71.6%) than non-Aboriginal participants (73.3%) agreed or strongly agreed that they felt supported and understood by healthcare providers. Figure 3.5 shows that a greater proportion of Aboriginal participants (6.8%) than non-Aboriginal participants (2.2%) strongly disagreed with the Domain 1 items.

FIGURE 3.5

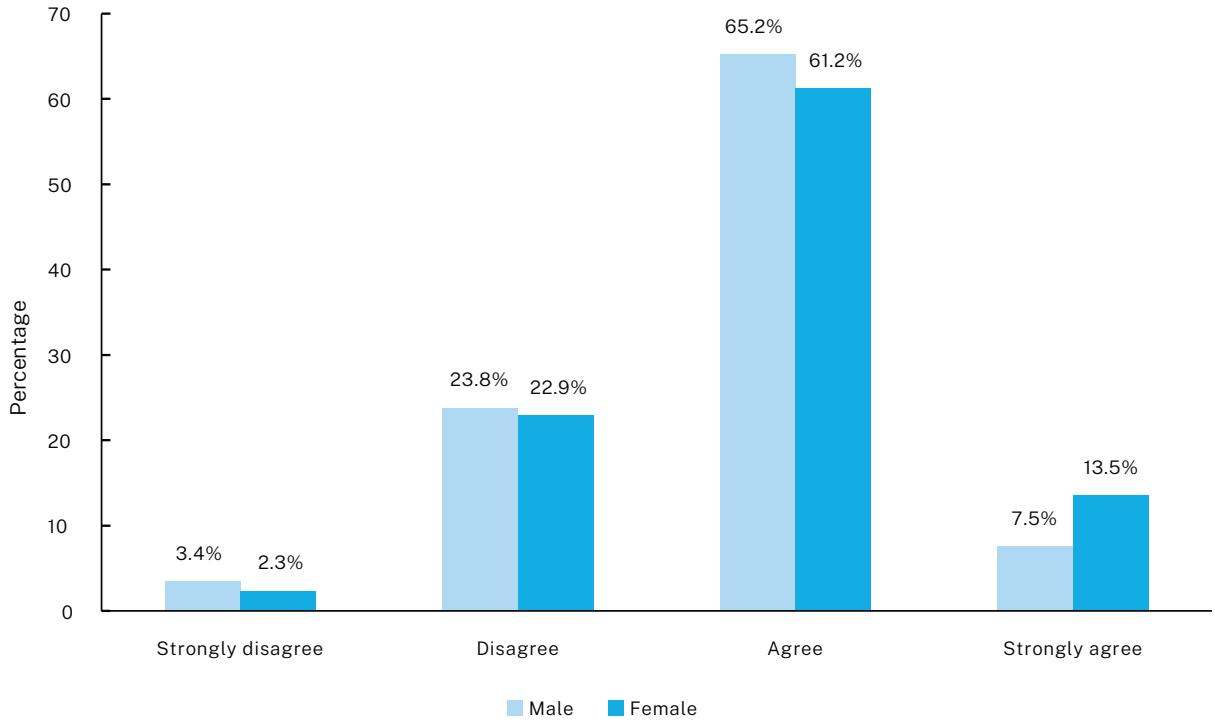
Aboriginal and Non-Aboriginal Custodial Participants' Reported Levels of Agreement With Domain 1 (Feeling Understood and Supported by Healthcare Professionals)



Female custodial participants had a slightly higher mean score in Domain 1 than males (2.73 v. 2.69) (see Table 3.13). This is consistent with the mean scores reported for the general population, with females in the general population having a slightly higher mean score than males (3.22 v. 3.14) (ABS, 2019c). A greater proportion of female participants (13.5%) than male participants (7.5%) strongly agreed with the Domain 1 items. Figure 3.6 shows that more than a quarter of both males (27.2%) and females (25.2%) disagreed or strongly disagreed with the Domain 1 items.

FIGURE 3.6

Male and Female Custodial Participants' Reported Levels of Agreement With Domain 1 (Feeling Understood and Supported by Healthcare Professionals)



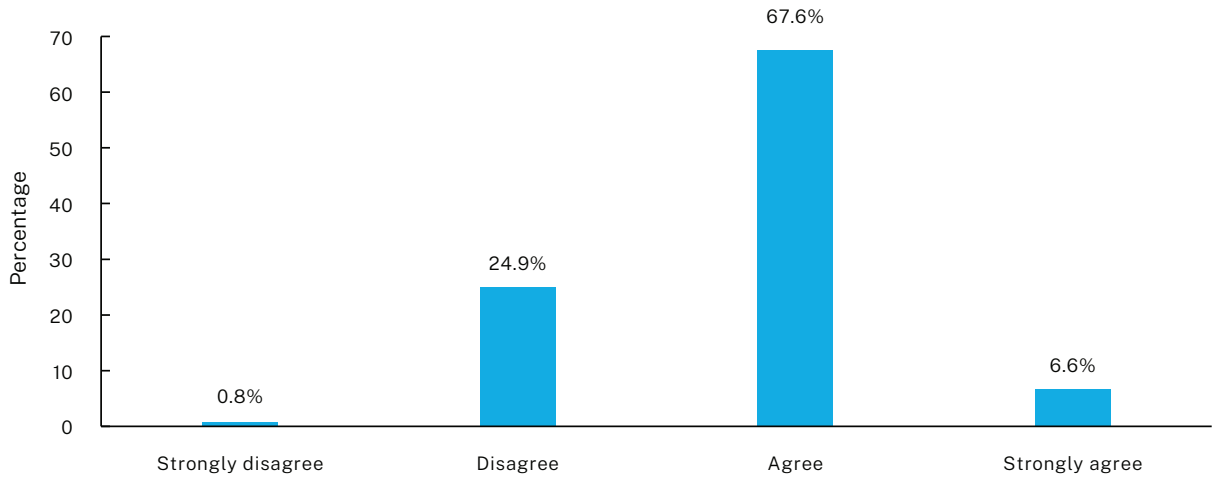
3.2.2. Domain 2: Having Sufficient Information to Manage My Health

Domain 2 addressed the access and amount of health information an individual had to manage their health. Specifically, it identified whether a 'person feels they have the information they need to take care of their health, and if they feel they have the right information to manage their health' (O'Hara et al., 2018, p. 2). A higher mean score indicates that a person feels confident that they have the information they need to live, manage and make decisions regarding their health conditions (Osborne et al., 2013). Individuals that were low in this domain are considered to have knowledge gaps and do not have the appropriate information needed to live and manage their health conditions (Osborne et al., 2013).

Custodial participants had a mean score of 2.73 (see Table 3.11). Comparatively, among the general population of Australians aged 18 and over surveyed for the 2018 NHS, the mean score in Domain 2 items was 3.17 (see Figure 3.2) (ABS, 2019c). Figure 3.7 shows that just over one quarter (25.7%) of participants disagreed or strongly disagreed that they had sufficient information to manage their health, compared to 3% of the general population (ABS, 2019a).

FIGURE 3.7

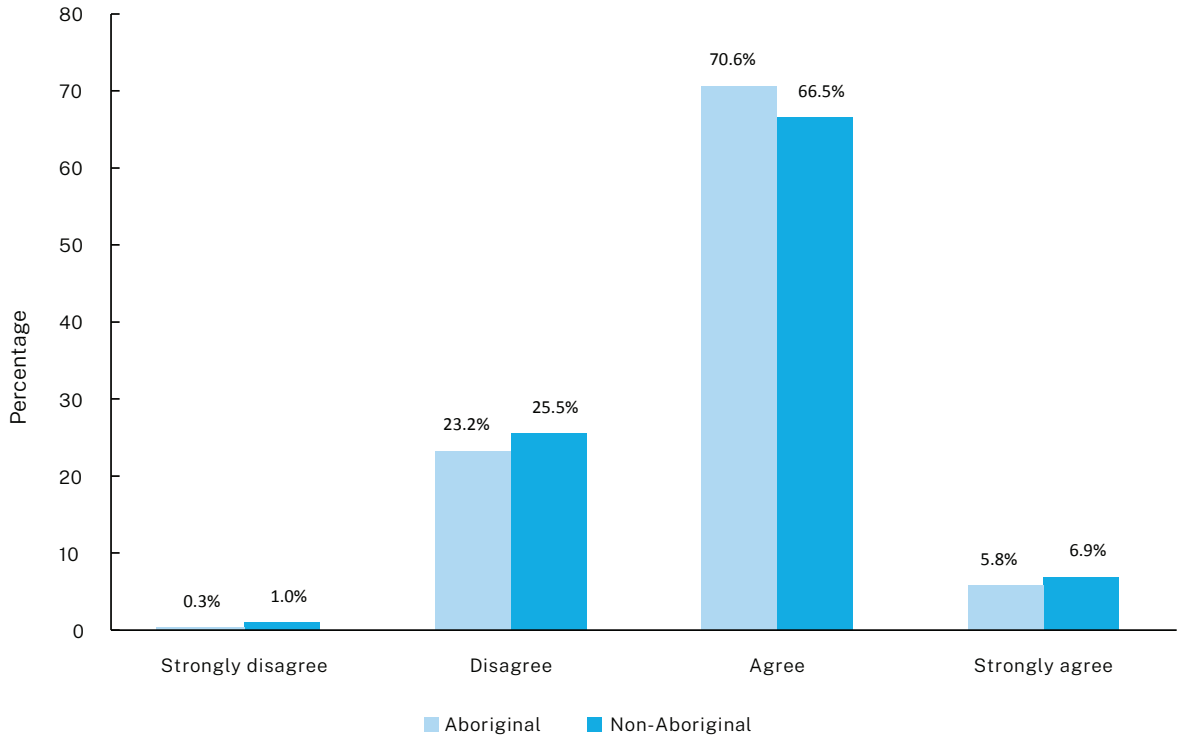
Custodial Participants' Reported Levels of Agreement With Domain 2 (Having Sufficient Information to Manage My Health)



Aboriginal participants reported a marginally higher mean score in Domain 2 than non Aboriginal participants (2.77 v. 2.72) (see Table 3.12). Over three quarters (76.4%) of Aboriginal participants agreed or strongly agreed they had sufficient health information, slightly higher than non-Aboriginal participants (73.4%) (see Figure 3.8).

FIGURE 3.8

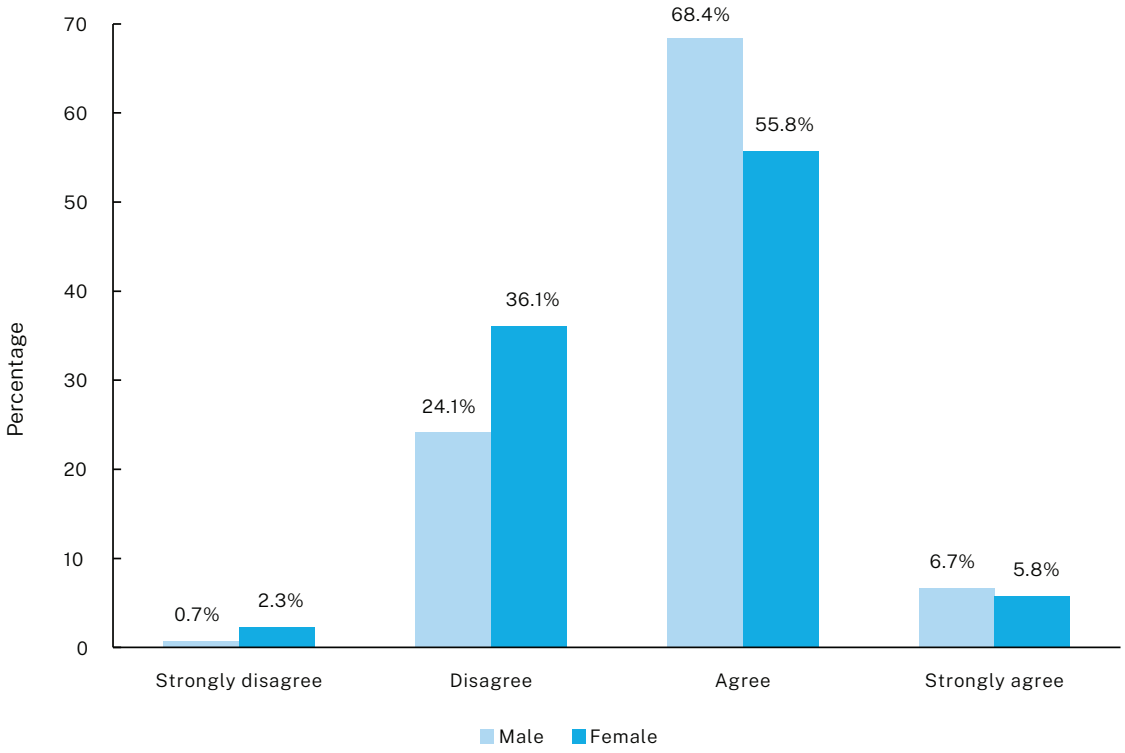
Aboriginal and Non-Aboriginal Custodial Participants' Reported Levels of Agreement With Domain 2 (Having Sufficient Information to Manage My Health)



Females felt they had less access to sufficient health information than males, with females having a slightly lower mean score in Domain 2 than males (2.59 v. 2.74) (see Table 3.13). This finding is contrary to that reported for the general Australian population (ABS, 2019c), with males having a slightly lower mean score than females (3.16 v. 3.19). Over three quarters of male custodial participants (75.1%) agreed or strongly agreed that they have sufficient information to manage their health compared to just over three in five females (61.6%) (see Figure 3.9). The differing levels of agreement between genders are consistent with the contrary mean score finding for male and female custodial participants compared to the general Australian population.

FIGURE 3.9

Male and Female Custodial Participants' Reported Levels of Agreement With Domain 2 (Having Sufficient Information to Manage My Health)



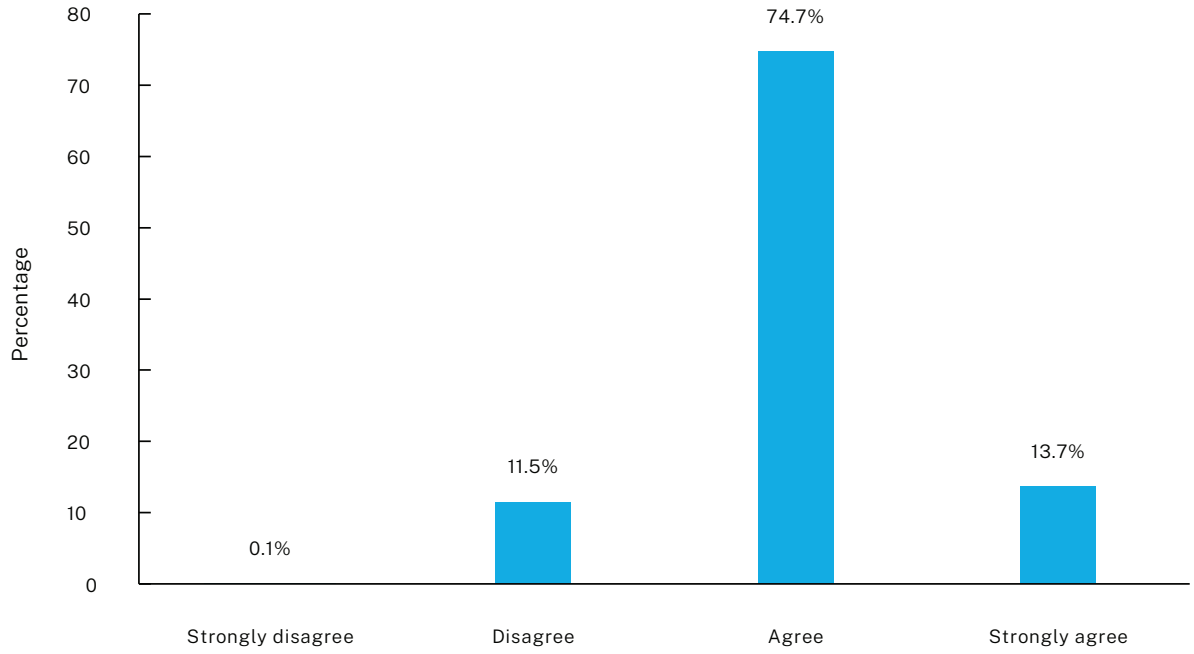
3.2.3. Domain 3: Actively Managing My Health

The Domain 3 items addressed the level of engagement an individual had in managing their health. O'Hara et al. (2018, p. 2) described that this domain ascertains whether a 'person actively engages with managing their own health or takes a more passive approach to health management'. Individuals who have a high mean score in this domain take responsibility for their own health, are proactively engaged in their care and make their own decisions about their health (Osborne et al., 2013). A lower mean score indicates a person may not consider their health their responsibility and are not engaged in their own healthcare (Osborne et al., 2013).

Custodial participants had a mean score of 3.03 in Domain 3 (see Table 3.11), slightly lower than the general population (3.09) (ABS, 2019c) (see Figure 3.2). Similar to the general population (91%) (ABS, 2019a), the majority (88.4%) of custodial participants agreed they could actively manage their health (see Figure 3.10).

FIGURE 3.10

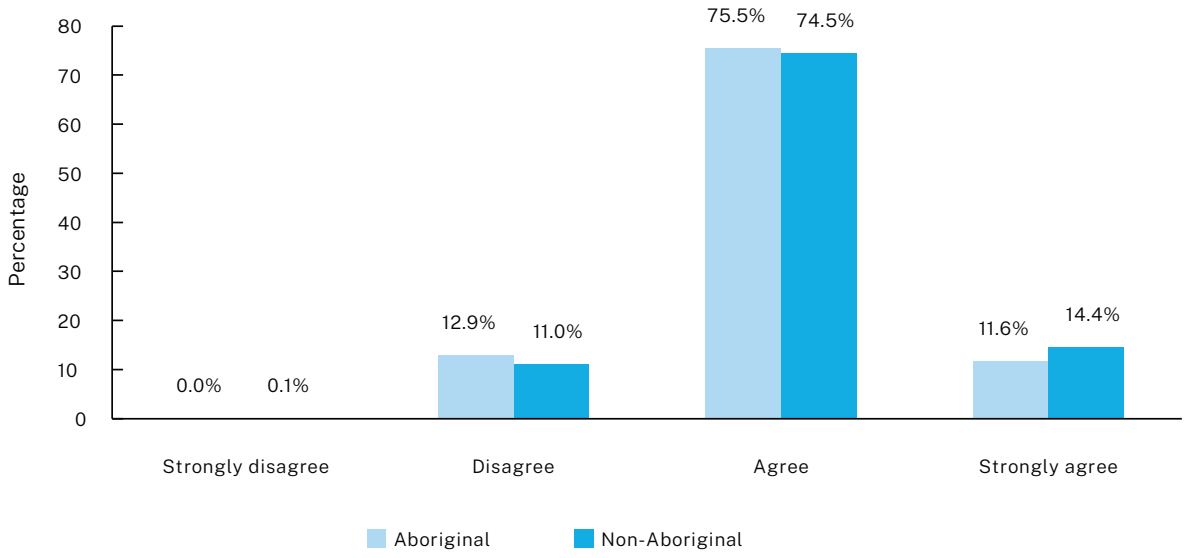
Custodial Participants' Reported Levels of Agreement With Domain 3 (Actively Managing My Health)



Aboriginal participants had a slightly lower mean score than non-Aboriginal participants (2.97 v. 3.05) in Domain 3 items (see Table 3.12). Figure 3.11 shows that a lower percentage of Aboriginal participants (87.1%) than non-Aboriginal participants (88.9%) agreed or strongly agreed that they were actively engaged in managing their health.

FIGURE 3.11

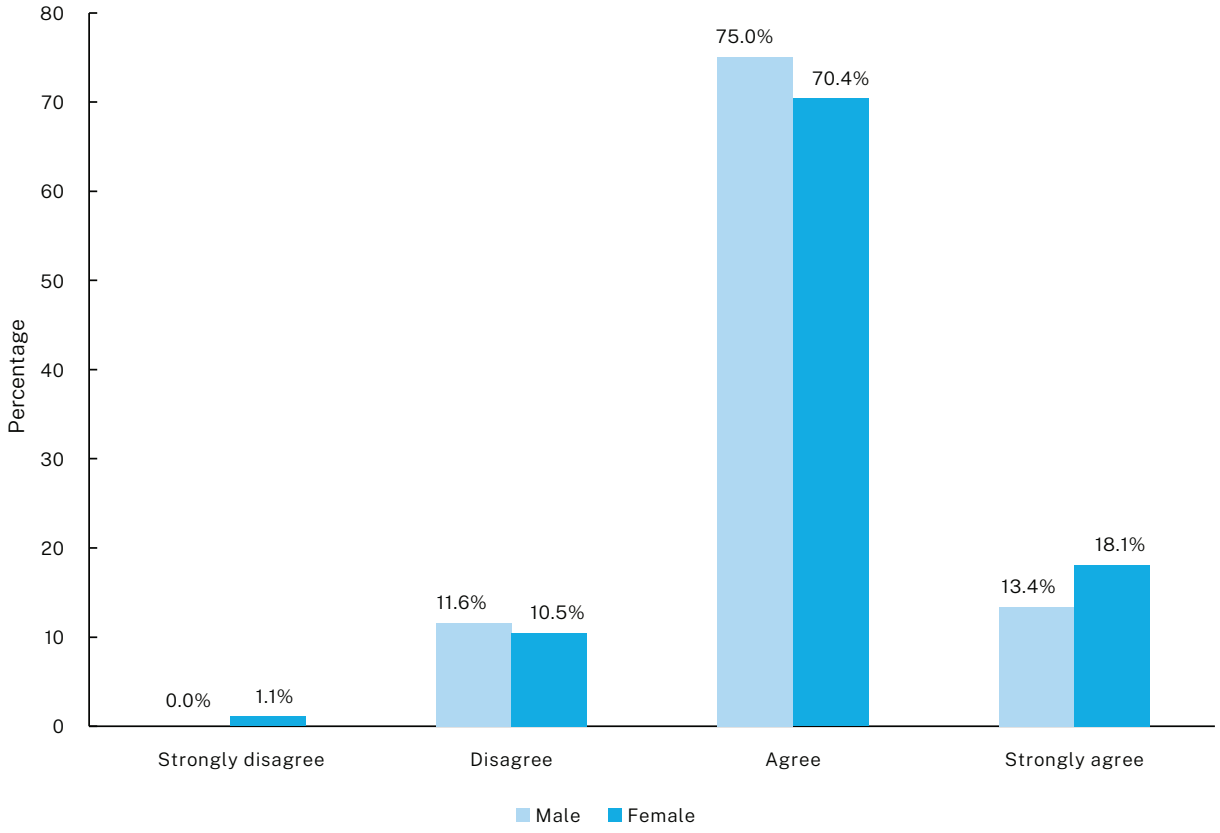
Aboriginal and Non-Aboriginal Custodial Participants' Reported Levels of Agreement With Domain 3 (Actively Managing My Health)



Males and females had similar mean scores in Domain 3 (3.03 v. 3.00) (see Table 3.13). The mean scores for male and female custodial participants were slightly lower than reported for the general population (males = 3.06; females = 3.10) (ABS, 2019c). Similar percentages were found for both male and female participants regarding their agreement with Domain 3 (88.4% and 88.5%, respectively), agreeing or strongly agreeing that they were engaged in managing their health (see Figure 3.12).

FIGURE 3.12

Male and Female Custodial Participants' Reported Levels of Agreement With Domain 3 (Actively Managing My Health)



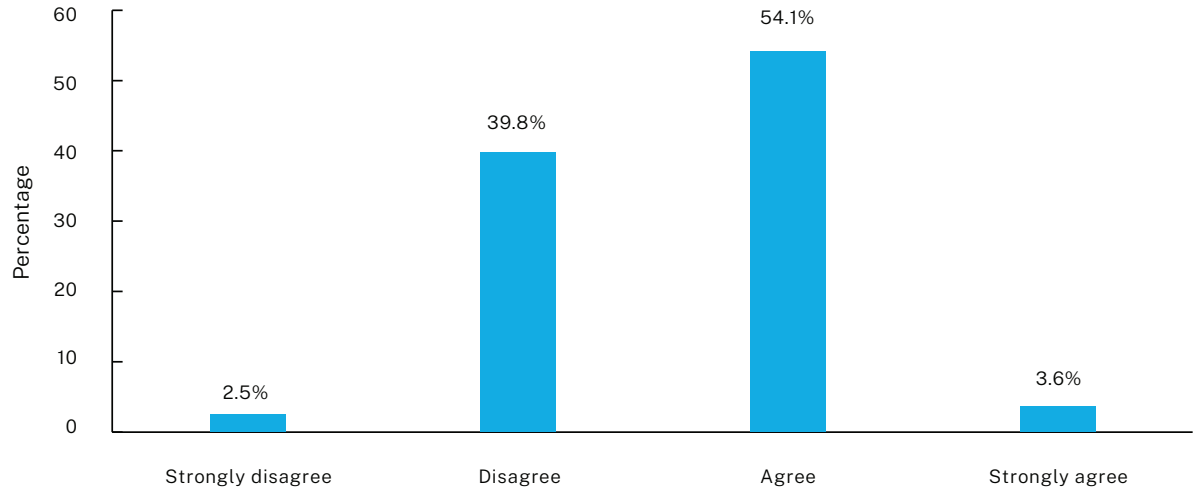
3.2.4. Domain 4: Social Support for Health

The Domain 4 items asked individuals about their social support networks and how they supported their health management. It can be described as 'if a person has one or more friends or family members they feel they can rely on and/or trust for support with health management' (O'Hara et al., 2018, p. 2). People who score low on this domain are considered alone and unsupported with their health management (Osborne et al., 2013), with higher mean scores reflecting an individual who has the social supports they need or want (Osborne et al., 2013).

