HYGIENE POVERTY IN AUSTRALIAN SCHOOLS

The Hidden Crisis

A research report commissioned by Pinchapoo

Pinchapoo Ltd
A cheeky way to help

eea

Foreword

Hygiene poverty is emerging as a significant crisis not just for low-income countries, but also high-income OECD countries in the wake of significant inflationary conditions and the impact of the pandemic. Concerningly, evidence suggests that the crisis predates these events, given the steady and significant demand for hygiene products from peak hygiene charities. Understanding the complex issue of hygiene poverty is essential, to establish a critical