Custodial participants had a mean score of 2.59 in Domain 4 (see Table 3.11), with just under three in five (57.7%) participants agreeing or strongly agreeing they had social support for health care in prison (see Figure 3.13). In addition to a lower mean score than the general population (3.19) (see Figure 3.2) (ABS, 2019c), a larger proportion of custodial participants than the general population (42.3% v. 6%) disagreed or strongly disagreed that they had the social supports they needed or wanted (ABS, 2019a).

FIGURE 3.13

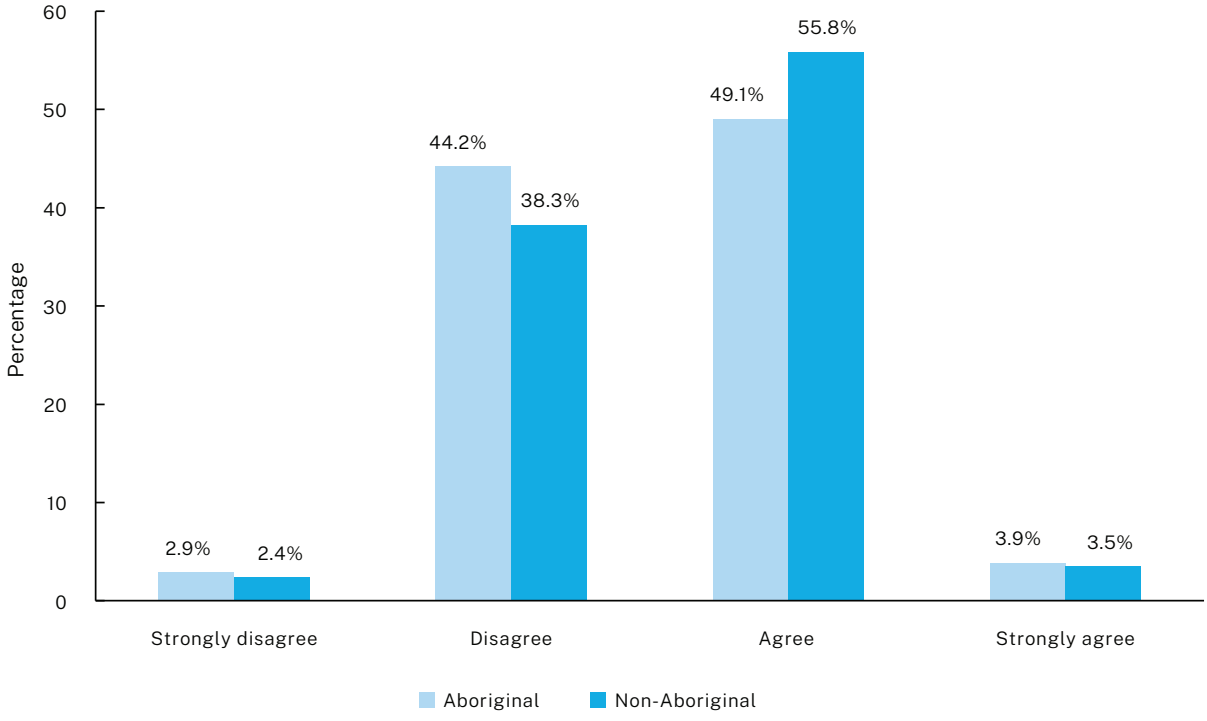
Custodial Participants' Reported Levels of Agreement With Domain 4 (Social Support for Health)



Aboriginal participants had a slightly lower mean score in Domain 4 than non-Aboriginal participants (2.56 v. 2.60) (see Table 3.12). Figure 3.14 highlights that 47.1% of Aboriginal participants disagreed or strongly disagreed with the Domain 4 items compared to 40.7% of non-Aboriginal participants. Thus, a greater percentage of Aboriginal participants felt they did not have the social support they deemed necessary to help with their healthcare while in custody.

FIGURE 3.14

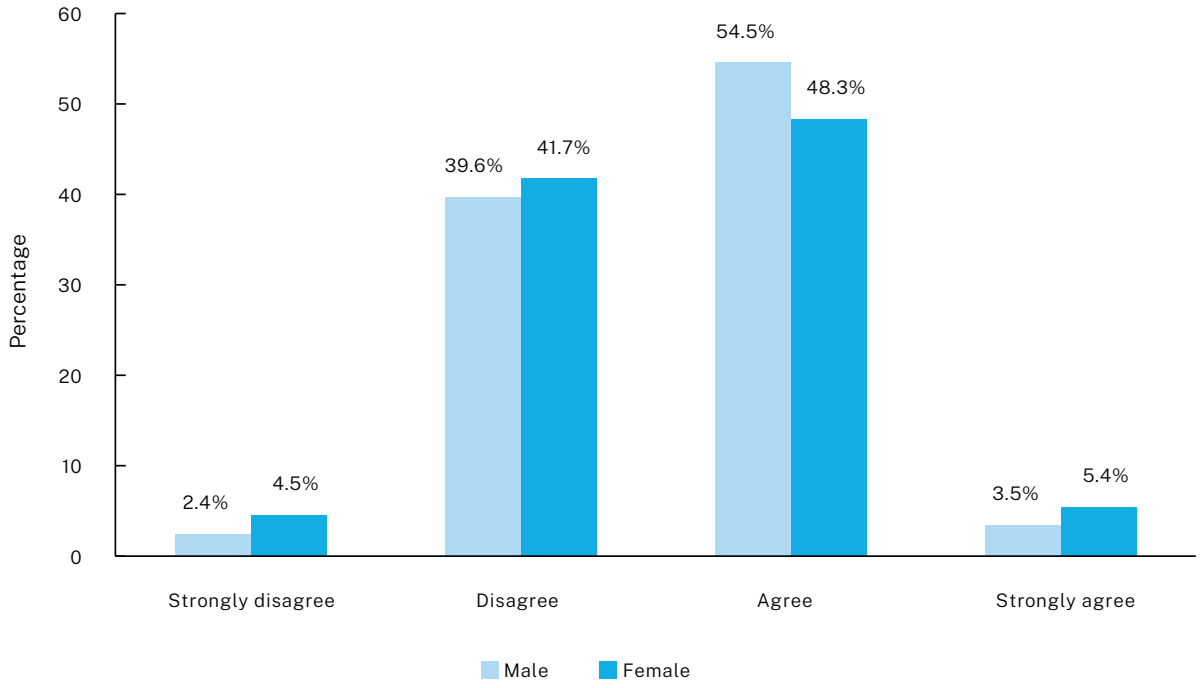
Aboriginal and Non-Aboriginal Custodial Participants' Reported Levels of Agreement With Domain 4 (Social Support for Health)



Male and female participants had similar mean scores in Domain 4 (2.59 v. 2.56) (see Table 3.13). This is consistent with the mean scores reported for the general population, with males and females having similar mean scores in Domain 4 (3.18 v. 3.19) (ABS, 2019c). When comparing male and female custodial participants to their respective counterparts in the general population, male and female custodial participants had lower mean scores in Domain 4 (males = 2.59 v. 3.18; females = 2.56 v. 3.19) (ABS, 2019c). Contrary to the general population, male custodial participants had a slightly higher mean score than females. Figure 3.15 shows that a greater percentage of males (58.0%) than females (53.7%) agreed or strongly agreed they had adequate social support in custody.

FIGURE 3.15

Male and Female Custodial Participants' Reported Levels of Agreement With Domain 4 (Social Support for Health)



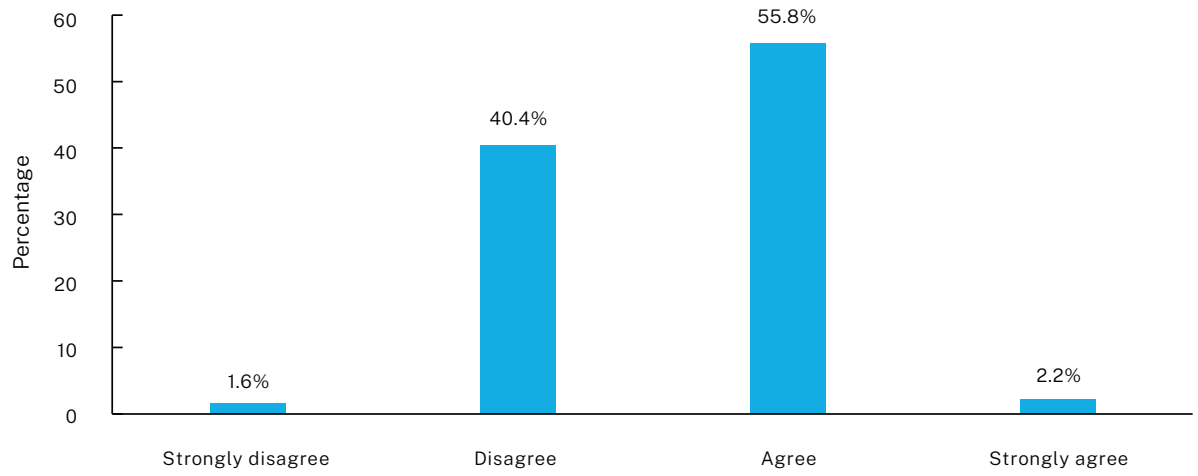
3.2.5. Domain 5: Appraisal of Health Information

The Domain 5 items addressed how individuals process the health information they receive and how this information guides their health decisions. O'Hara et al. (2018, p. 2) provided that it describes whether a 'person tends to accept most health information they hear or see, or if they tend to think critically about the information they receive and if it is right for them'. Individuals who are high on this scale can identify good, reliable sources of information and resolve any conflicting information (Osborne et al., 2013). Low mean scores indicate that an individual cannot comprehend most health information and may become confused with conflicting information (Osborne et al., 2013).

Over half (58%) of custodial participants agreed or strongly agreed that they could reliably appraise health information from different sources (see Figure 3.16). Custodial participants had a mean score of 2.57 (see Table 3.11) in Domain 5 items, notably lower than the mean score (2.92) reported for the general population (ABS, 2019c). Approximately two in five (42%) custodial participants disagreed or strongly disagreed that they were able to appraise health information, a greater proportion than among the general population (17%) (ABS, 2019a).

FIGURE 3.16

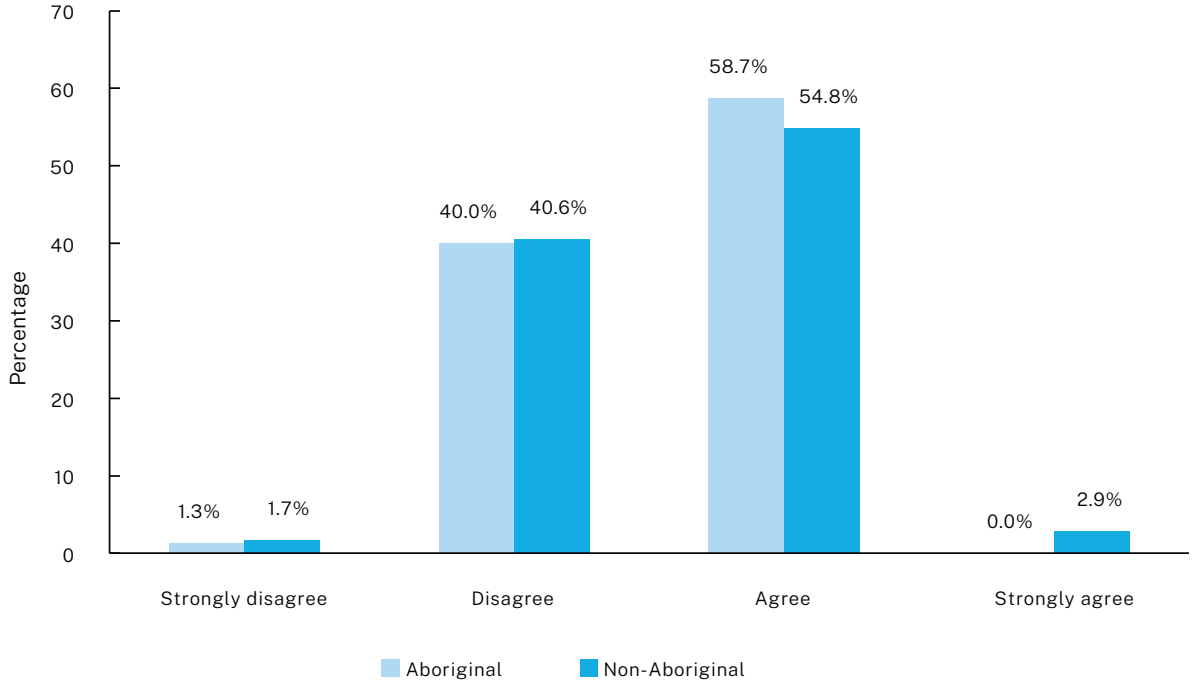
Custodial Participants' Reported Levels of Agreement With Domain 5 (Appraisal of Health Information)



Aboriginal participants had a lower mean score compared to non-Aboriginal participants in this study (2.54 v. 2.59) (see Table 3.12), with 58.7% of Aboriginal participants agreeing or strongly agreeing they were able to appraise health information adequately compared to 57.7% of non-Aboriginal participants (see Figure 3.17). Interestingly, no Aboriginal participants strongly agreed they were able to appraise health information, with 2.9% of non-Aboriginal participants reporting they could do so.

FIGURE 3.17

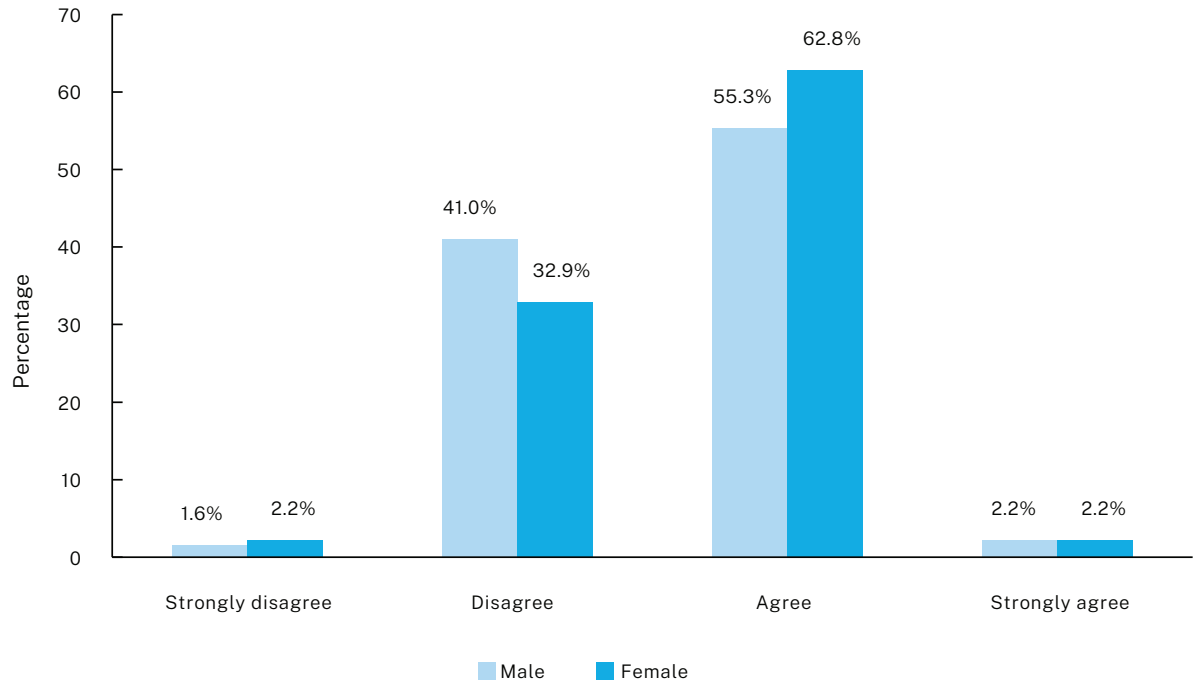
Aboriginal and Non-Aboriginal Custodial Participants' Reported Levels of Agreement With Domain 5 (Appraisal of Health Information)



Male and female custodial participants had similar mean scores in Domain 5 (2.57 v. 2.59) (see Table 3.13). Despite the similar mean score, Figure 3.18 shows that 65.0% of females agreed or strongly agreed that they could appraise health information, compared to 57.5% of males. Both male and female custodial participants had lower mean scores than reported for the general population (males = 2.88; females = 2.96) (ABS, 2019c). Nonetheless, a smaller difference between mean scores for genders was found in the custodial participants than in the general population.

FIGURE 3.18

Male and Female Custodial Participants' Reported Levels of Agreement With Domain 5 (Appraisal of Health Information)



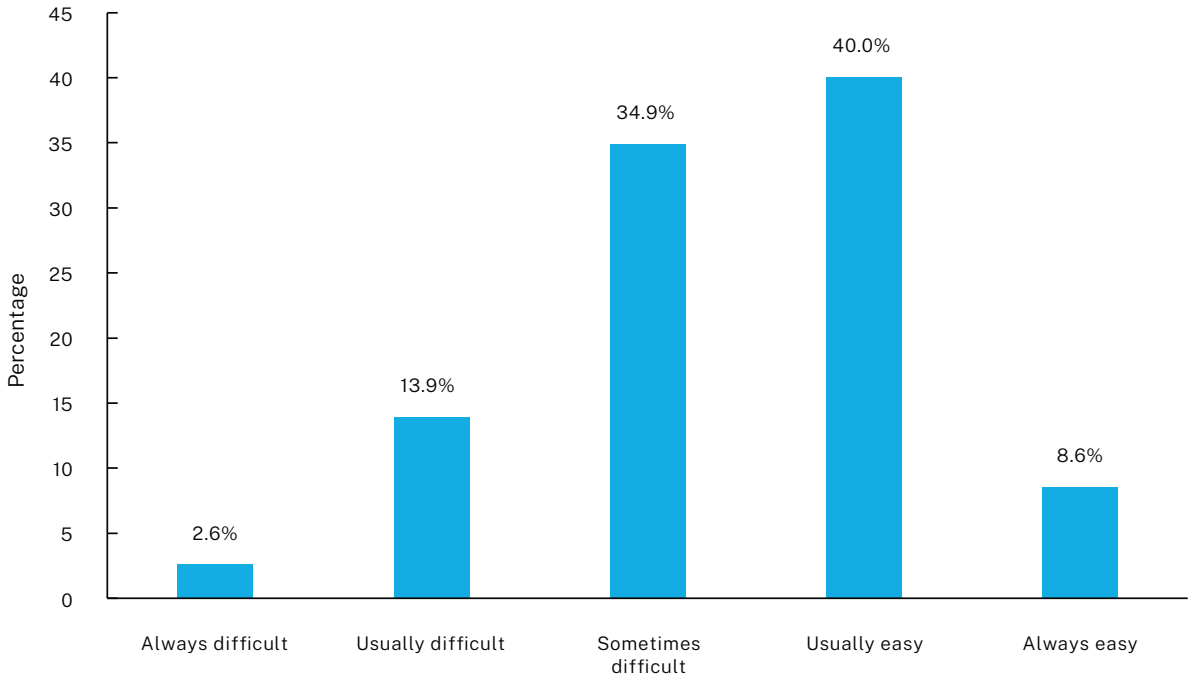
3.2.6. Domain 6: Ability to Actively Engage With Healthcare Professionals

The Domain 6 items addressed the ability of individuals to engage with healthcare professionals. The items directly relate to whether a 'person finds it easy or difficult to communicate openly and effectively with health providers and to continue with discussions until they feel they have the information they need' (O'Hara et al., 2018, p. 2). Higher mean scores in this domain indicate that an individual is empowered in their health journey, is proactive in approaching their health and can actively receive advice on their health (Osborne et al., 2013). Lower mean scores indicate that an individual is passive in approaching healthcare professionals to question, receive and understand the information provided to them (Osborne et al., 2013).

Custodial participants had a mean score of 3.37 (see Table 3.11) in Domain 6, with just over half (51.4%) (see Figure 3.19) reporting that they always, usually or sometimes found it difficult to engage with healthcare providers while in prison. In contrast, the mean score for the general population was 4.18 (ABS, 2019c), with the majority (89%) stating it was usually or always easy to actively engage with health providers (ABS, 2019a).

FIGURE 3.19

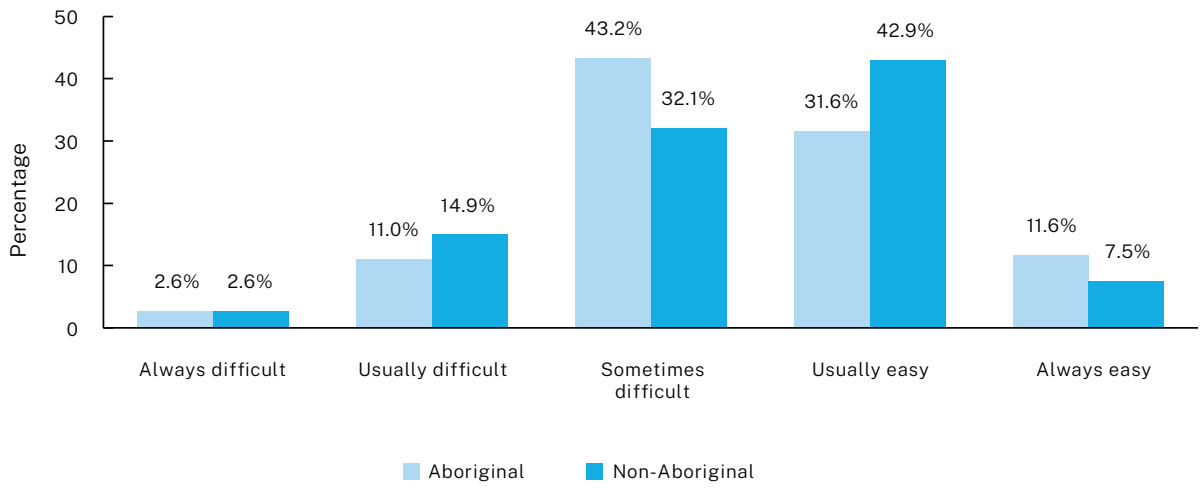
Custodial Participants' Reported Levels of Difficulty With Domain 6 (Ability to Actively Engage With Healthcare Professionals)



Aboriginal participants had a slightly lower mean score in Domain 6 compared to non Aboriginal participants (3.33 v. 3.38) (see Table 3.12). Over half (56.8%) of Aboriginal participants found it always, usually or sometimes difficult to actively engage with healthcare providers, compared to 49.6% of non-Aboriginal participants (see Figure 3.20).

FIGURE 3.20

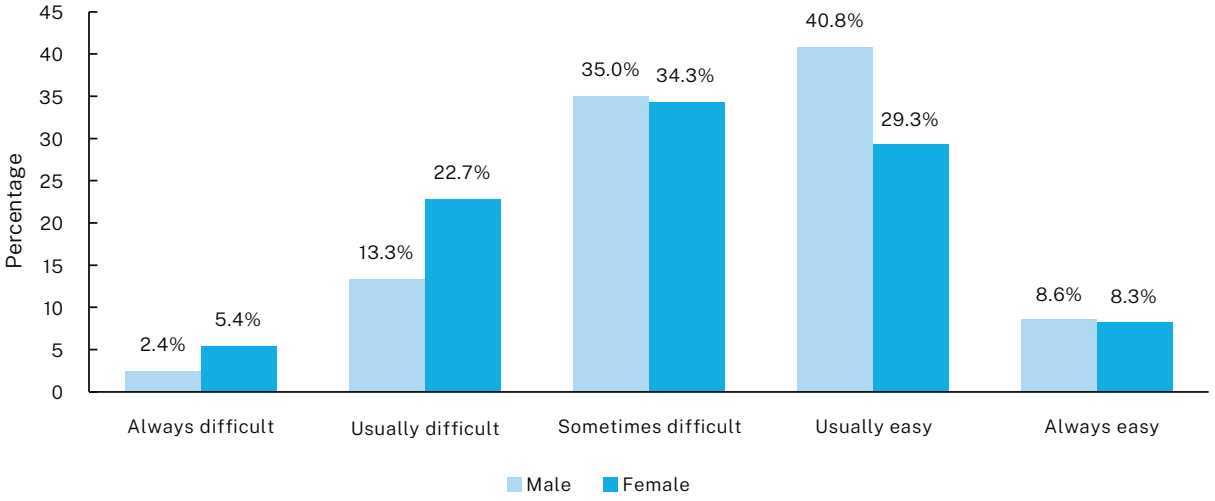
Aboriginal and Non-Aboriginal Custodial Participants' Reported Levels of Difficulty With Domain 6 (Ability to Actively Engage With Healthcare Professionals)



Contrary to the similar Domain 6 mean scores for males and females in the general population (males = 4.17; females = 4.19) (ABS, 2019c), males in this study had a higher mean score than females (3.39 v. 3.12). Just over half of male (50.7%) and nearly two thirds of female participants (62.4%) found it always, usually or sometimes difficult to actively engage with healthcare professionals while in custody (see Figure 3.21).

FIGURE 3.21

Male and Female Custodial Participants' Reported Levels of Difficulty With Domain 6 (Ability to Actively Engage With Healthcare Professionals)



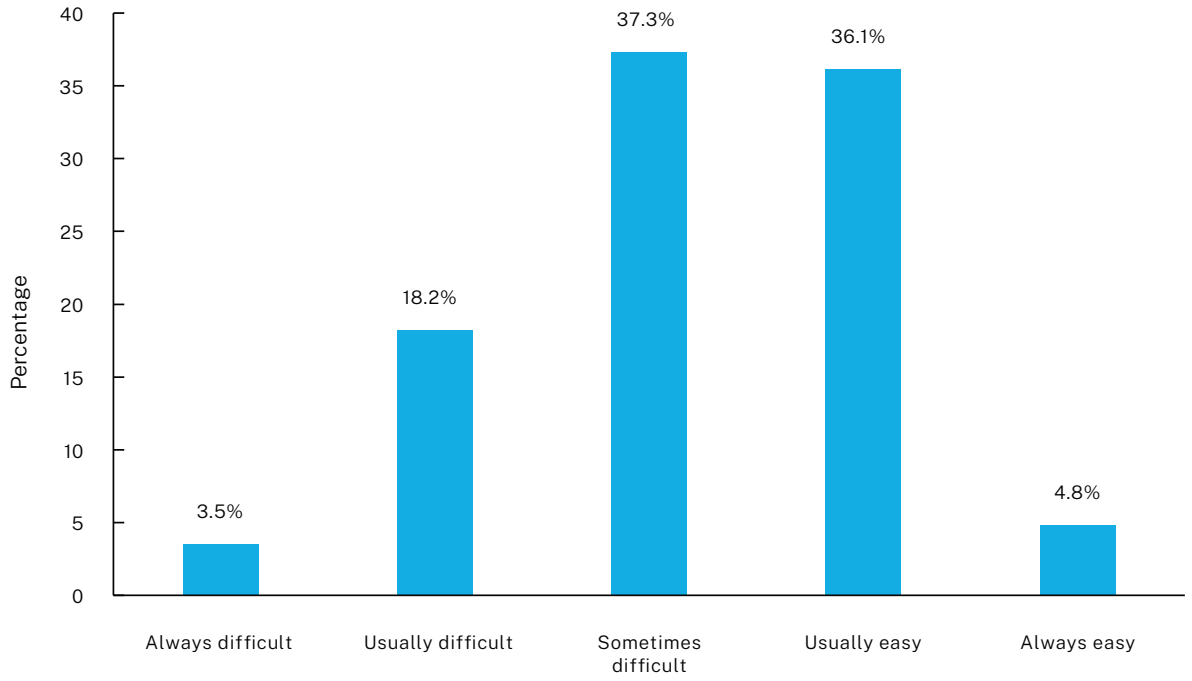
3.2.7. Domain 7: Navigating the Healthcare System

The Domain 7 items addressed whether individuals could find information about health services, access support to meet their needs and their personal advocacy when utilising services. Domain 7 was described by O'Hara et al. (2018, p. 2) as whether a 'person is aware of health services and health providers that are appropriate for their needs, and when to access them'. Individuals who are high in this domain can find information about services and supports to meet their needs and advocate for themselves at the system and service levels (Osborne et al., 2013). Lower mean scores indicate an individual is unable to source information and support to navigate the healthcare system when addressing their health needs. Lower scoring individuals are more likely to have a limited understanding of services and what they are entitled to (Osborne et al., 2013).

Custodial participants had a mean score of 3.11 in Domain 7 (see Table 3.11), with nearly three in five (59.3%) (see Figure 3.22) participants reporting that they always, usually or sometimes found it difficult to navigate the prison healthcare system. Comparatively, the mean score for the general population was 4.02 (ABS, 2019c), with 86% finding it always or usually easy to navigate the community healthcare system (ABS, 2019a).

FIGURE 3.22

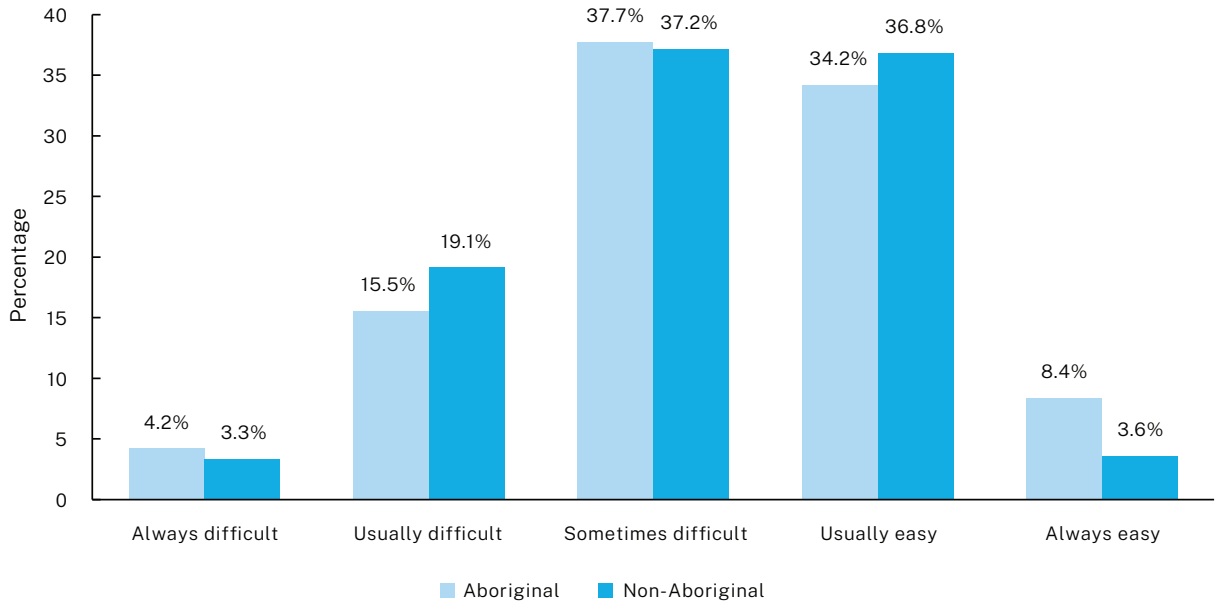
Custodial Participants' Reported Levels of Difficulty With Domain 7 (Navigating the Healthcare System)



Aboriginal participants had a slightly higher mean score than non-Aboriginal participants (3.19 v. 3.08) in Domain 7 (see Table 3.12). A slightly higher proportion of Aboriginal participants found navigating the prison healthcare system always or usually easy compared to the non-Aboriginal participants (42.6% v. 40.4%); however, a greater difference was observed between the proportions finding it always easy (see Figure 3.23).

FIGURE 3.23

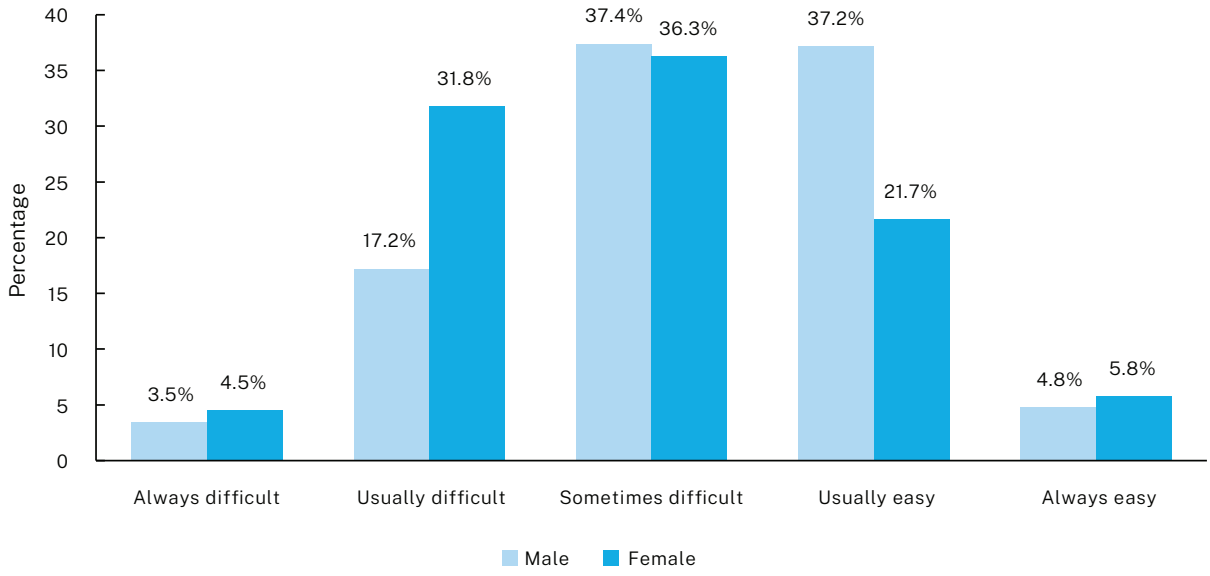
Aboriginal and Non-Aboriginal Custodial Participants' Reported Levels of Difficulty With Domain 7 (Navigating the Healthcare System)



Males had a higher mean score than females (3.13 v. 2.87) in Domain 7, indicating that male participants found it easier to navigate the prison healthcare system (see Table 3.13). Conversely, males in the general population had lower mean scores than females (4.06 v. 4.13) (ABS, 2019c). Figure 3.24 shows that nearly three quarters (72.6%) of females reported they found it always, usually or sometimes difficult, compared to three fifths of males (58.1%).

FIGURE 3.24

Male and Female Custodial Participants' Reported Levels of Difficulty With Domain 7 (Navigating the Healthcare System)



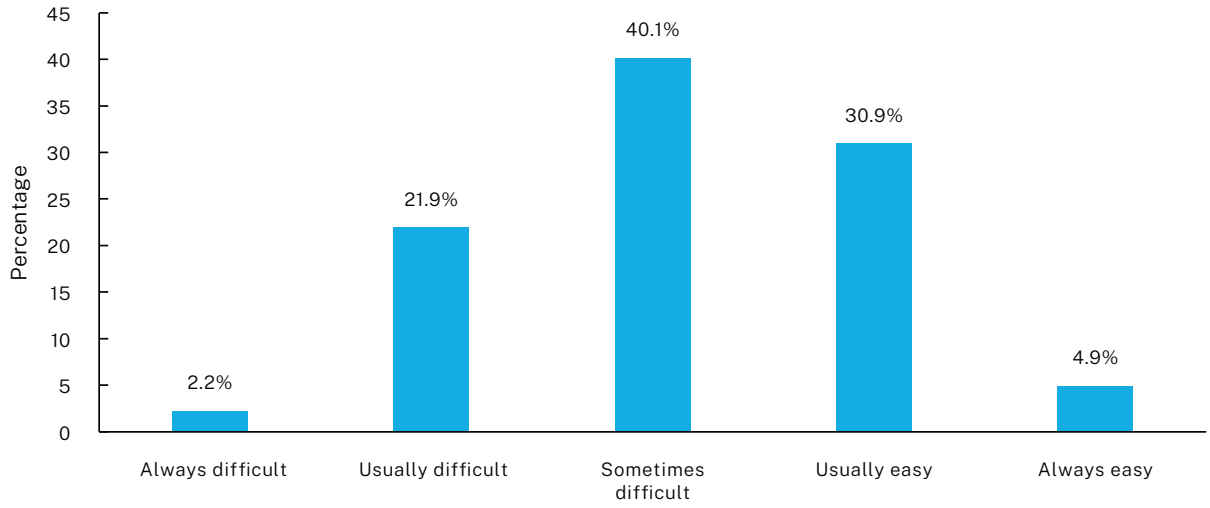
3.2.8. Domain 8: Ability to Find Good Health Information

Domain 8 addressed health literacy items regarding an individual's ability to locate good health information successfully. It was described by O'Hara et al. (2018, p. 2) as whether a 'person knows where to find health information when they need it, and if they feel confident and able to source this information'. A high mean score in Domain 8 indicates that an individual actively uses a diverse range of sources to find information and keeps up to date with new information (Osborne et al., 2013). A low mean score indicates that an individual cannot access health information when required and relies on others for the information (Osborne et al., 2013).

Custodial participants in this study had a mean score of 3.13 (see Table 3.11) in Domain 8, with nearly two thirds (64.2%) (see Figure 3.25) finding it always, usually or sometimes difficult to find good health information. In comparison to the ability of the general population (ABS, 2019a, 2019c), the Domain 8 mean score was notably lower (3.13 v. 4.09) (see Figure 3.3), and only 12% of the general population reported it being always, usually or sometimes difficult, when looking to find good health information.

FIGURE 3.25

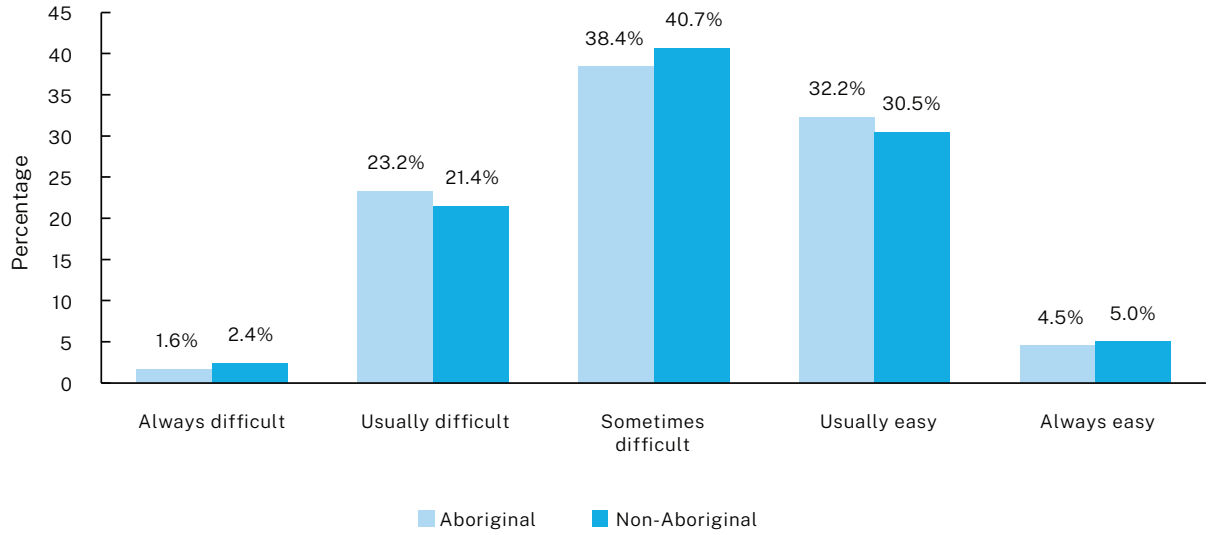
Custodial Participants' Reported Levels of Difficulty With Domain 8 (Ability to Find Good Health Information)



Both Aboriginal and non-Aboriginal participants had similar mean scores in Domain 8 items (3.11 and 3.13, respectively) (see Table 3.12). Figure 3.26 shows that just under two thirds of both Aboriginal (63.2%) and non-Aboriginal (64.2%) participants reported that it was always, usually or sometimes difficult to find good health information.

FIGURE 3.26

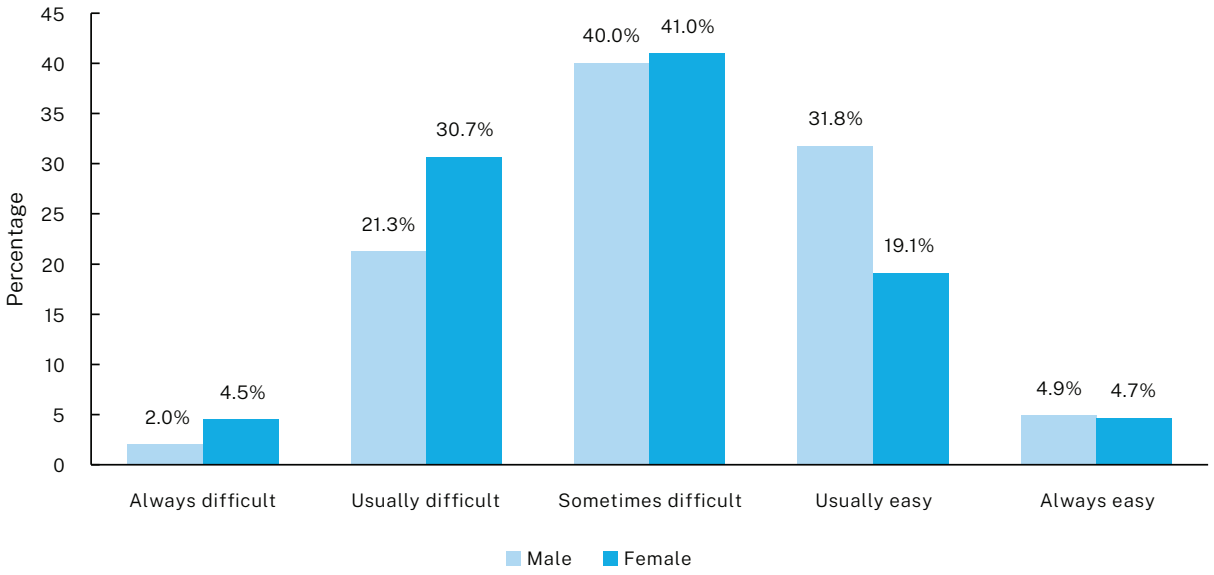
Aboriginal and non-Aboriginal Custodial Participants' Reported Levels of Difficulty With Domain 8 (Ability to Find Good Health Information)



Females had a lower mean score in Domain 8 than males (2.86 v. 3.14) (see Table 3.13). Gender mean scores reported from the 2018 NHS (ABS, 2019c) were higher than those of the custodial participants for both males (4.06) and females (4.13), with females scoring higher in this domain than males. Figure 3.27 shows that over three quarters of females (76.2%) found it always, usually or sometimes difficult to find good health information, compared to just under two thirds of males (63.3%).

FIGURE 3.27

Male and Female Custodial Participants' Reported Levels of Difficulty With Domain 8 (Ability to Find Good Health Information)



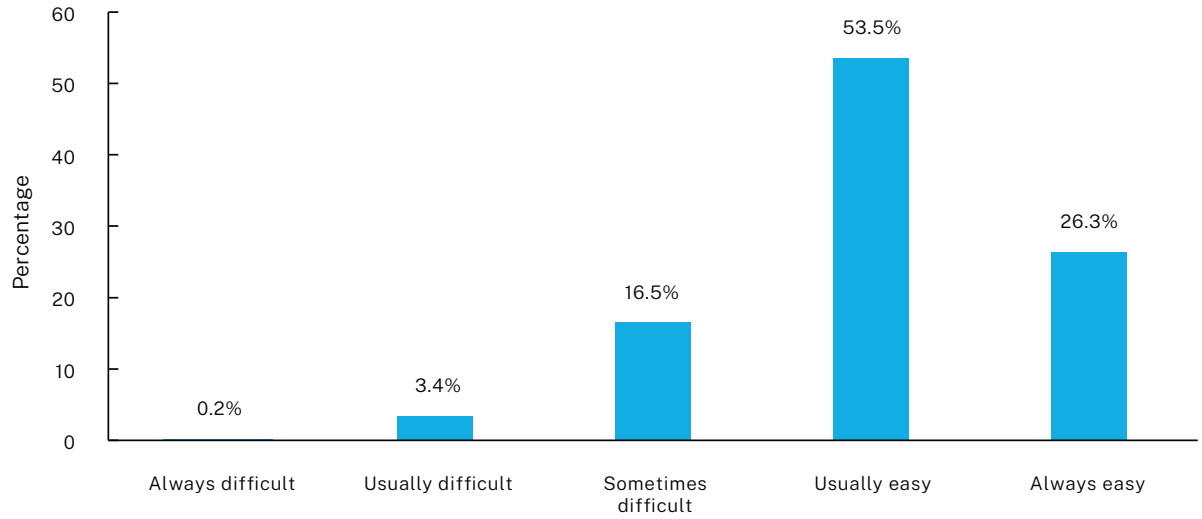
3.2.9. Domain 9: Understand Health Information Enough to Know What to Do

The Domain 9 health literacy items addressed an individual's ability to understand, cognitively process and follow health information when maintaining their health. In more simple terms, Domain 9 explored whether a 'person finds it easy or difficult to understand and follow health information they are provided with' (O'Hara et al., 2018, p. 2). A higher mean score indicates that an individual finds it easy to understand written information regarding their health and complete necessary forms (Osborne et al., 2013). A lower mean score indicates that an individual may have issues understanding written health information or instructions and reading or writing on forms (Osborne et al., 2013).

The mean in Domain 9 health literacy items was 4.00. This was the highest mean in Domains 6 to 9 (see Table 3.11). The custodial participants had a lower mean than the general population (4.27 v. 4.00) (ABS, 2019c). Nearly four in five custodial participants (79.8%) (see Figure 3.28) reported that it was usually or always easy for them to comprehend health information and know what to do. As expected from the difference in mean scores, the percentage of custodial participants reporting it to be usually or always easy was less than reported for the general population (93.0%) (ABS, 2019a).

FIGURE 3.28

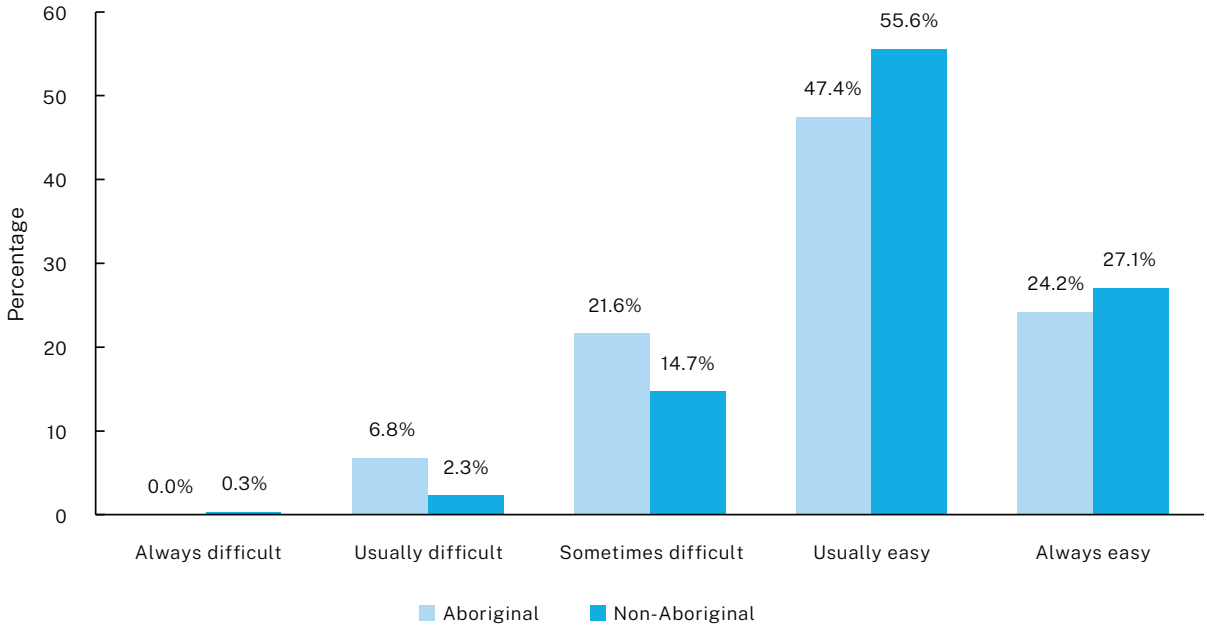
Custodial Participants' Reported Levels of Difficulty With Domain 9 (Understand Health Information Enough to Know What to Do)



Aboriginal participants had a lower mean in Domain 9 than non-Aboriginal participants (3.86 v. 4.05) (see Table 3.12). Just under three quarters (71.6%) of Aboriginal participants found it usually or always easy to understand written information, compared to 82.7% of non-Aboriginal participants. Figure 3.29 shows that no Aboriginal participants reported that they found it always difficult in Domain 9 items.

FIGURE 3.29

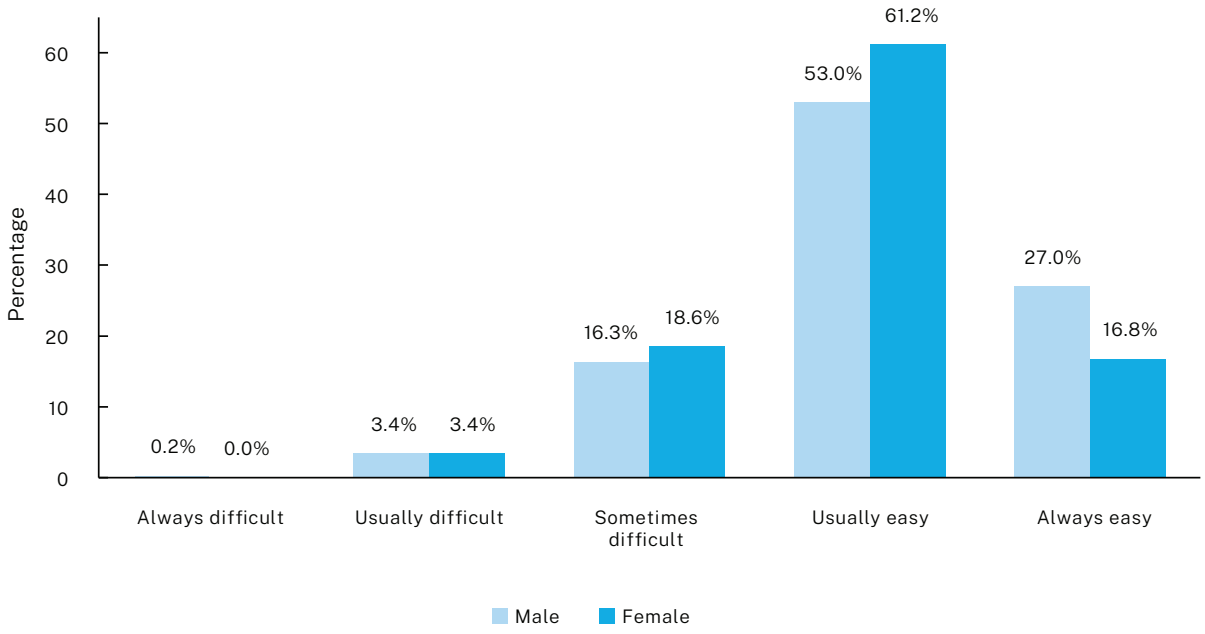
Aboriginal and Non-Aboriginal Custodial Participants' Reported Levels of Difficulty With Domain 9 (Understand Health Information Enough to Know What to Do)



Mean scores in Domain 9 were marginally higher for males than females (4.00 v. 3.97) (see Table 3.13). Male and female custodial participants had lower mean scores in Domain 9 than the general population (males = 4.23; females = 4.31) (ABS, 2019c). Moreover, the gender difference among custodial participants contrasted to the general population, where females had higher mean scores than males (ABS, 2019c). Figure 3.30 shows that four in five males (80%) and just under four in five females (78%) found it usually or always easy to understand written health information.

FIGURE 3.30

Male and Female Custodial Participants' Reported Levels of Difficulty With Domain 9 (Understand Health Information Enough to Know What to Do)

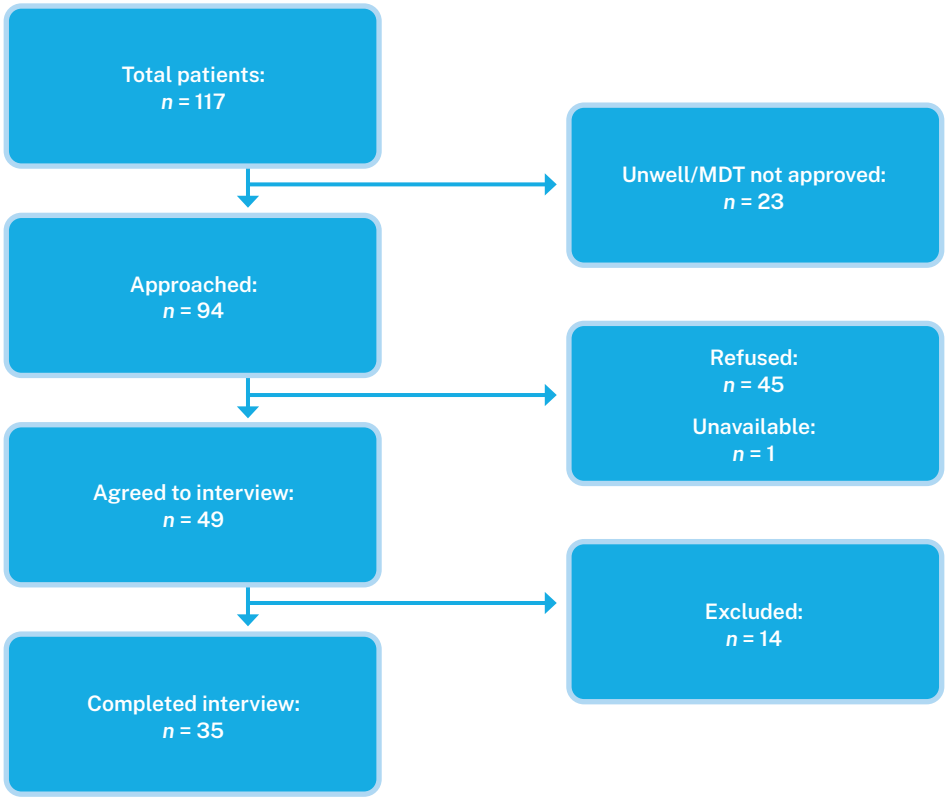


3.3. Forensic Participants

The Forensic Hospital had 117 adult patients eligible to participate in the health literacy study. Prior to approaching potential participants, MDT and NiC approval was sought to ensure the patient could give consent and was not mentally unwell. The treating team excluded a total of 23 patients during this process. Figure 3.31 outlines the recruitment flow for the forensic participants. Just under half of the patients approached (48.9%) either refused (*n* = 44) or were unavailable to take part in the interview due to rehabilitation groups (*n* = 1).

FIGURE 3.31

Forensic Participants' Recruitment Flow Chart



Note: MDT = multidisciplinary team.

Of the 94 forensic hospital patients approached, 49 (52.1%) agreed to undertake an interview, with a further 14 excluded throughout the informed consent process. The reasons for exclusion included insufficient English to consent (*n* = 7) and not being suitable to partake due to being assessed by the interviewer as not having the capacity to provide informed consent (*n* = 7). Of the patients approached, 37.2% completed the interview.

3.3.1. Characteristics

The majority of forensic participants were male (85.7%). This was lower than the proportion of males (92.4%) in the *2016 Forensic Mental Health Patient Survey Report (2016 FMH Survey)* (JHFMHN, 2018), as was the proportion of Aboriginal forensic participants in this study (11.4% v. 18.3%) (JHFMHN, 2018). Demographic breakdowns of the forensic participants' characteristics by gender and Aboriginal identity have been omitted from this report to preserve their anonymity in this smaller sample.

3.3.1.1. Age

Forensic participants ranged from 25 to 62 years of age, with a median age of 41 years (males = 40.5 years; females = 44.0 years). There has been little information reported on the age of forensic patients in NSW. The only available data is from the *2016 FMH Survey* (JHFMHN, 2018), which reported a mean age of 43.8 years. Forensic participant age profiles are outlined in Table 3.14, which shows that nearly three quarters (74.3%) were in the 30 to 49-year categories.

TABLE 3.14

Forensic Participants' Ages by Age Groups

Age groups (years)	Total %
25–29	8.6
30–34	11.4
35–39	25.7
40–44	22.9
45–49	14.3
50–54	8.6
55–59	2.9
60+	5.7

3.3.1.2. Language at Home

The majority of forensic participants (85.7%) reported English as the primary language spoken at home, with only 14.3% of participants (males = 16.7%; females = 0%) reporting that they primarily spoke a language other than English at home. This percentage was notably lower than the *2016 FMH Survey* (JHFMHN, 2018), which reported 31.1% of participants speaking a language other than English as the primary language spoken at home. A high proportion of English-speaking participants was expected in this study because individuals with insufficient English to complete the interview were excluded. This approach was undertaken to ensure participants could adequately comprehend the questions asked.

3.3.1.3. Legal Status

The majority of participants interviewed (88.6%) were forensic patients. Forensic patients are individuals the court has found to have committed a serious indictable offence but who are not considered criminally responsible due to mental health or cognitive impairment *(Mental Health and Cognitive Impairment Forensic Provisions Act 2020* [NSW]). The results of this study were higher than the 78% of forensic patients who participated in the *2016 FMH Survey* (JHFMHN, 2018). A small number of civil (8.6%) and correctional patients (2.9%) also participated (see Table 3.15). These participant groups were too small to allow separate reporting without creating a risk that individual respondents could be identified. Their responses are included in the results for forensic participants.

TABLE 3.15

Forensic Participants' Current Legal Statuses

Legal status	Total %
Forensic patient	88.6
Civil patient	8.6
Correctional patient	2.9

3.3.2. Self-Reported Health Status

3.3.2.1. Health Rating

Just under three quarters (74.3%) of the forensic participants rated their health as good or very good. The *2016 FMH Survey* (JHFMHN, 2018)found that 68.5% of respondents rated their health as good, very good or excellent. In this study, no participants rated their health as poor or very poor (see Table 3.16).

TABLE 3.16

Forensic Participants' Self-Reported Health Ratings

Health rating	Total %
Very good	14.3
Good	60.0
Fair	17.1
Poor	0.0
Very poor	0.0
Not stated/missing data	8.6

3.3.2.2. Health Conditions

Almost two thirds (65.7%) (see Table 3.17) of the forensic participants interviewed reported they had a health condition for which they regularly consulted a healthcare provider.

TABLE 3.17

Forensic Participants' Self-Reported Health Conditions

Health condition	Total %
Yes	65.7
No	25.7
Not stated/missing data	8.6

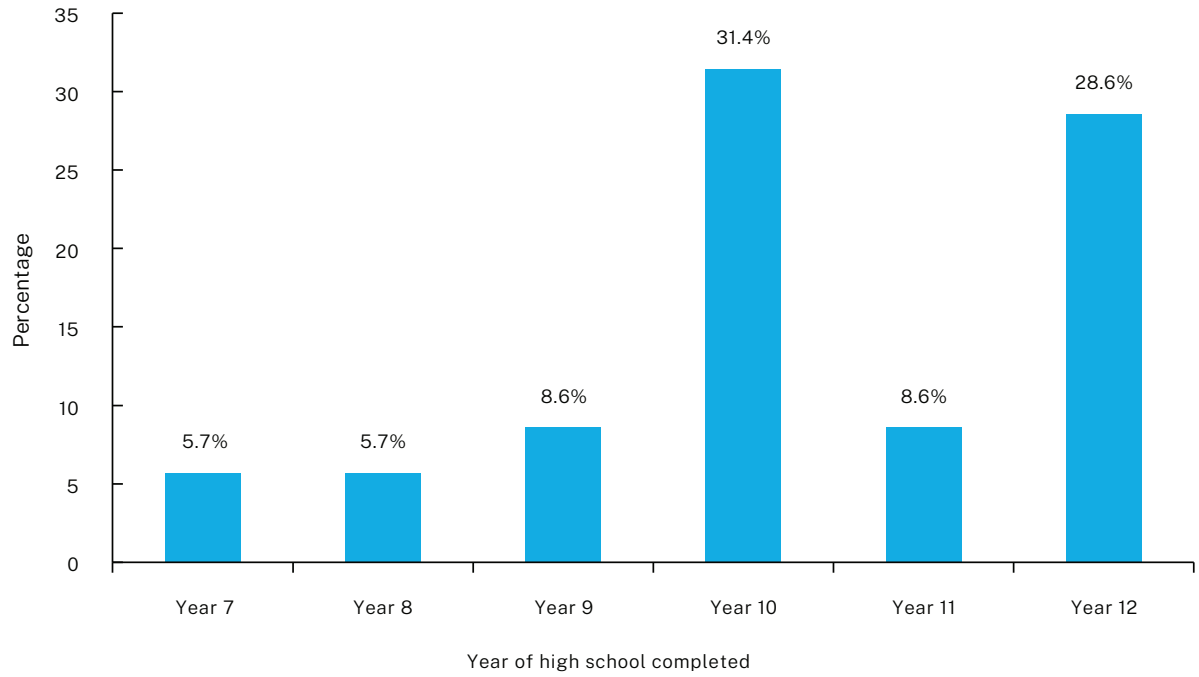
3.3.3. Education

3.3.3.1. Highest Schooling Level

Over half (51.4%) of forensic participants had left school in Year 10 or earlier (see Figure 3.32). This proportion was lower than the nearly two thirds (66.1%) reported in the *2016 FMH Survey* (JHFMHN, 2018). The number of participants completing Years 11 and 12 was slightly higher than previously reported, with more participants in this study completing Year 11 (11.4% v. 9.9%) and Year 12 (28.6% v. 27.7%) (JHFMHN, 2018).

FIGURE 3.32

Forensic Participants' Highest Schooling Levels



3.3.3.2. Highest Education Level

Just under three quarters (71.4%) of participants stated that high school was the highest level of education obtained, and 17.1% had completed tertiary level education (see Table 3.18). Limited data is available on the education levels of forensic patients, although one quarter (24.4%) of a forensic population surveyed in 2016 had high school as their highest level of education, with one third (33.7%) having obtained a tertiary level education (JHFMHN, 2018).

TABLE 3.18

Forensic Participants' Highest Education Level Attained

Education level	Total %
High school	71.4
Diploma	11.4
Bachelors degree	5.7
Not stated/missing data	11.4

3.4. Forensic Participants' Health Literacy Questionnaire Domains

As described in Section 2.3.1, the HLQ is a multidimensional health literacy tool for measuring health literacy across nine independent but complementary domains. Table 3.19 outlines the overall HLQ domains' mean scores, SD and 95% CIs for the forensic participants. For the first five domains, the highest overall mean score for forensic participants was demonstrated in Domain 3, and the lowest mean score was shown in Domain 5. For the last four domains, the highest mean score was found in Domain 9, and the lowest mean score was observed in Domain 8. Mean scores for individual domains are discussed in further detail in Sections 3.4.1 to 3.4.9.

TABLE 3.19

Health Literacy Questionnaire Domain Mean Scores of Forensic Participants

Health Literacy Questionnaire Domain		Mean (SD)	[95% CI]
1.	Feeling understood and supported by healthcare professionals[a]	3.16 (0.65)	[2.95, 3.38]
2.	Having sufficient information to manage my health[a]	2.90 (0.75)	[2.64, 3.16]
3.	Actively managing my health[a]	3.24 (0.52)	[3.06, 3.42]
4.	Social support for health[a]	3.06 (0.56)	[2.87, 3.25]
5.	Appraisal of health information[a]	2.70 (0.45)	[2.54, 2.85]
6.	Ability to actively engage with healthcare professionals[b]	3.83 (0.96)	[3.50, 4.16]
7.	Navigating the healthcare system[b]	3.67 (0.80)	[3.40, 3.95]
8.	Ability to find good health information[b]	3.57 (0.88)	[3.26, 3.87]
9.	Understand health information enough to know what to do[b]	4.02 (0.71)	[3.78, 4.27]

Note: [a] Scale range = 1 (lowest) to 4 (highest), a higher score indicates greater ability or more support; [b] Scale range = 1 (lowest) to 5 (highest), a higher score indicates greater ability or more support.

The HLQ domain mean scores, SD and 95% CIs for the Aboriginal and non-Aboriginal forensic participants are shown in Table 3.20. For the first five domains, the highest overall mean score for Aboriginal forensic participants was shown in Domain 3, and the lowest mean score was demonstrated in Domain 2. For the last four domains, the highest mean score was found in Domain 9, and the lowest mean score was shown in Domain 6. For the first five domains, the highest overall mean score for non-Aboriginal forensic participants was observed in Domains 1 and 3, and the lowest mean score was shown in Domain 5. For the last four domains, the highest mean score was found in Domain 9, and the lowest mean score was demonstrated in Domain 8.

TABLE 3.20

Health Literacy Questionnaire Domain Mean Scores of Aboriginal and Non-Aboriginal Forensic Participants

Health Literacy Questionnaire Domain		Aboriginal		Non-Aboriginal	
		Mean (SD)	[95% CI]	Mean (SD)	[95% CI]
1.	Feeling understood and supported by healthcare professionals[a]	2.74 (1.18)	[0.85, 4.62]	3.22 (0.55)	[3.02, 3.42]
2.	Having sufficient information to manage my health[a]	2.61 (1.29)	[0.55, 4.66]	2.94 (0.67)	[2.69, 3.19]
3.	Actively managing my health[a]	3.38 (0.79)	[2.12, 4.64]	3.22 (0.49)	[3.04, 3.40]
4.	Social support for health[a]	2.93 (1.04)	[1.27, 4.60]	3.08 (0.49)	[2.90, 3.26]
5.	Appraisal of health information[a]	2.85 (0.56)	[1.95, 3.74]	2.68 (0.44)	[2.51, 2.84]
6.	Ability to actively engage with healthcare professionals[b]	2.86 (1.71)	[0.12, 5.59]	3.96 (0.77)	[3.68, 4.24]
7.	Navigating the healthcare system[b]	3.06 (1.35)	[0.91, 5.22]	3.76 (0.70)	[3.50, 4.01]
8.	Ability to find good health information[b]	2.95 (0.85)	[1.60, 4.31]	3.65 (0.87)	[3.33, 3.97]
9.	Understand health information enough to know what to do[b]	3.43 (1.29)	[1.47, 5.60]	4.09 (0.60)	[3.87, 4.31]

Note: [a] Scale range = 1 (lowest) to 4 (highest), a higher score indicates greater ability or more support; [b] Scale range = 1 (lowest) to 5 (highest), a higher score indicates greater ability or more support.

The HLQ domain mean scores, SD and 95% CIs for male and female forensic participants are outlined in Table 3.21. For the first five domains, the highest overall mean score for male forensic participants was observed in Domain 3, and the lowest mean score was found in Domain 5. For the last four domains, the highest mean score was found in Domain 9, and the lowest mean score was demonstrated in Domain 8. For the first five domains, the highest overall mean score for female forensic participants was shown in Domain 3, and the lowest mean score was observed in Domain 2. For the last four domains, the highest mean score was demonstrated in Domain 9, and the lowest mean score was found in Domain 6.

TABLE 3.21

Health Literacy Questionnaire Domain Mean Scores of Male and Female Forensic Participants

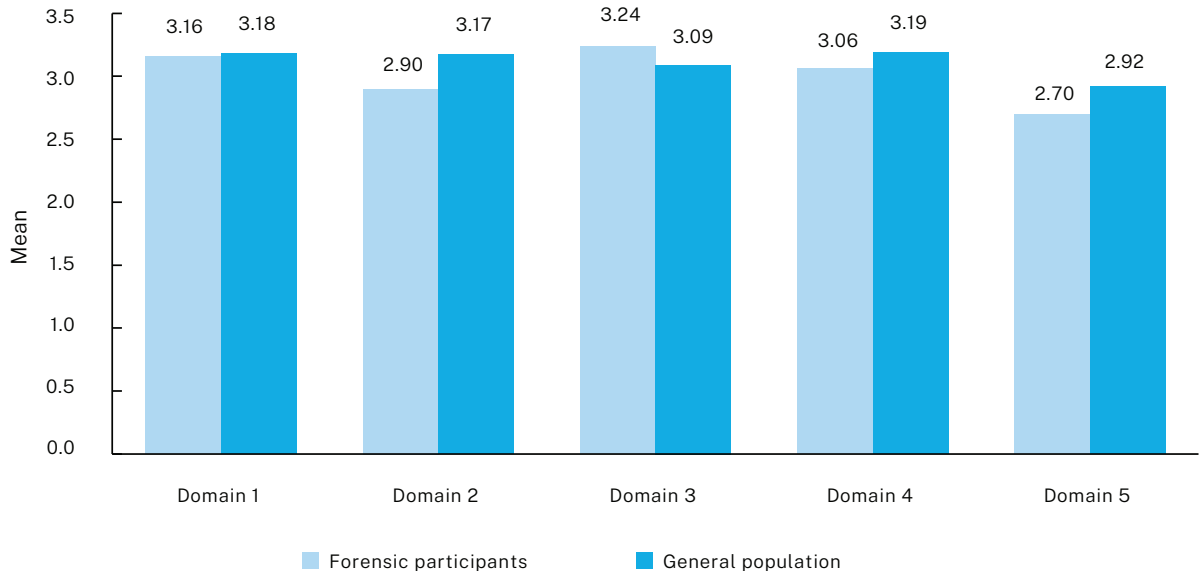
Health Literacy Questionnaire Domain		Male (*N* = 30)		Female (*N* = 5)	
		Mean (SD)	[95% CI]	Mean (SD)	[95% CI]
1.	Feeling understood and supported by healthcare professionals[a]	3.19 (0.54)	[2.99, 3.39]	2.94 (1.25)	[1.39, 4.50]
2.	Having sufficient information to manage my health[a]	2.92 (0.66)	[2.67, 3.16]	2.78 (1.35)	[1.10, 4.46]
3.	Actively managing my health[a]	3.21 (0.52)	[3.01, 3.40]	3.50 (0.53)	[1.10, 4.46]
4.	Social support for health[a]	3.07 (0.48)	[2.89, 3.25]	2.99 (1.05)	[1.68, 4.30]
5.	Appraisal of health information[a]	2.67 (0.45)	[2.50, 2.84]	2.87 (0.44)	[2.33, 3.41]
6.	Ability to actively engage with healthcare professionals[b]	3.89 (0.81)	[3.58, 4.19]	3.39 (1.78)	[1.18, 5.60]
7.	Navigating the healthcare system[b]	3.69 (0.74)	[3.41, 3.97]	3.56 (1.29)	[1.95, 5.17]
8.	Ability to find good health information[b]	3.58 (0.86)	[3.26, 3.90]	3.46 (1.12)	[2.07, 4.86]
9.	Understand health information enough to know what to do[b]	4.00 (0.73)	[3.73, 4.27]	4.16 (0.62)	[3.40, 4.93]

Note: [a] Scale range = 1 (lowest) to 4 (highest), a higher score indicates greater ability or more support; [b] Scale range = 1 (lowest) to 5 (highest), a higher score indicates greater ability or more support.

A lower mean score for forensic participants was found in Domains 1, 2, 4 and 5 compared to the general population (ABS, 2019c) (see Figure 3.33).

FIGURE 3.33

Comparison of Forensic Participants and the Reported Australian General Population Domain Mean Scores for Health Literacy Questionnaire Domains 1 to 5

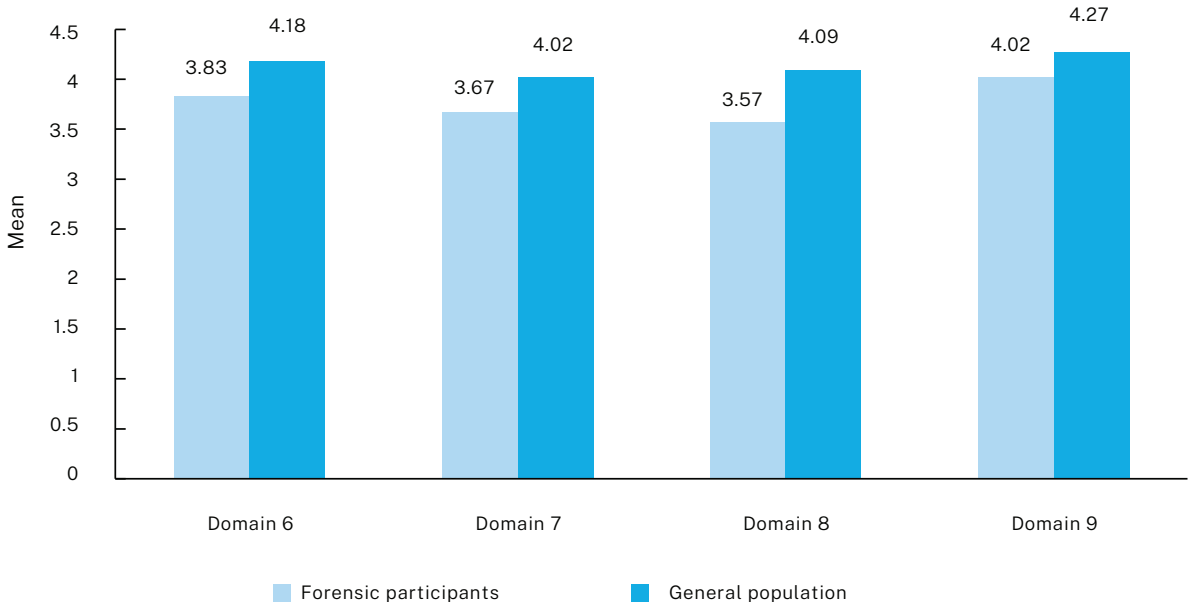


Note: Australian general population data were adapted from ABS (2019c).

A lower mean score was found in Domains 6 to 9 when comparing the forensic participants to the general population (ABS, 2019c) (see Figure 3.34).

FIGURE 3.34

Comparison of Forensic Participants and the Reported Australian General Population Domain Mean Scores for Health Literacy Questionnaire Domains 6 to 9



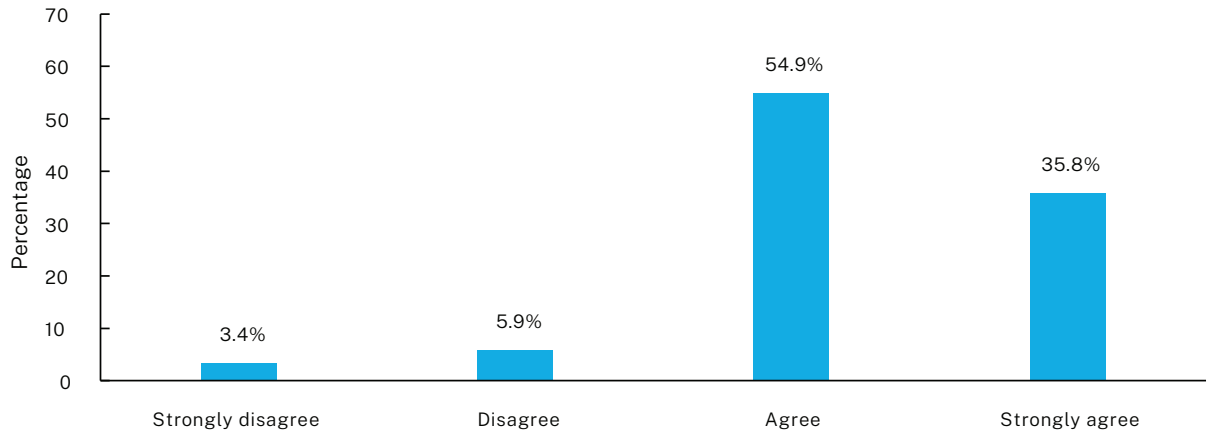
Note: Australian general population data were adapted from ABS (2019c).

3.4.1. Domain 1: Feeling Understood and Supported by Healthcare Providers

Forensic participants had a mean score of 3.16 in Domain 1 (see Table 3.19). Figure 3.35 shows that 90.7% agreed or strongly agreed that they felt supported and understood by healthcare providers. The mean score of forensic participants in Domain 1 was similar to that among general population participants in the *2018 NHS* (3.16 v. 3.18) (ABS, 2019c) (see Figure 3.33). A slightly higher percentage of forensic participants disagreed or strongly disagreed that they felt supported by healthcare providers compared to the general population (9.1% v. 4%) (ABS, 2019a).

FIGURE 3.35

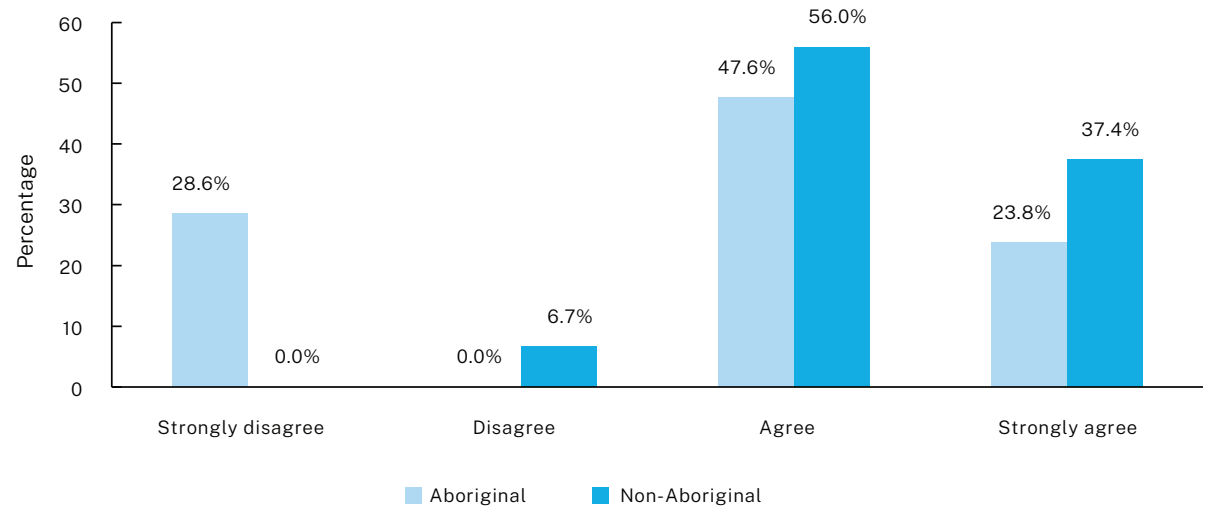
Forensic Participants' Reported Levels of Agreement With Domain 1 (Feeling Understood and Supported by Healthcare Providers)



Aboriginal participants had a notably lower mean score in Domain 1 compared to non-Aboriginal participants (2.74 v. 3.22) (see Table 3.20). Just under three quarters (71.4%) of Aboriginal participants agreed or strongly agreed compared to over nine tenths (93.4%) of non Aboriginal participants (see Figure 3.36).

FIGURE 3.36

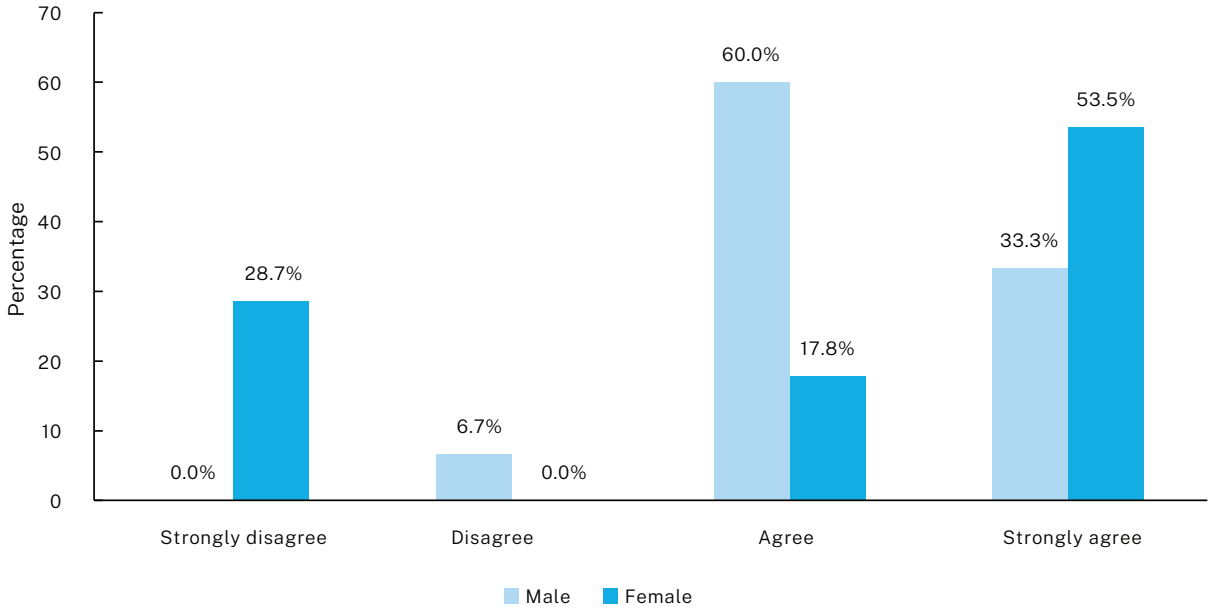
Aboriginal and Non-Aboriginal Forensic Participants' Reported Levels of Agreement With Domain 1 (Feeling Understood and Supported by Healthcare Providers)



Males had a slightly higher mean score in Domain 1 items than females (3.19 v. 2.94) (see Table 3.21). This finding is contrary to the general population, where females reported a higher mean score than males (females = 3.22; males = 3.14) (ABS, 2019c). Despite this difference in mean scores for forensic participants, just over 9 in 10 males (93.3%) and 7 in 10 females (71.3%) agreed or strongly agreed they felt understood and supported by healthcare providers (see Figure 3.37). Compared to the males in the general population, males in this study had a slightly higher mean in Domain 1 (3.19 v. 3.14) (ABS, 2019c). Female forensic participants had a lower mean score in Domain 1 compared to females in the general population (2.94 v. 3.22) (ABS, 2019c).

FIGURE 3.37

Male and Female Forensic Participants' Reported Levels of Agreement With Domain 1 (Feeling Understood and Supported by Healthcare Providers)

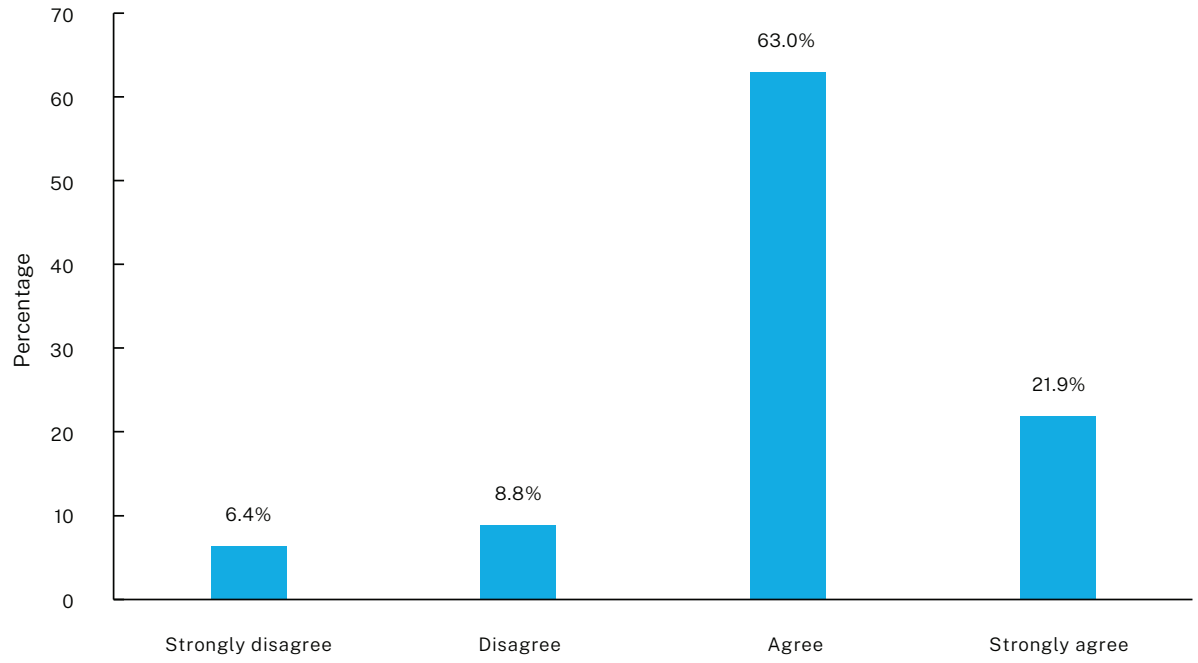


3.4.2. Domain 2: Having Sufficient Information to Manage My Health

Forensic participants had a mean score of 2.90 (see Table 3.19), with over four in five participants (84.9%) agreeing or strongly agreeing that they had sufficient information to manage their health. Comparatively, among the general population of Australians aged 18 and over surveyed for the *2018 NHS*, the mean score in Domain 2 was 3.17 (ABS, 2019c). Figure 3.38 shows that 15.2% of forensic participants disagreed or strongly disagreed that they had sufficient information to manage their health, compared to 3% of the general population (ABS, 2019a).

FIGURE 3.38

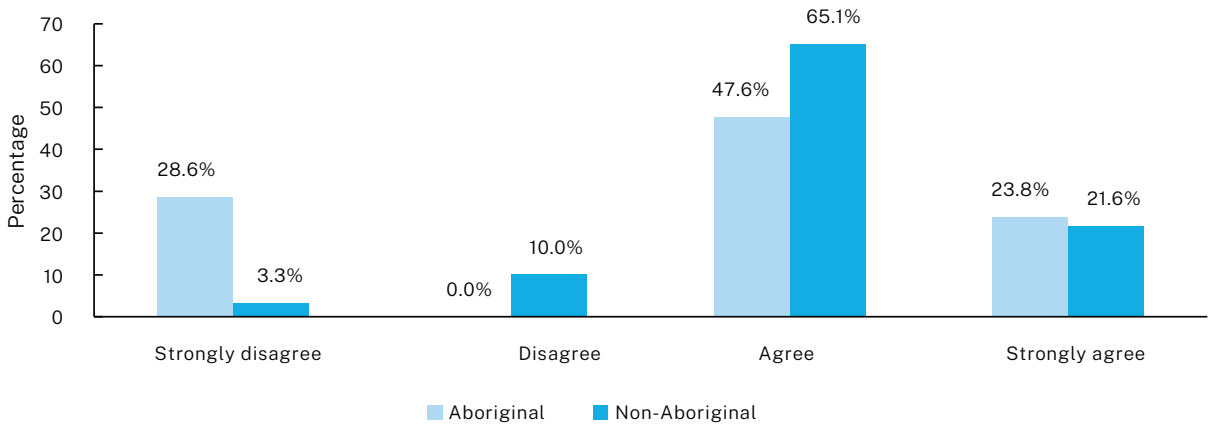
Forensic Participants' Reported Levels of Agreement With Domain 2 (Having Sufficient Information to Manage My Health)



Aboriginal participants had a notably lower mean in Domain 2 compared to non Aboriginal participants (2.61 v. 2.94) (see Table 3.20). Nearly three quarters (71.4%) of Aboriginal participants agreed or strongly agreed they had sufficient information to manage their health compared to 86.7% of non-Aboriginal participants (see Figure 3.39).

FIGURE 3.39

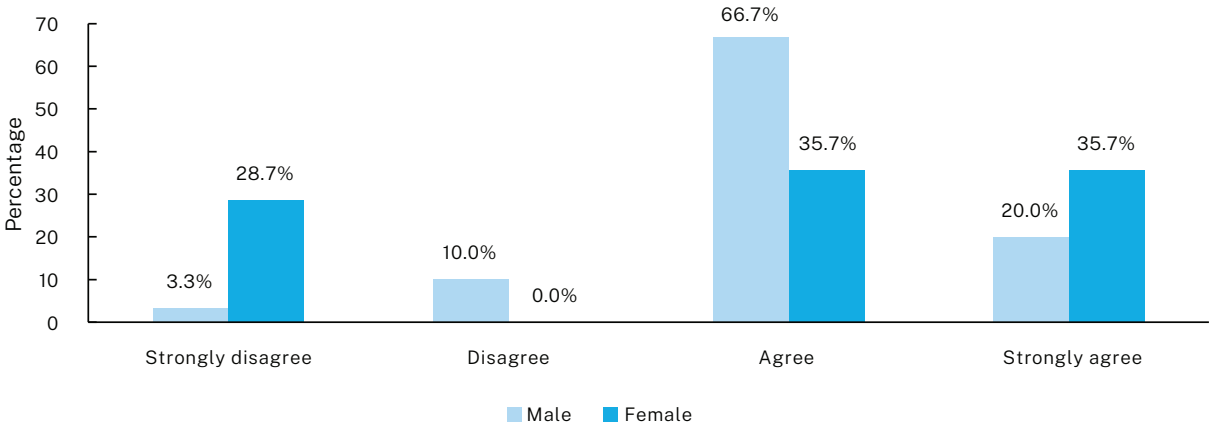
Aboriginal and Non-Aboriginal Forensic Participants' Reported Levels of Agreement With Domain 2 (Having Sufficient Information to Manage My Health)



Male forensic participants had a slightly higher mean score in Domain 2 than females (2.92 v. 2.78) (see Table 3.21). Figure 3.40 shows that a greater percentage of males (86.7%) agreed or strongly agreed they had sufficient information to manage their health compared to females (71.4%). Male and female forensic participants had lower mean scores than reported for males and females in the general population, where females scored marginally higher than males (males = 3.16; females = 3.19) (ABS, 2019c).

FIGURE 3.40

Male and Female Forensic Participants' Reported Levels of Agreement With Domain 2 (Having Sufficient Information to Manage My Health)

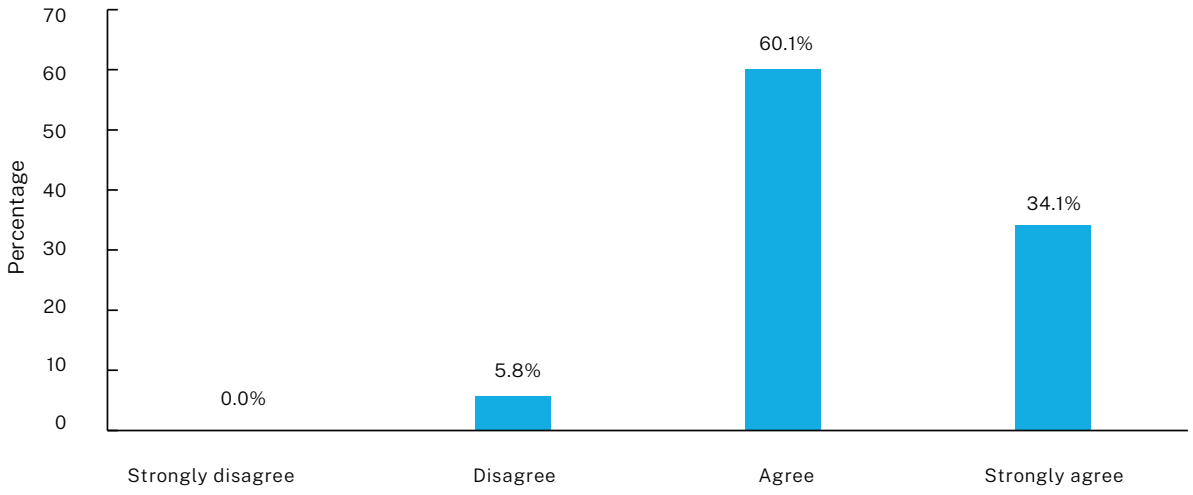


3.4.3. Domain 3: Actively Managing My Health

Forensic participants had a mean score of 3.24 in Domain 3 (see Table 3.19), with 94.2% agreeing or strongly agreeing they were could actively manage their health (see Figure 3.41). Compared to the general Australian population, forensic participants had a slightly higher mean score in Domain 3 (3.24 v. 3.09) (ABS, 2019c). Only 5.8% of forensic participants disagreed or strongly disagreed with Domain 3 items compared to 9% reported in the general population (ABS, 2019a).

FIGURE 3.41

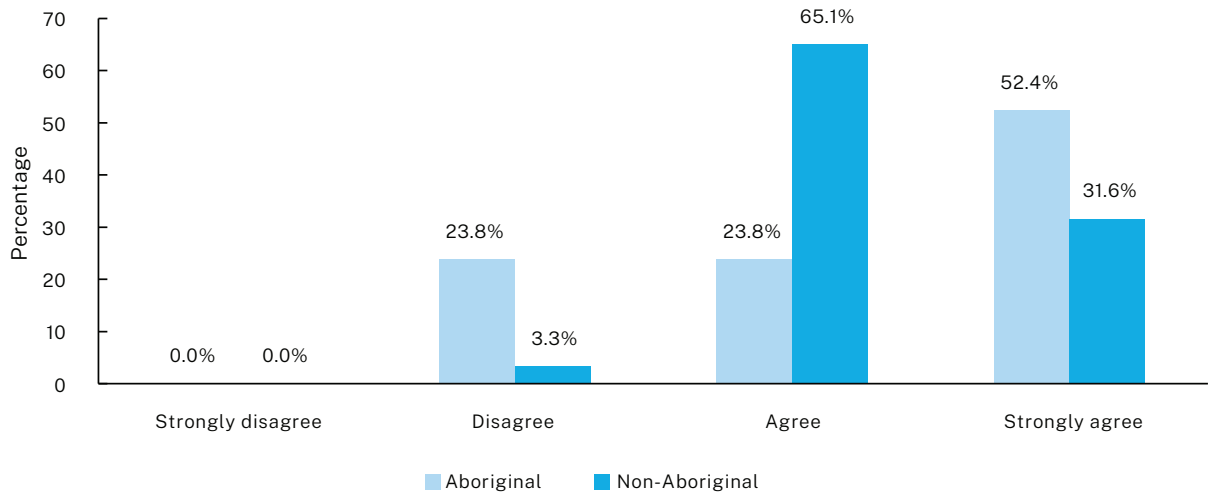
Forensic Participants' Reported Levels of Agreement With Domain 3 (Actively Managing My Health)



Aboriginal forensic participants had a higher Domain 3 mean score than non-Aboriginal forensic participants (3.38 v. 3.22) (see Table 3.20). Just over three quarters (76.2%) of Aboriginal participants agreed or strongly agreed they could actively manage their health, compared to 96.7% of non-Aboriginal participants (see Figure 3.42).

FIGURE 3.42

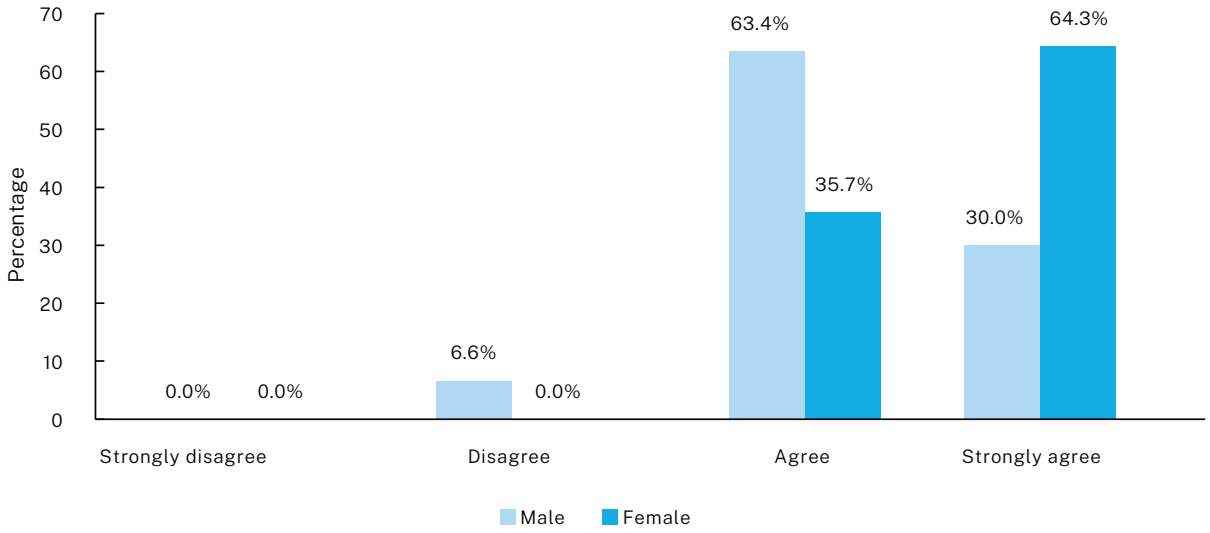
Aboriginal and Non-Aboriginal Forensic Participants' Reported Levels of Agreement With Domain 3 (Actively Managing My Health)



Female forensic participants had a higher mean in Domain 3 than males (3.50 v. 3.21) (see Table 3.21). Figure 3.43 shows that all females (100.0%) agreed or strongly agreed that they could actively manage their health, compared to 93.4% of males. Both genders had higher means than the general population (males = 3.06; females = 3.10) (ABS, 2019c).

FIGURE 3.43

Male and Female Forensic Participants' Reported Levels of Agreement With Domain 3 (Actively Managing My Health)

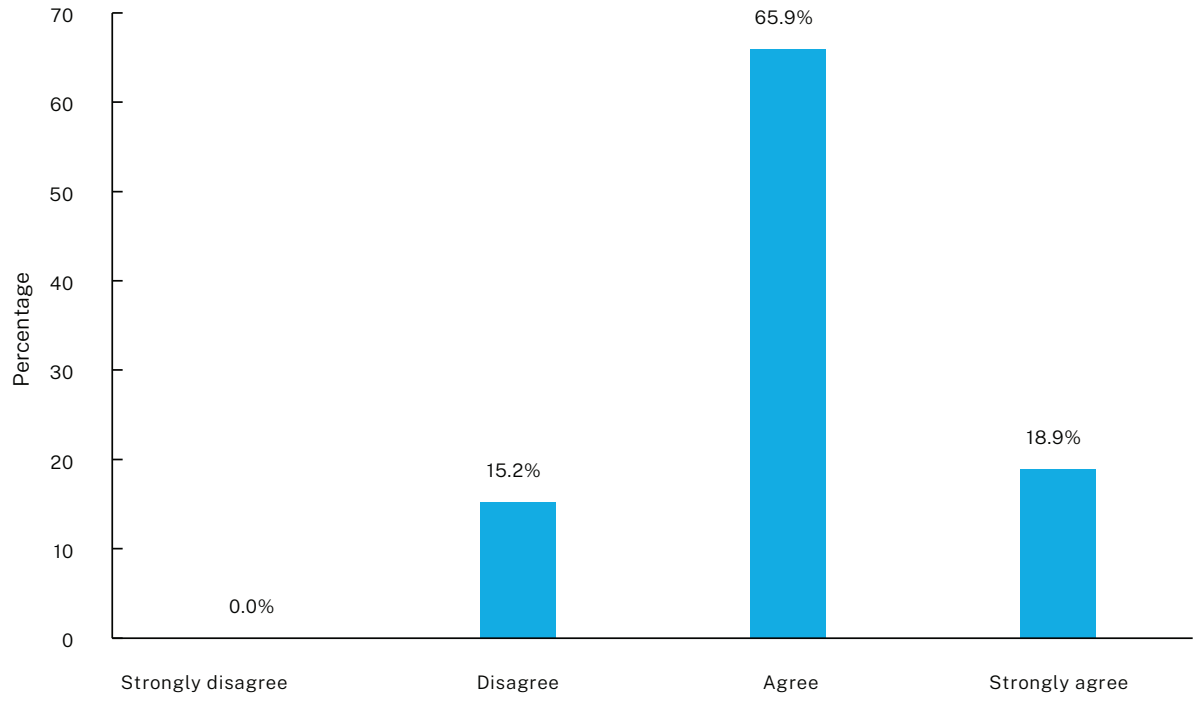


3.4.4. Domain 4: Social Support for Health

Forensic participants had a mean score of 3.06 in Domain 4 (see Table 3.19), with 84.8% agreeing or strongly agreeing (see Figure 3.44) that they had access to the necessary social support for their health. Compared to the general population, forensic participants had a slightly lower Domain 4 mean (3.06 v. 3.19) (see Figure 3.33) (ABS, 2019c). A greater percentage of forensic participants (15.2%) disagreed or strongly disagreed that they had enough social support compared to the general population (6%) (ABS, 2019a).

FIGURE 3.44

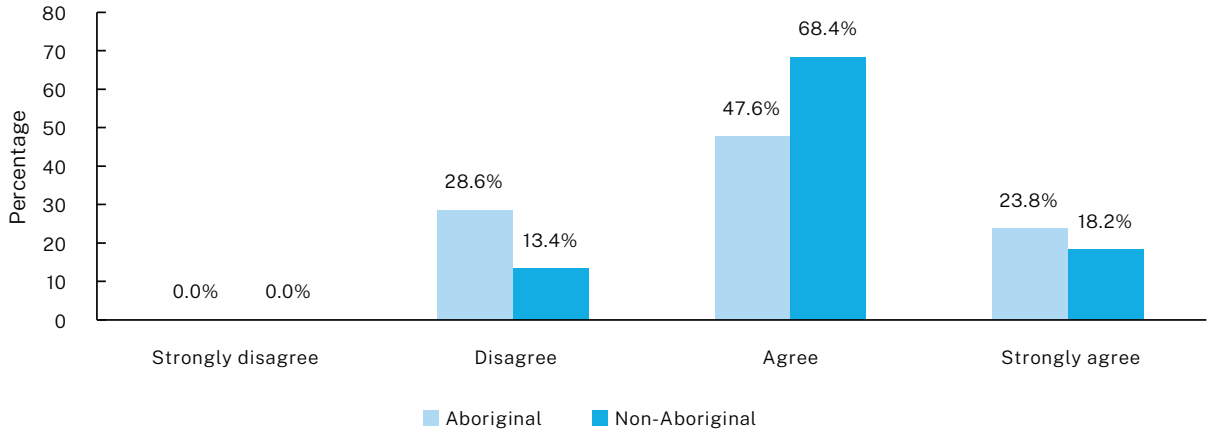
Forensic Participants' Reported Levels of Agreement With Domain 4 (Social Support for Health)



Forensic Aboriginal participants had a slightly lower mean score in Domain 4 compared to non-Aboriginal participants (2.93 v. 3.08) (see Table 3.20). Just under three quarters (71.4%) of Aboriginal participants agreed or strongly agreed they had access to the necessary social supports, compared to 86.6% of non-Aboriginal participants (see Figure 3.45).

FIGURE 3.45

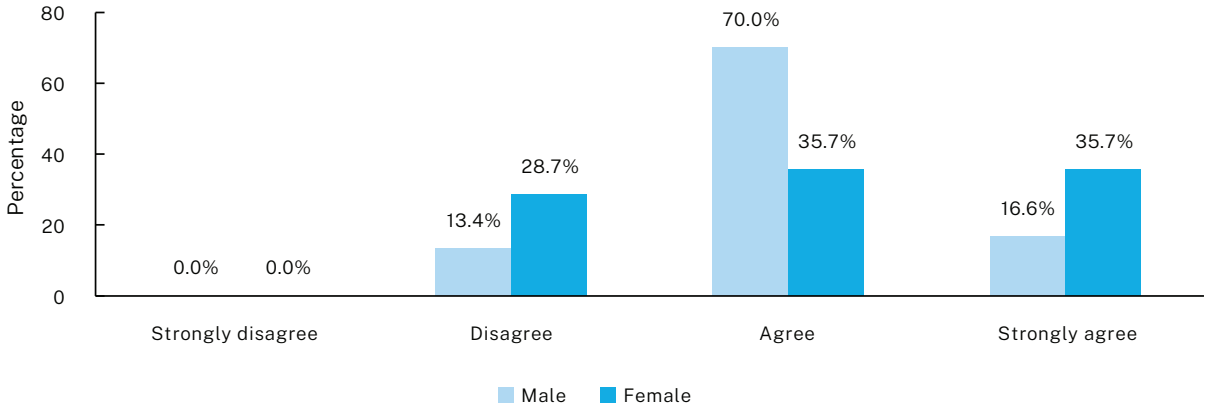
Aboriginal and non-Aboriginal Forensic Participants' Reported Levels of Agreement With Domain 4 (Social Support for Health)



Male forensic participants had a slightly higher mean score in Domain 4 than females (3.07 v 2.99) (see Table 3.21). Figure 3.46 shows that just under three quarters of females (71.4%) and over four fifths of males (86.6%) agreed or strongly agreed they had the social support for their health. Both genders had a lower mean score in Domain 4 than the general population (males = 3.18; females = 3.19) (ABS, 2019c). Contrary to results for the general population, the female forensic participants had a lower mean score than males.

FIGURE 3.46

Aboriginal and Non-Aboriginal Forensic Participants' Reported Levels of Agreement With Domain 4 (Social Support for Health)

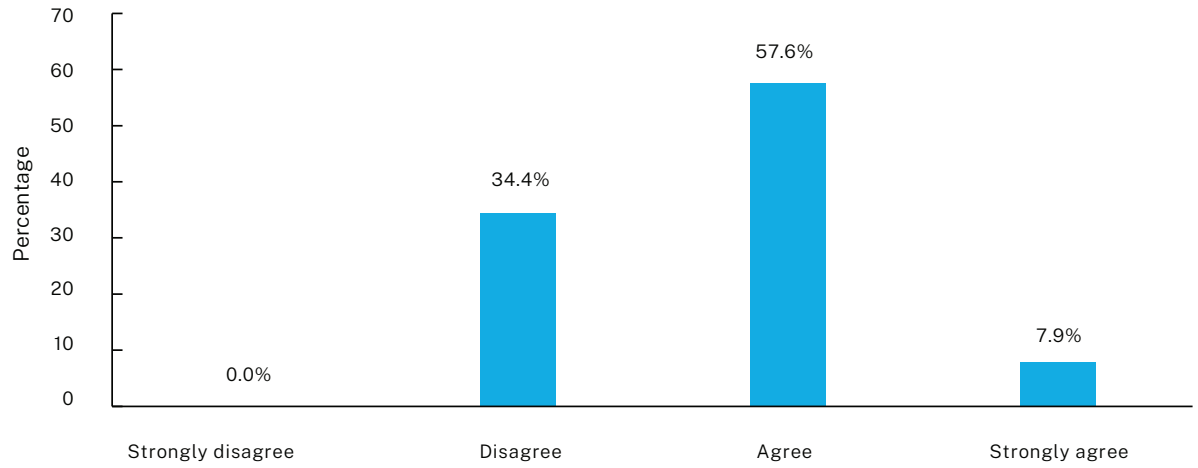


3.4.5. Domain 5: Appraisal of Health Information

Forensic participants had a mean score of 2.70 in Domain 5 (see Table 3.19), with just under two thirds (65.5%) (see Figure 3.47) of participants agreeing or strongly agreeing that they could appraise reliable health information. Figure 3.33 shows that compared to the general population, forensic participants had a slightly lower mean score in Domain 5 (2.70 v. 2.92) (ABS, 2019c). Despite only a slightly lower mean score, 34.4% disagreed or strongly disagreed with Domain 5 items compared to 17% of the general population (ABS, 2019a).

FIGURE 3.47

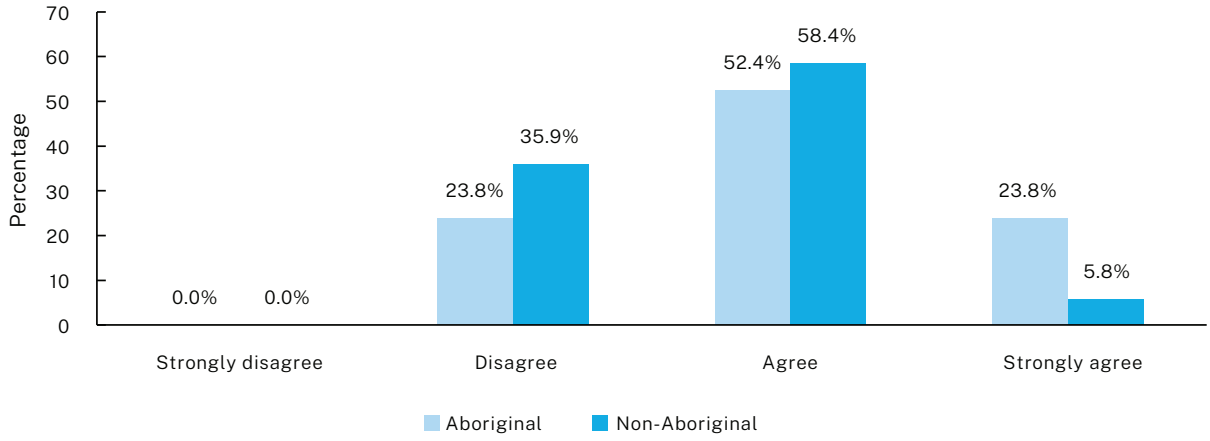
Forensic Participants' Reported Levels of Agreement With Domain 5 (Appraisal of Health Information)



Aboriginal forensic participants had a slightly higher mean score than non-Aboriginal participants (2.85 v. 2.68) (see Table 3.20). Just over three quarters (76.2%) of Aboriginal participants agreed or strongly agreed that they could appraise health information compared to approximately two thirds (64.2%) of non-Aboriginal participants (see Figure 3.48).

FIGURE 3.48

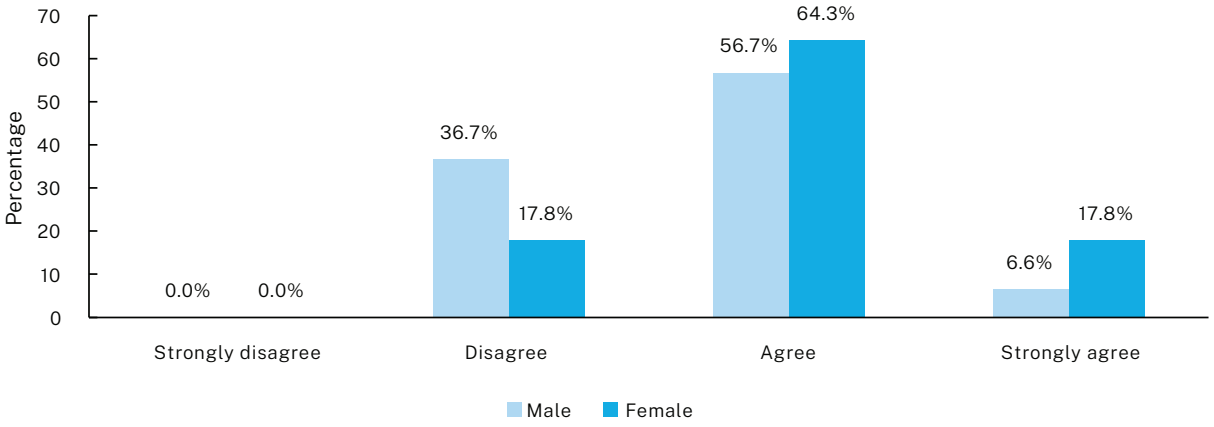
Aboriginal and Non-Aboriginal Forensic Participants' Reported Levels of Agreement With Domain 5 (Appraisal of Health Information)



Female forensic participants had a slightly higher mean score than male participants (2.87 v. 2.67) (see Table 3.21). Male and female forensic participants had lower mean scores in Domain 5 than the gender mean scores reported for the general population, in which females scored higher than males (males = 2.88; females = 2.96) (ABS, 2019c). Over one third (36.7%) of males disagreed or strongly disagreed that they could appraise health information, compared to 17.8% of females (see Figure 3.49).

FIGURE 3.49

Male and Female Forensic Participants' Reported Levels of Agreement With Domain 5 (Appraisal of Health Information)

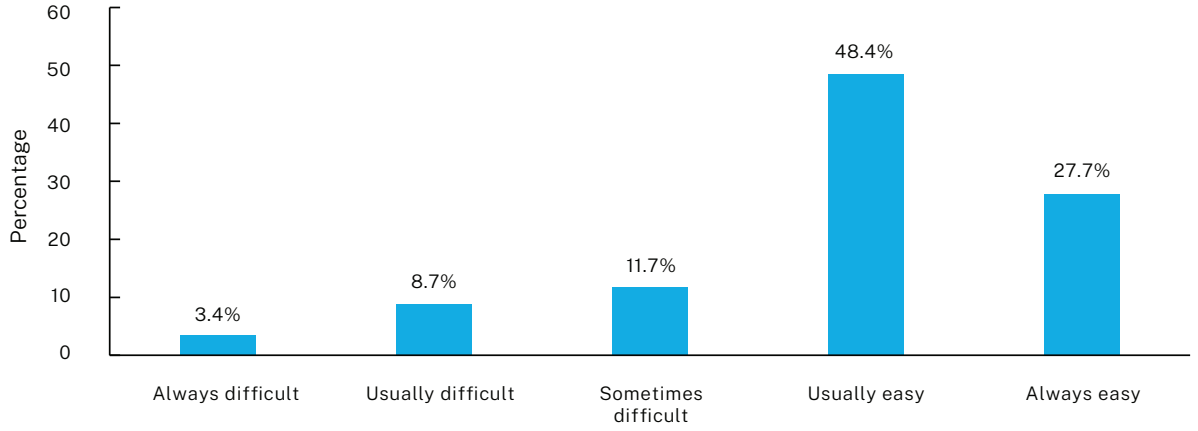


3.4.6. Domain 6: Ability to Engage With Healthcare Providers

Forensic participants had a mean score of 3.83 (see Table 3.19) in Domain 6, with just over three quarters (76.1%) (see Figure 3.50) of participants reporting that it was usually or always easy to actively engage with healthcare providers. Figure 3.34 shows that forensic participants had a lower mean score than the general population (3.83 v. 4.18) (ABS, 2019c). The proportion of forensic participants who found it sometimes, usually or always difficult in Domain 6 items (23.8%) was greater than that of the general population (12%) (ABS, 2019a).

FIGURE 3.50

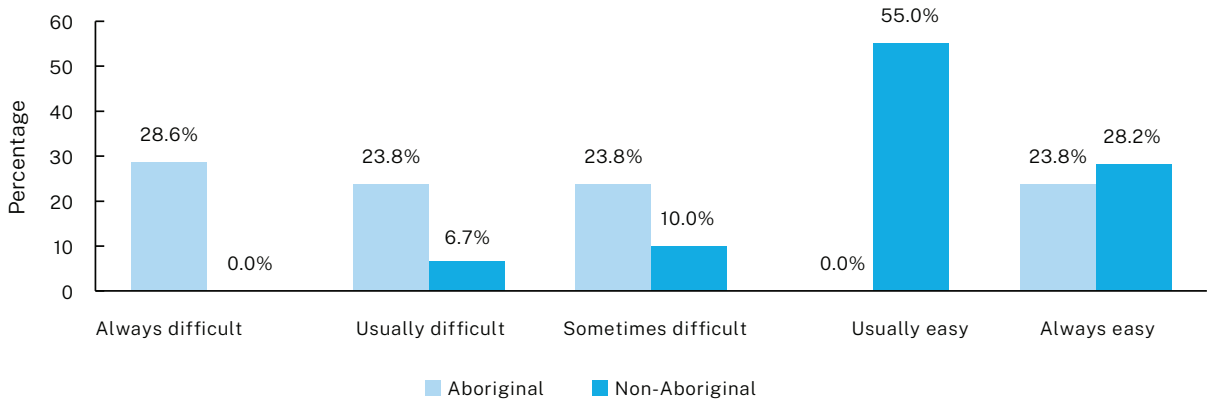
Forensic Participants' Reported Levels of Difficulty With Domain 6 (Navigating the Healthcare System)



Aboriginal forensic participants had a notably lower mean score in Domain 6 than non Aboriginal participants (2.86 v. 3.96) (see Table 3.20). Over three quarters (76.2%) of Aboriginal participants found it always, usually or sometimes difficult to actively engage with healthcare providers, compared to 16.7% of non-Aboriginal participants (see Figure 3.51).

FIGURE 3.51

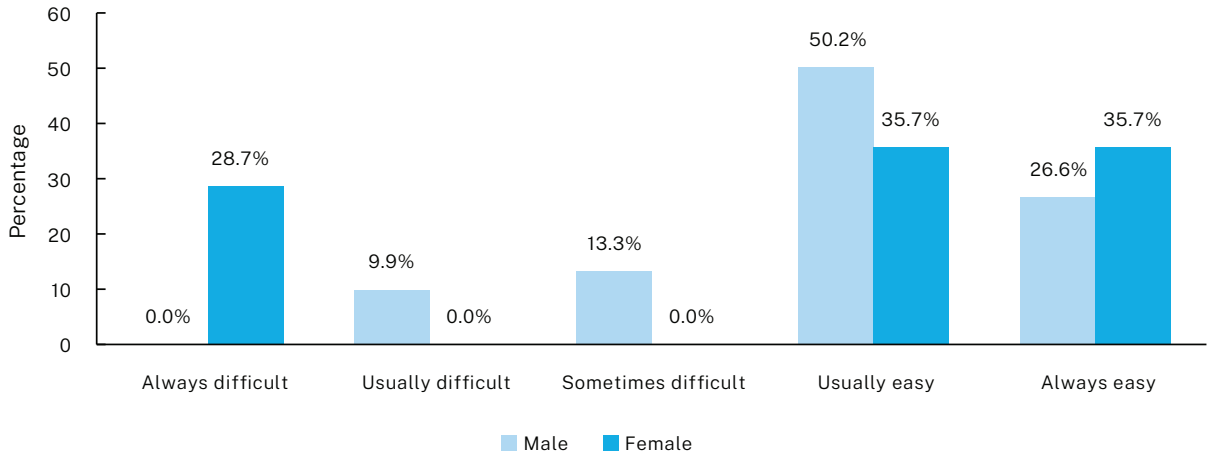
Aboriginal and Non-Aboriginal Forensic Participants' Reported Levels of Difficulty With Domain 6 (Navigating the Healthcare System)



Male forensic participants had a higher mean score in Domain 6 than females (3.89 v. 3.39) (see Table 3.21). Compared to males and females in the general population (males = 4.17; females = 4.19) (ABS, 2019c), male and female forensic participants had lower mean scores in Domain 6. Contrary to the general population, female forensic participants had a lower mean score in Domain 6 than males. Figure 3.52 shows that over a quarter (28.7%) of females found it difficult to actively engage with healthcare providers compared to just under a quarter of males (23.2%).

FIGURE 3.52

Male and Female Forensic Participants' Reported Levels of Difficulty With Domain 6 (Navigating the Healthcare System)

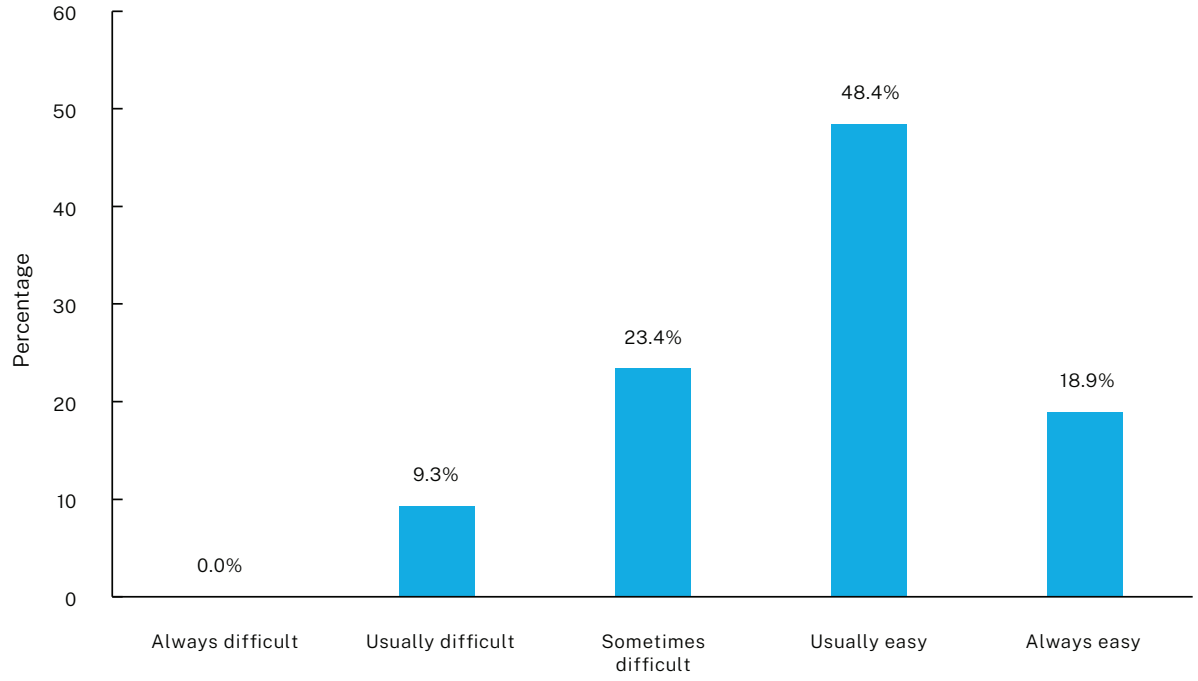


3.4.7. Domain 7: Navigating the Healthcare System

Forensic participants had a mean score of 3.67 in Domain 7 (see Table 3.19). Figure 3.53 shows that over two thirds (67.3%) found it usually or always easy to navigate the healthcare system. Compared to the general population, forensic participants had a lower mean score in Domain 7 (4.02 v. 3.67) (ABS, 2019c). Just under one third (32.7%) (see Figure 3.53) of forensic participants found it always, usually or sometimes difficult to navigate the healthcare system, compared to 14% of the general population (ABS, 2019a).

FIGURE 3.53

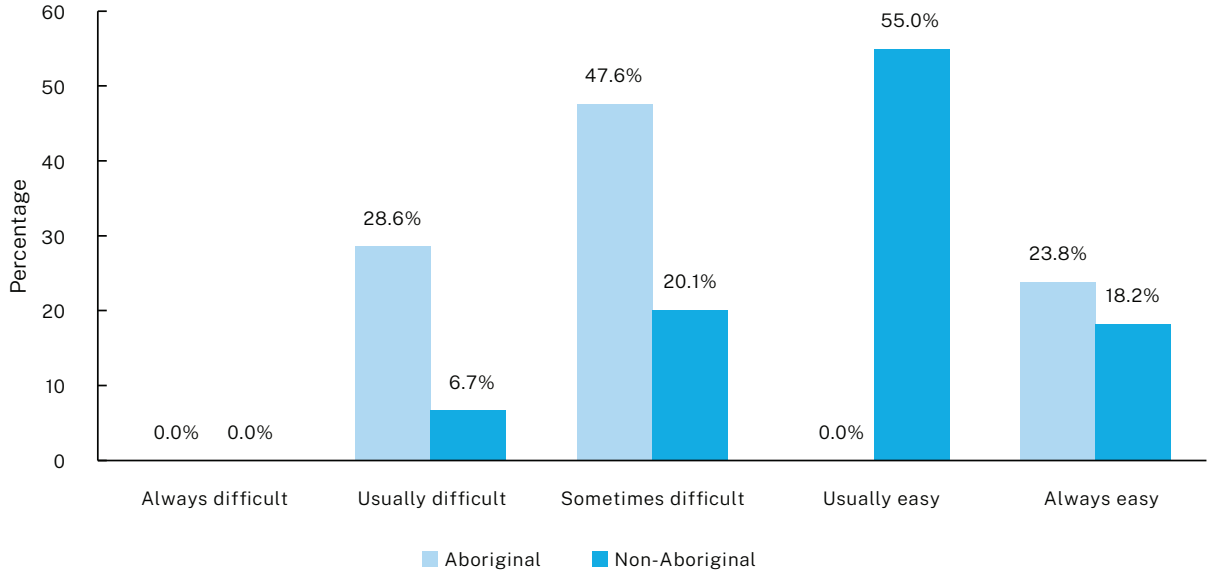
Forensic Participants' Reported Levels of Difficulty With Domain 7 (Navigating the Healthcare System)



Aboriginal forensic participants had a notably lower mean score in Domain 7 than non Aboriginal participants (3.06 v. 3.76) (see Table 3.20). Figure 3.54 shows that over three quarters (76.2%) of Aboriginal participants found it difficult to navigate the healthcare system compared to approximately one quarter (26.8%) of non-Aboriginal participants.

FIGURE 3.54

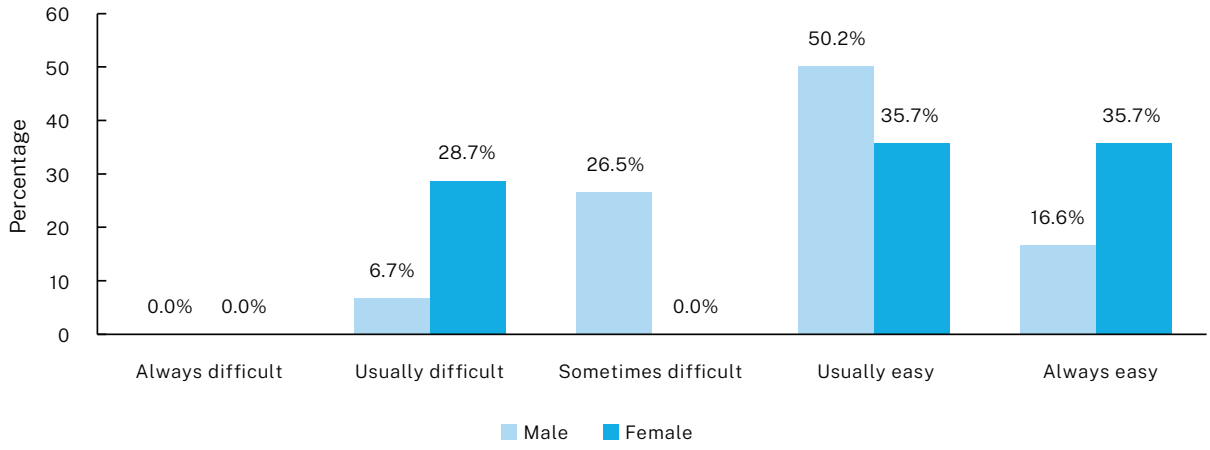
Aboriginal and Non-Aboriginal Forensic Participants' Reported Levels of Difficulty With Domain 7 (Navigating the Healthcare System)



Male forensic participants had a slightly higher Domain 7 mean score than females (3.69 v. 3.56) (see Table 3.21). Both genders had lower mean scores than reported in the general population (males = 4.00; females = 4.04) (ABS, 2019c). Dissimilar to the general population, female forensic participants had a lower mean score in Domain 7 items than males. Figure 3.55 shows that over two thirds of males (66.8%) and females (71.4%) found it usually or always easy to navigate the healthcare system.

FIGURE 3.55

Male and Female Forensic Participants' Reported Levels of Difficulty With Domain 7 (Navigating the Healthcare System)

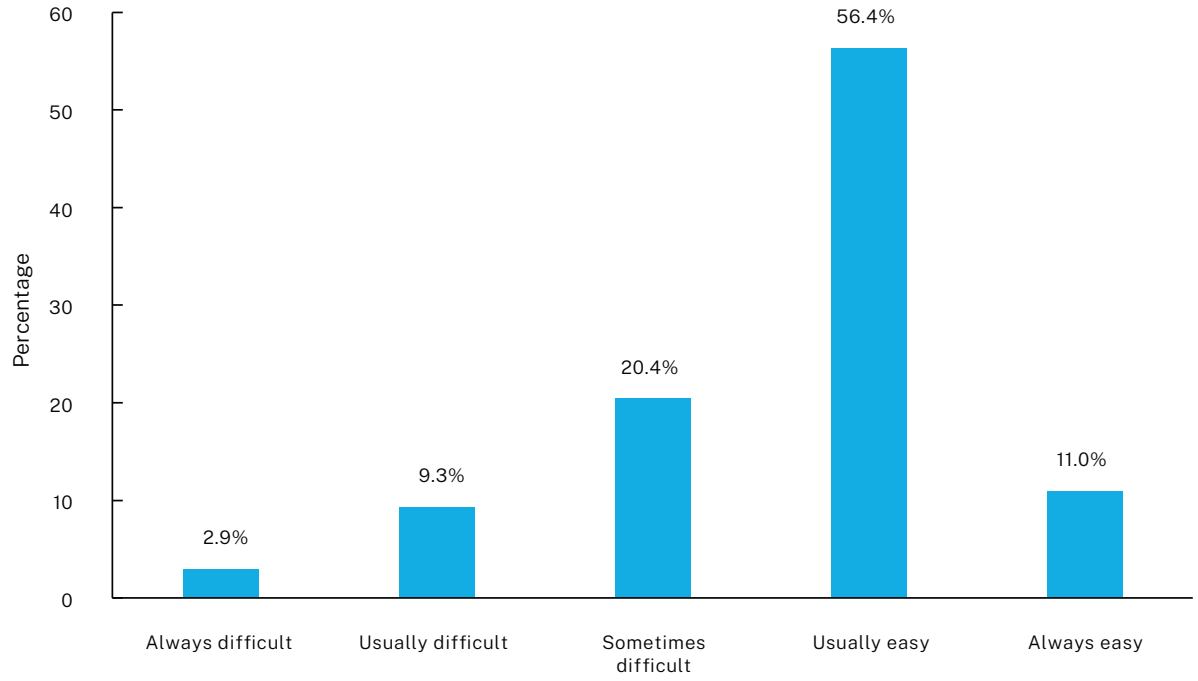


3.4.8. Domain 8: Ability to Find Good Health Information

Forensic participants had a mean score of 3.57 (see Table 3.19) in Domain 8, with just over two thirds (67.4%) of participants finding it usually or always easy to find good health information. Figure 3.34 shows that forensic participants had a notably lower mean score than the general population (3.57 v. 4.09) (ABS, 2019c). Just under one third (32.6%) (see Figure 3.56) of forensic participants found it always, usually or sometimes difficult to find good health information, compared to 12% of the general population (ABS, 2019a).

FIGURE 3.56

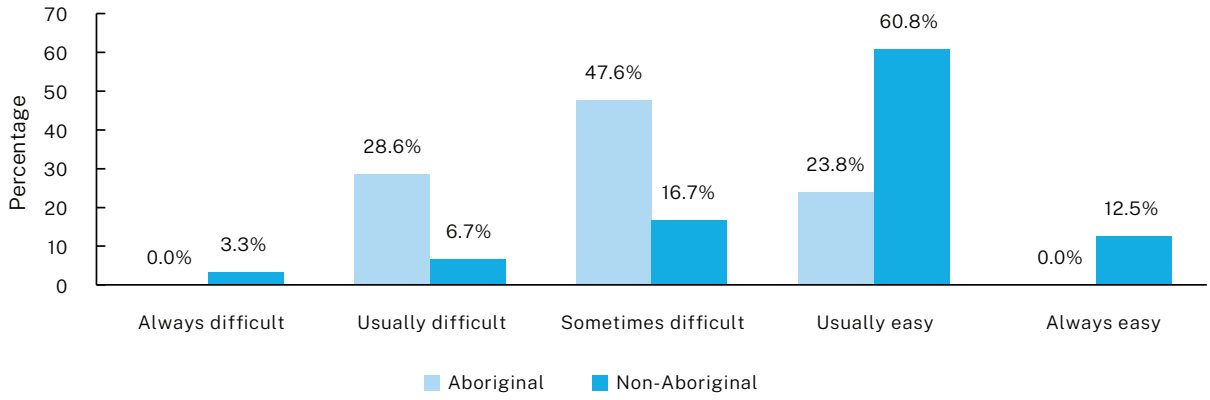
Forensic Participants' Reported Levels of Difficulty With Domain 8 (Ability to Find Good Health Information)



Aboriginal participants had a lower mean score in Domain 8 than non-Aboriginal forensic participants (2.95 v. 3.65) (see Table 3.20). Figure 3.57 shows that over three quarters (76.2%) of Aboriginal participants found it difficult to find good health information, compared to just over one quarter (26.7%) of non-Aboriginal participants.

FIGURE 3.57

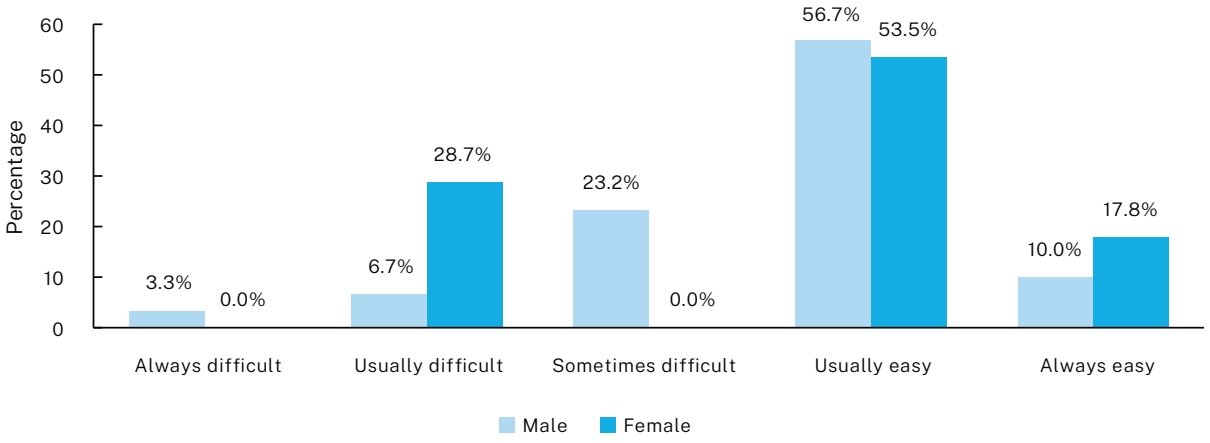
Aboriginal and Non-Aboriginal Forensic Participants' Reported Levels of Difficulty With Domain 8 (Ability to Find Good Health Information)



Females had a slightly lower mean score in Domain 8 than male forensic participants (3.46 v. 3.58) (see Table 3.21). The lower mean score for female forensic participants is contrary to the gender differences observed in the general population, where females had a higher mean score than males (4.13 v. 4.06) (ABS, 2019c). Male and female forensic participants had lower mean scores in Domain 8 than their respective genders in the general population (ABS, 2019c). Despite this difference, 56.7% of males and 53.5% of females usually found it easy to find good health information (see Figure 3.58).

FIGURE 3.58

Male and Female Forensic Participants' Reported Levels of Difficulty With Domain 8 (Ability to Find Good Health Information)

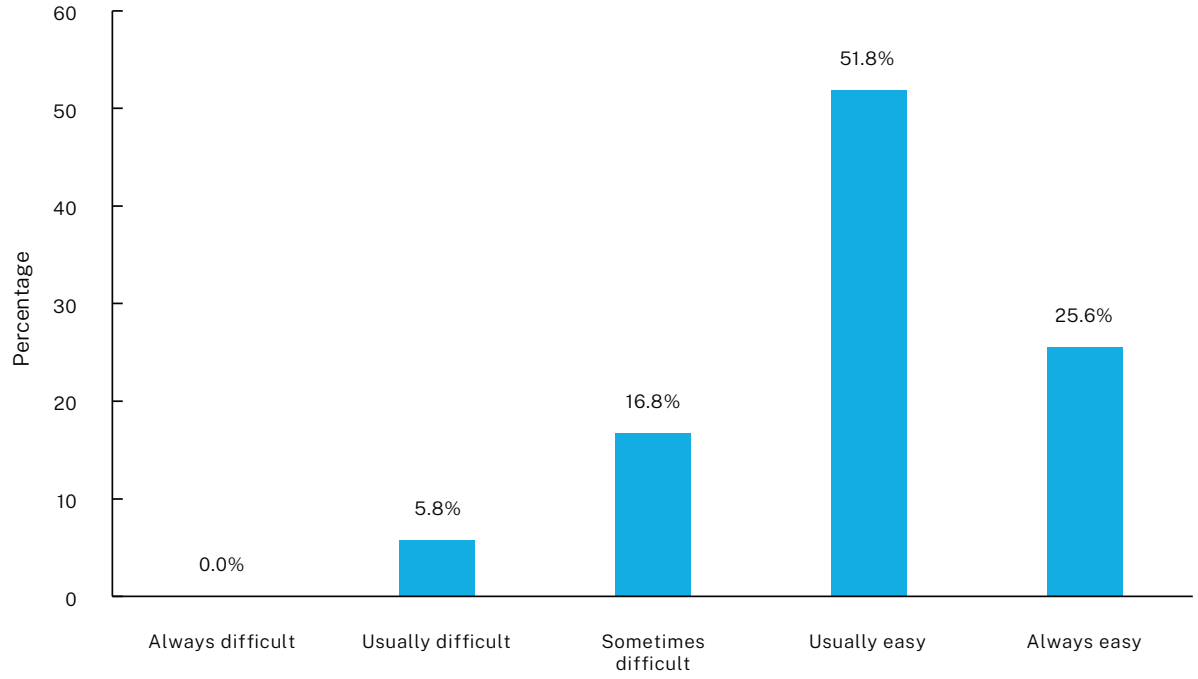


3.4.9. Domain 9: Understand Health Information Well Enough to Know What to Do

Forensic participants had a mean score of 4.02 (see Table 3.19) in Domain 9, with over three quarters (77.4%) of participants finding it usually or always easy to understand health information well enough to know what to do (see Figure 3.59). Compared to the general population, the forensic participants had a slightly lower mean score in Domain 9 (4.02 v. 4.27) (see Figure 3.34) (ABS, 2019c). A greater percentage of forensic participants found it always, usually or sometimes difficult to understand health information than the general population (22.6% v. 8%) (ABS, 2019a).

FIGURE 3.59

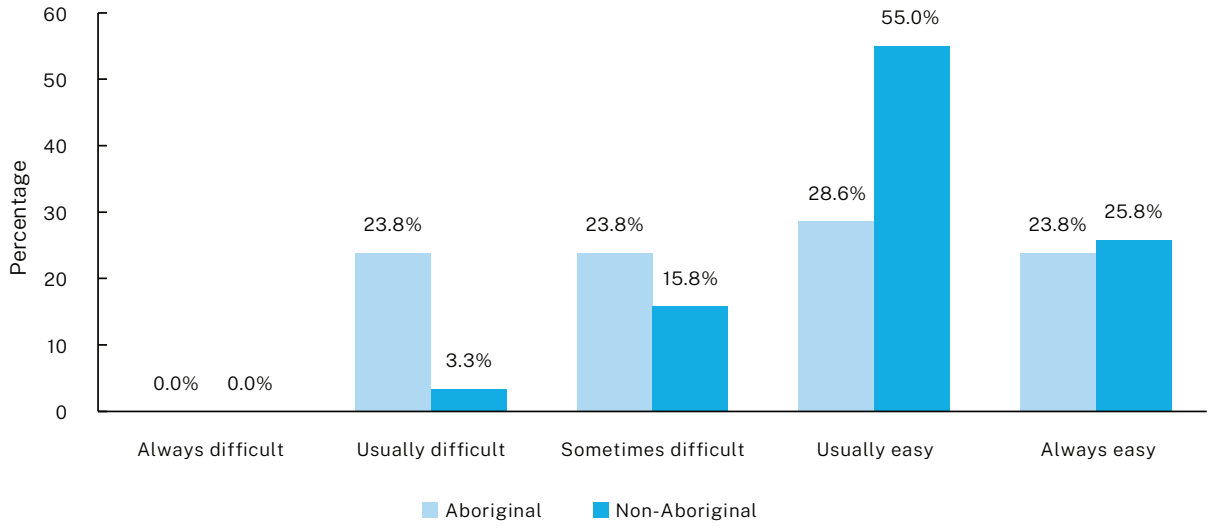
Forensic Participants' Reported Levels of Difficulty With Domain 9 (Understand Health Information Enough to Know What to Do)



Aboriginal forensic participants had a notably lower mean score in Domain 9 than non Aboriginal participants (3.43 v. 4.09) (see Table 3.20). Figure 3.60 shows that just under half (47.6%) of Aboriginal participants found it difficult to understand health information well enough to know what to do, compared to 19.1% of non-Aboriginal participants.

FIGURE 3.60

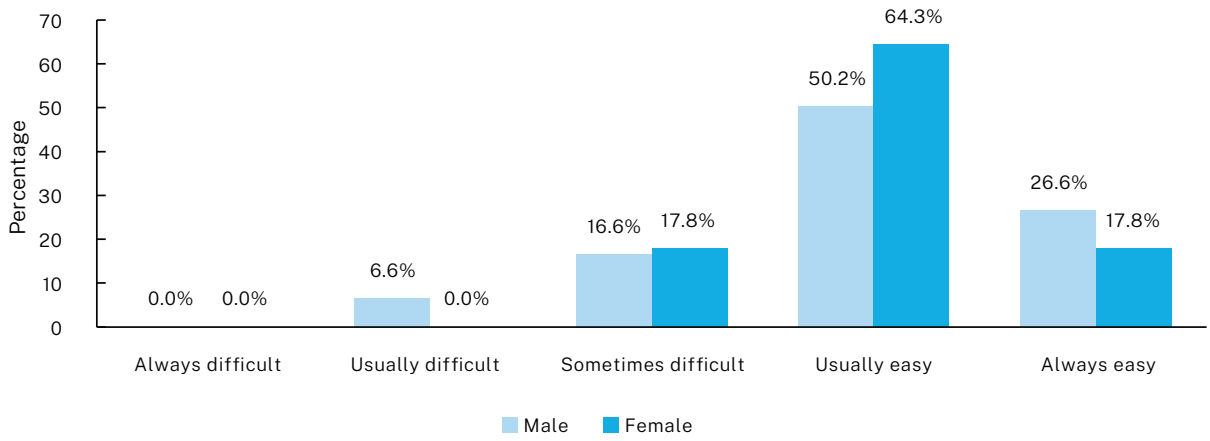
Aboriginal and Non-Aboriginal Forensic Participants' Reported Levels of Difficulty With Domain 9 (Understand Health Information Enough to Know What to Do)



Male forensic participants had a lower mean score in Domain 9 than females (4.00 v. 4.16) (see Table 3.21). Figure 3.61 shows that four in five females (82.1%) and three in four males (76.8%) found it usually or always easy to understand health information enough to know what to do. Similar to the general population (males = 4.23; females = 4.32), females had a higher mean than males in this domain. Despite this similarity, male and female forensic participants had lower mean scores than males and females in the general population (ABS, 2019c).

FIGURE 3.61

Male and Female Forensic Participants' Reported Levels of Difficulty With Domain 9 (Understand Health Information Enough to Know What to Do)



4. Discussion and Policy Implications

This is the first study that has used the HLQ in a correctional environment or high secure forensic mental health setting. It aimed to establish a profile on the health literacy of people in NSW prisons and a high secure Forensic Hospital. This study represents one part of a broader project investigating patient experiences of healthcare while in custody and potential workable and non workable practices within these environments. Overall, custodial and forensic participants demonstrated lower levels of health literacy than the general Australian population. Among custodial participants, HLQ scores in most domains were similar for Aboriginal and non-Aboriginal participants; however, Aboriginal forensic participants had lower mean scores than non-Aboriginal participants in several domains. Males in both the custodial and forensic participant groups had higher levels of health literacy than females across the majority of domains.

The results for the *2021 Health Literacy Study* clearly demonstrate that individuals in contact with the NSW criminal justice and forensic mental health systems have several health literacy weaknesses and strengths. These are particularly highlighted compared to the health literacy mean scores of the general Australian population reported in the *2018 NHS* (ABS, 2019a). Understanding the health literacy of people in secure environments is an important first step towards understanding opportunities to improve and to remove barriers to healthcare for patients.

Health literacy has been an emerging field for the past three decades and, increasingly, has become recognised as an important factor in helping individuals engage with and navigate the healthcare system and reducing health inequalities (Batterham et al., 2016; Clouston et al., 2017; Paasche Orlow & Wolf, 2007). The contents of this report provide the first data on health literacy in an Australian prison and forensic hospital context. This report establishes an invaluable resource for understanding the health literacy of people in secure settings, highlighting individual indicators of health literacy that contribute to improving the overall healthcare system and, thus, how one can manage their health.

4.1. Key Findings

4.1.1. Custodial Participants

Custodial participants had lower HLQ mean scores for all nine domains than the mean scores reported for the general Australian population (ABS, 2019c). Lower HLQ domain mean scores for the custodial participants can be explained by the well-documented socio-economic, health and education disparities of people in prison (AIHW, 2019; JHFMHN, 2017). Lower socio-economic, health and educational statuses have been associated with lower levels of health literacy in two community-based studies (Beauchamp et al., 2015; van der Heide et al., 2013). For example, individuals who have had several health conditions or poorer self-reported health, or had not completed secondary schooling, similar to the prison population, had lower health literacy (Beauchamp et al., 2015; van der Heide et al., 2013). Although HLQ domain scores in this study were consistently lower than those reported in the *2018 NHS*, some similarities in the pattern of scores can be drawn between custodial participants and the general population. For example, Domain 9 (Understand health information well enough to know what to do) represented the highest mean score among both the custodial participants and the general population (4.00 and 4.27, respectively) (ABS, 2019c).

Except for Domains 7 (Navigating the healthcare system) and 9 (Understand health information well enough to know what to do), similar mean scores were found for Aboriginal and non-Aboriginal custodial participants. Aboriginal participants had a higher mean score in Domain 7 than non-Aboriginal participants (3.19 v. 3.08), indicating greater ability or more support when navigating the healthcare system. Conversely, non-Aboriginal participants had a higher mean score than Aboriginal participants in Domain 9 (4.05 v. 3.86), indicating greater ability or support for understanding health information enough to know what to do. To date, there is no national dataset on the health literacy of Aboriginal people, and, more specifically, no research has been conducted on the health literacy of Aboriginal people in prison. Thus, these findings require further investigation.

Male custodial participants had a higher mean score than females for seven of the nine HLQ domains (Domains 2 to 4 and 6 to 9). These findings indicate that males feel they have a greater ability or support to access, understand and use health information than females. This is contrary to the general population, where mean scores reported for females were higher across all nine HLQ domains compared to males (ABS, 2019c). Previous research has indicated that females in prison are some of the most vulnerable individuals and have poorer health outcomes than both males and the general population (Aldridge et al., 2018; AIHW, 2019). Thus, it is hypothesised that female custodial participants in this study may be more disadvantaged than male participants and require a greater amount of support to access and engage in healthcare.

Male custodial participants had lower mean scores for eight of the nine HLQ domains than males in the general population (ABS, 2019c). Domain 3 (Actively managing my health) was the only domain where male custodial participants had a similar mean score to males in the general population (3.03 v. 3.06) (ABS, 2019c). This finding indicates that males in prison have less ability or support across the HLQ domains. The lower HLQ mean scores of the custodial participants can be explained by the aforementioned disparities between the socio-economic, health and educational statuses of the prison population and the general population (AIHW, 2019; JHFMHN, 2017). Further statistical analysis is warranted to confirm if the differences in mean scores are statistically significant.

Female custodial participants had lower mean scores for eight of the nine HLQ domains than females in the general population (ABS, 2019c). Similar to the male custodial participants, Domain 3 (Actively managing my health) was the only domain where female custodial participants had a similar mean score to females in the general population (3.00 v. 3.10) (ABS, 2019c). These findings indicate that females in prison have less ability or support across at least eight HLQ domains. Previously published literature has suggested that female custodial participants are a highly vulnerable group (Aldridge et al., 2018), which could explain their lower mean scores compared to the general population. Further statistical analysis is needed to confirm if the lower HLQ mean scores are significantly different to those reported for the general population.

4.1.2. Forensic Participants

Forensic participants had lower mean scores for eight of the nine HLQ domains than the general population (ABS, 2019c). Lower HLQ domain mean scores for the forensic participants were expected due to the well-documented and complex socio-economic, health and educational disparities of forensic patients (JHFMHN, 2018) that have been associated with lower health literacy (Beauchamp et al., 2015; van der Heide et al., 2013). Unexpectedly, the Domain 3 (Actively managing my health) mean score for forensic participants was higher than reported in the general population (3.24 v. 3.19) (ABS, 2019c). It has been hypothesised that this finding can be attributed to the environment in which forensic participants receive healthcare. For example, forensic participants are patients admitted to high secure psychiatric hospital who received continuous medical care from healthcare workers. However, caution must be taken when interpreting the forensic participant results due to the small sample size. Thus, this finding requires thorough examination and investigation through statistical analysis in a larger sample and potential qualitative research.

Compared to non-Aboriginal forensic participants, Aboriginal participants had a higher mean score in Domain 3 (Actively managing my health) and Domain 5 (Appraisal of health information), indicating that Aboriginal forensic participants have a greater ability or more support to actively manage their health and appraise health information. However, Aboriginal forensic participants had lower mean scores for the other seven HLQ domains. To date, there is no national dataset on the health literacy of Aboriginal people that would allow further comparisons. Given the small sample size, further statistical analysis is warranted of a larger sample to confirm if there is a significant difference between Aboriginal and non-Aboriginal forensic participants.

When comparing genders for the forensic participants, males had higher mean scores than females for six of the nine HLQ domains (Domains 1, 2, 4 and 6 to 8). This is contrary to the general population, where mean scores reported for females were higher than males for all nine HLQ domains (ABS, 2019c). This indicates that female forensic participants have less support or ability across these domains. It is hypothesised that this could be attributed to the vulnerabilities and complex layered health and social issues that female forensic patients experience, such as a history of trauma, substance use, mental illness, poor literacy levels and employment history (Crouch, 2020). Further investigation is warranted to confirm this hypothesis.

Male forensic participants had lower mean scores for seven of the nine HLQ domains (Domains 2 and 4 to 9) than males in the general population. These findings indicate that males in forensic hospitals have less ability or support across these domains. Lower HLQ mean scores were expected for the male forensic participants because previous research about forensic patients of the Network (males = 89.9%; females = 10.1%) has reported that these patients have lower levels of formal education and a high prevalence of health conditions (JHFMHN, 2018). Interestingly, male forensic participants had higher mean scores in Domains 1 (Feeling understood and supported by healthcare providers) and 3 (Actively managing my health) compared to mean scores reported for males in the general population (3.19 v. 3.14 and 3.21 v. 3.06, respectively) (ABS, 2019c). It is hypothesised that these findings relate to the environment in which male forensic participants are admitted: a high secure psychiatric hospital with around-the-clock medical care. However, further investigation is warranted to confirm this hypothesis.

Female forensic participants had lower mean scores for eight of the nine HLQ domains (Domains 1, 2 and 4 to 9) than females in the general population (ABS, 2019a), indicating that female forensic participants have less ability or support across eight of the HLQ domains. This finding suggests that female forensic participants have less ability or support across eight of the HLQ domains and is consistent with the aforementioned research demonstrating the vulnerability and complexity of layered health and social issues experienced by female forensic patients (Crouch, 2020). It also reflects the lower levels of formal education among forensic patients (JHFMHN, 2018). Interestingly, Domain 3 (Actively managing my health) was the only domain where female forensic participants had a higher mean score than females in the general population (3.50 v. 3.10) (ABS, 2019c). This finding was unexpected and has been hypothesised to relate to the setting in which the female forensic participants are admitted: a high secure psychiatric hospital, where they receive continuous medical care from healthcare workers. Further investigation is required to gain a deeper understanding and confirm this finding.

4.2. Policy Implications

The Network is committed to conducting and translating research into policies and practices. Findings from previous studies conducted by the Research Unit have been used to inform the strategic direction, models of care and clinical redesign. Findings from the *2021 Health Literacy Study* will inform policies and practices to improve the communication, understanding and utilisation of healthcare services and, in turn, continue to help improve the health outcomes of people in prison and forensic mental health settings. It is important for organisations, healthcare providers and patients to understand the concept of health literacy and how it can be applied to improve the health outcomes of patients. Using a multidimensional health literacy measurement tool such as the HLQ in a population sample is an important first step to identifying the strengths and weaknesses of the population. Improving clinical, community and population health responses to low health literacy has the potential to increase access to health care, improve health outcomes and advance health equity (Batterham et al., 2016). Two major steps are recommended for the Network: first, utilising the key findings of this study to provide evidence-based knowledge to inform the Network's relevant stakeholders; and second, undertaking a collaborative process to identify areas for improvement, development of organisational strategies and the drive to improve the health literacy and, in turn, the health equity of the Network's patients.

4.3. Limitations

The data presented in this report represent information collected from 14 NSW publicly operated metropolitan prisons and The Forensic Hospital. Across NSW, there are 33 publicly operated prisons and four secure forensic mental health facilities (one high secure and three medium-secure). In accordance with the study design, data collection did not occur at all of these correctional centres and mental health facilities. Data collection in prisons focused on metropolitan prisons and The Forensic Hospital because it is the only secure forensic mental health facility under the Network's sole jurisdiction. Further, individuals who did not have sufficient English to provide informed consent or comprehend the survey were excluded from participating in the survey. Therefore, caution must be taken when interpreting the results because the exclusion of these sites and potential participants may reduce the overall representation of different patient subgroups. In particular, caution is necessary when drawing conclusions from the forensic participant sample due to the small sample size. Findings in this report have been weighted to avoid any potential bias from the under-representation of key demographic groups within the study participants' cohorts to reduce the effects of this limitation.

A study of this nature and size relies heavily on self-reported data, which has the potential to introduce information bias, particularly recall bias, in the reported measures (Althubaiti, 2016). The use of self-reported data is a common practice in health research because it allows a wider range of responses from participants (Zhu et al., 1999). The data for this study were collected simultaneously as a patient experience survey. When interviewed, participants were asked to honestly express their level of agreement or ease with the HLQ items and self-report demographic information and health statuses. Self-reported data may introduce underestimations or (less likely) overestimations in the health-related measures by participants. Despite this, studies comparing self-reported data and medical records have reported a high concordance between the two data sources (Noble et al., 2019; Okura et al., 2004; Zhu et al., 1999). Further, data were not collected regarding participants' specific chronic health conditions, as has been done by many studies. Therefore, analysis between the prevalence of particular health conditions and health literacy strengths and weaknesses of the participant samples cannot be achieved using the survey data only. Data linkage needs to be performed to investigate associations between health conditions and health literacy strengths and weaknesses. Despite using self-reported data and the lack of chronic health condition information, these should not discredit the information collected. The novelty of this study creates an invaluable evidence base, enabling further studies to build upon and incorporate these identified limitations into future research developments.

The HLQ was designed and validated to be used in community healthcare settings, with this being the first study to use it in prisons and high secure forensic mental health settings. Therefore, the questions asked of our participants may not directly align with the true meanings intended by the authors of the tool when used in a community setting. However, all of the Network's clinics use a model similar to community outpatient clinics, thus, aligning the type of health care provided in the prison setting to some degree with that in community outpatient settings. It is critical that the context of the setting in which the HLQ is administered is considered when interpreting HLQ findings. Despite this being a limitation, the evidence from this study allows the Network to understand better the health literacy strengths and weaknesses of the patient cohort it provides care for, creating a building block to continue to refine and improve the services provided.

Conclusion

The 2021 Health Literacy Study is a critical reference for the Network, patients and partner organisations. This is the first study of its kind in an Australian prison context or forensic mental health setting, creating a valuable evidence base to inform and improve the service delivery for two vulnerable population groups. While in the Network's care, there is an opportunity to ensure these vulnerable patient groups are provided with equitable health care. The current report has identified the strengths and weaknesses of individuals currently in the care of the Network across several multidimensional and complementary health literacy domains. Thus, the report provides an evidence base that can allow patients and relevant Network stakeholders to have a common direction regarding health care and its complex nature within secure settings.

Both custodial and forensic participants in this study have demonstrated several weaknesses in health literacy that need to be addressed and strengths that can be enhanced. Two key recommendations are made to harness this opportunity and ensure there is a common direction to address the health literacy weaknesses and enhance the strengths:

1. Collaboration is needed between all relevant stakeholders, including custodial and forensic patients, for the prison and forensic hospital environments to improve access to health information, health care and navigation of the healthcare system.
2. Further statistical analysis needs to be conducted to inform future research, allowing for the confirmation of findings in this report and for co-designed interventions to be developed to address the health literacy weaknesses and build upon identified strengths.

References

Aldridge, R. W., Story, A., Hwang, S. W., Nordentoft, M., Luchenski, S. A., Hartwell, G., Tweed, E. J., Lewer, D., Vittal Katikireddi, S. & Hayward, A. C. (2018). Morbidity and mortality in homeless individuals, prisoners, sex workers, and individuals with substance use disorders in high income countries: A systematic review and meta-analysis. *The Lancet, 391*(10117), 241–250. https://doi.org/https://doi.org/10.1016/S0140-6736(17)31869-X

Althubaiti, A. (2016). Information bias in health research: Definition, pitfalls, and adjustment methods. *Journal of Multidisciplinary Healthcare*, *9*(1), 211–217. https://doi.org/10.2147/JMDH.S104807

Altin, S. V., Finke, I., Kautz-Freimuth, S. & Stock, S. (2014). The evolution of health literacy assessment tools: A systematic review. *BMC Public Health, 14*(1), Article 1207. https://doi.org/10.1186/1471-2458-14-1207

Australian Bureau of Statistics. (2008, 25 June). *Health literacy, Australia, 2006* (Cat. No. 4233.0). https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4233.0Main%20Features22006?opendocument&tabname=Summary&prodno=4233.0&issue=2006&num=&view=

Australian Bureau of Statistics. (2018, 12 December). *National Health Survey: First results*. https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-first-results/2017-18

Australian Bureau of Statistics. (2019a, 29 April May). *National Health Survey: Health literacy.* https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-health-literacy/latest-release

Australian Bureau of Statistics. (2019b, 30 April). *National Health Survey: User's guide, 2017–18. The Health Literacy Questionnaire* (Cat. No. 4363.0). https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4363.0~2017-18~Main%20Features~The%20Health%20Literacy%20Questionnaire~48

Australian Bureau of Statistics. (2019c). *Table 2: Health literacy score, 2018 – Australia.* https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-health-literacy/latest-release

Australian Bureau of Statistics. (2020, 3 December). *Prisoners in Australia.* https://www.abs.gov.au/statistics/people/crime-and-justice/prisoners-australia/2020

Australian Institute of Health and Welfare. (2019). *The health of Australia's prisoners 2018* (Cat. No. PHE 246). https://www.aihw.gov.au/reports/prisoners/health-australia-prisoners-2018

Baidawi, S., Turner, S., Trotter, C., Browning, C., Collier, P., O'Connor, D. & Sheehan, R. (2011). Older prisoners: A challenge for Australian corrections. *Trends & Issues in Crime and Criminal Justice*, (426), 1–8. https://www.aic.gov.au/publications/tandi/tandi426

Barber, M. N., Staples, M., Osborne, R. H., Clerehan, R., Elder, C. & Buchbinder, R. (2009). Up to a quarter of the Australian population may have suboptimal health literacy depending upon the measurement tool: Results from a population-based survey. *Health Promotion International*, *24*(3), 252–261. https://doi.org/10.1093/heapro/dap022

Batterham, R. W., Hawkins, M., Collins, P. A., Buchbinder, R. W. & Osborne, R. H. (2016). Health literacy: Applying current concepts to improve health services and reduce health inequalities. *Public Health, 132*, 3–12. https://doi.org/10.1016/j.puhe.2016.01.001

Beauchamp, A., Buchbinder, R., Dodson, S., Batterham, R. W., Elsworth, G. R., McPhee, C., Sparkes, L., Hawkins, M. & Osborne, R. H. (2015). Distribution of health literacy strengths and weaknesses across socio-demographic groups: A cross-sectional survey using the Health Literacy Questionnaire (HLQ). B*MC Public Health*, *15*, Article 678. https://doi.org/10.1186/s12889-015-2056-z

Berkman, N. D., Sheridan, S. L., Donahue, K. E., Halpern, D. J. & Crotty, K. (2011). Low health literacy and health outcomes: An updated systematic review. *Annals of Internal Medicine*, *155*(2), 97–107. https://doi.org/10.7326/0003-4819-155-2-201107190-00005

Bombard, Y., Baker, G. R., Orlando, E., Fancott, C., Bhatia, P., Casalino, S., Onate, K., Denis, J.-L. & Pomey, M.-P. (2018). Engaging patients to improve quality of care: A systematic review. *Implementation Science*, *13*(1), Article 98. https://doi.org/10.1186/s13012-018-0784-z

Capon, A., McGowan, L. & Bowman, J. (2020). Prisoners' experience and perceptions of health care in Australian prisons: A qualitative study. *International Journal of Prisoner Health*, *16*(3), 249–262. https://doi.org/10.1108/IJPH-11-2019-0062

Centre for Aboriginal Health. (2019, 1 July). *Communicating positively: A guide to appropriate Aboriginal terminology* (Doc. N. GL2019_008). NSW Health. https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/GL2019_008.pdf

Chou, H.-L., Lo, Y.-L., Liu, C.-Y., Lin, S.-C. & Chen, Y.-C. (2020). Development and psychometric evaluation of the cancer health literacy scale in newly diagnosed cancer patients. *Cancer Nursing*, *43*(5), E291–E303. https://doi.org/10.1097/NCC.0000000000000711

Clouston, S. A. P., Manganello, J. A. & Richards, M. (2017). A life course approach to health literacy: The role of gender, educational attainment and lifetime cognitive capability. *Age and Ageing*, *46*(3), 493–499. https://doi.org/10.1093/ageing/afw229

Corrective Services NSW. (2019, May). *Classification and placement* (Fact sheet 9). https://www.correctiveservices.dcj.nsw.gov.au/documents/csnsw-fact-sheets/classification-and-placement.pdf

Crouch, C. (2020). Are female forensic patients in secure care the most in need and the most ignored? A demographic study of female forensic patients in NSW [Unpublished masters thesis]. The University of New South Wales. https://unsworks.unsw.edu.au/fapi/datastream/unsworks:73230/SOURCE02?view=true

Guzys, D., Kenny, A., Dickson-Swift, V., & Threlkeld, G. (2015). A critical review of population health literacy assessment. *BMC Public Health*, *15*(1), Article 215. https://doi.org/10.1186/s12889-015-1551-6

Haun, J. N., Valerio, M. A., McCormack, L. A., Sørensen, K. & Paasche-Orlow, M. K. (2014). Health literacy measurement: An inventory and descriptive summary of 51 instruments. *Journal of Health Communications*, *19*(sup2), 302–333. https://doi.org/10.1080/10810730.2014.936571

Huizinga, M. M., Elasy, T. A., Wallston, K. A., Cavanaugh, K., Davis, D., Gregory, R. P., Fuchs, L. S., Malone, R., Cherrington, A., DeWalt, D. A., Buse, J., Pignone, M. & Rothman, R. L. (2008). Development and validation of the Diabetes Numeracy Test (DNT). *BMC Health Services Research*, *8*(1), Article 96. https://doi.org/10.1186/1472-6963-8-96

Israel, G. D. (1992, November). *Determining sample size* (Fact sheet PEOD-6). Institute of Food and Agriculture Sciences, University of Florida. https://www.academia.edu/21353552/Determining_Sample_Size_1

Justice Health and Forensic Mental Health Network. (2017). *2015 Network patient health survey report*. https://www.justicehealth.nsw.gov.au/publications/2015_NHPS_FINALREPORT.pdf

Justice Health and Forensic Mental Health Network. (2018, November). *2016 forensic mental health patient survey report*. https://www.justicehealth.nsw.gov.au/publications/2016-forensic-mental-health-patient-report-final-1.pdf

Justice Health and Forensic Mental Health Network. (2019, March). *Patients' experiences and perceptions study*. https://www.justicehealth.nsw.gov.au/publications/patients-experiences-and-perceptions-study-report.pdf

Justice Health and Forensic Mental Health Network. (2020, November). *Our network 2020*. https://www.justicehealth.nsw.gov.au/publications/our-network-2020.pdf

Justice Health and Forensic Mental Health Network. (n.d.). *The forensic hospital*. https://www.justicehealth.nsw.gov.au/about-us/health-care-locations/the-forensic-hospital

Mental Health and Cognitive Impairment Forensic Provisions Act 2020 (NSW)

Murphy, P. W., Davis, T. C., Long, S. W., Jackson, R. H. & Decker, B. C. (1993). Rapid estimate of adult literacy in medicine (REALM): A quick reading test for patients. *Journal of Reading, 37*(2), 124–130. https://www.jstor.org/stable/40033408

Muscat, D. M., Song, W., Cvejic, E., Ting, J. H. C., Medlin, J. & Nutbeam, D. (2019). The impact of the Chronic Disease Self-Management Program on health literacy: A pre-post study using a multi-dimensional health literacy instrument. *International Journal of Environmental Research and Public Health*, *17*(1), 58–72. https://doi.org/10.3390/ijerph17010058

Noble, N., Paul, C., Walsh, J., Wyndham, K., Wilson, S. & Stewart, J. (2019). Concordance between self-report and medical records of preventive healthcare delivery among a sample of disadvantaged patients from four Aboriginal community controlled health services. *BMC Health Services Research*, *19*(1), Article 111. https://doi.org/10.1186/s12913-019-3930-7

NSW Bureau of Crime Statistics and Research. (2020a). *Aboriginal over-representation in the NSW criminal justice system*. Retrieved 21 October 2021 from https://www.bocsar.nsw.gov.au/Pages/bocsar_pages/Aboriginal-over-representation.aspx

NSW Bureau of Crime Statistics and Research. (2020b, August). *New South Wales custody statistics: Quarterly update June 2020*. https://www.bocsar.nsw.gov.au/Pages/bocsar_publication/Pub_Summary/custody/NSW-Custody-Statistics-Quarterly-update-June2020.aspx

NSW Bureau of Crime Statistics and Research. (2021, February). *New South Wales custody statistics: Quarterly update December 2020*. https://www.bocsar.nsw.gov.au/Publications/custody/NSW_Custody_Statistics_Dec2020.pdf

Nutbeam, D. (1998). Health promotion glossary. *Health Promotion International, 13(4)*, 349–364. https://doi.org/10.1093/heapro/13.4.349

O'Hara, J., Hawkins, M., Batterham, R., Dodson, S., Osborne, R. H. & Beauchamp, A. (2018). Conceptualisation and development of the Conversational Health Literacy Assessment Tool (CHAT). *BMC Health Services Research*, *18*(1), Article 199. https://doi.org/10.1186/s12913-018-3037-6

Okura, Y., Urban, L. H., Mahoney, D. W., Jacobsen, S. J. & Rodeheffer, R. J. (2004). Agreement between self-report questionnaires and medical record data was substantial for diabetes, hypertension, myocardial infarction and stroke but not for heart failure. *Journal of Clinical Epidemiology*, *57*(10), 1096–1103. https://doi.org/https://doi.org/10.1016/j.jclinepi.2004.04.005

Osborne, R. H., Batterham, R. W., Elsworth, G. R., Hawkins, M. & Buchbinder, R. (2013). The grounded psychometric development and initial validation of the Health Literacy Questionnaire (HLQ). *BMC Public Health*, *13*, Article 658. https://doi.org/10.1186/1471-2458-13-658

Paasche-Orlow, M. K. & Wolf, M. S. (2007). The causal pathways linking health literacy to health outcomes. *American Journal of Health Behavior*, *31*(Suppl 1), S19–26. https://doi.org/10.5555/ajhb.2007.31.supp.s19

Parker, R. M., Baker, D. W., Williams, M. V. & Nurss, J. R. (1995). The test of functional health literacy in adults. *Journal of General Internal Medicine*, *10*(10), 537–541. https://doi.org/10.1007/BF02640361

Rademakers, J., Waverijn, G., Rijken, M., Osborne, R. & Heijmans, M. (2020). Towards a comprehensive, person-centred assessment of health literacy: Translation, cultural adaptation and psychometric test of the Dutch Health Literacy Questionnaire. *BMC Public Health*, *20*(1), Article 1850. https://doi.org/10.1186/s12889-020-09963-0

Swinburne University of Technology. (n.d.). *Ophelia and questionnaires*. Retrieved 25 August 2021 from https://www.swinburne.edu.au/research/global-health-equity/ophelia-and-questionnaires/

Vahdat, S., Hamzehgardeshi, L., Hessam, S. & Hamzehgardeshi, Z. (2014). Patient involvement in health care decision making: A review. *Iranian Red Crescent Medical Journal*, *16*(1), Article e12454. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3964421/

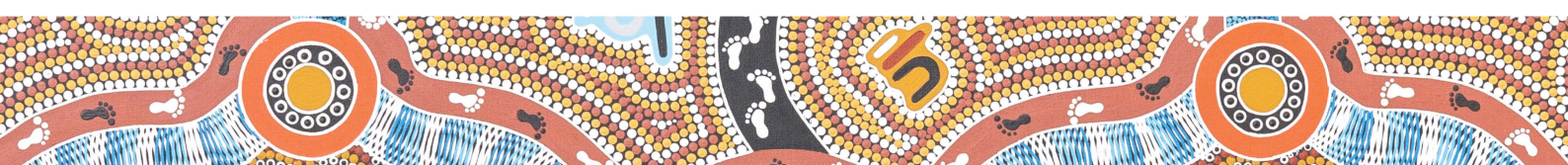
van der Heide, I., Wang, J., Droomers, M., Spreeuwenberg, P., Rademakers, J. & Uiters, E. (2013). The relationship between health, education, and health literacy: Results from the Dutch Adult Literacy and Life Skills Survey. *Journal of Health Communication*, *18*(Suppl. 1), 172–184. https://doi.org/10.1080/10810730.2013.825668

Walther, B., Hossin, S., Townend, J., Abernethy, N., Parker, D. & Jeffries, D. (2011). Comparison of electronic data capture (EDC) with the standard data capture method for clinical trial data. *PLOS ONE, 6*(9), Article e25348. https://doi.org/10.1371/journal.pone.0025348

Wilcox, A. B., Gallagher, K. D., Boden-Albala, B. & Bakken, S. R. (2012). Research data collection methods: From paper to tablet computers. *Medical Care, 50*, S68–S73. https://doi.org/10.1097/MLR.0b013e318259c1e7

World Health Organization. (1998). *Health promotion glossary* (WHO/HPR/HEP/98.1). https://www.who.int/publications/i/item/WHO-HPR-HEP-98.1

Zhu, K., McKnight, B., Stergachis, A., Daling, J. R. & Levine, R. S. (1999). Comparison of self-report data and medical records data: Results from a case-control study on prostate cancer. *International journal of epidemiology, 28*(3), 409–417. https://doi.org/10.1093/ije/28.3.409



Justice Health and Forensic Mental Health Network

1300 Anzac Parade
Malabar NSW 2036
PO Box 150
Matraville NSW 2036

Phone: + 61 2 9700 3000
Fax: + 61 2 9700 3493
Email: JHFMHN-ResearchUnit@health.nsw.gov.au
www.justicehealth.nsw.gov.au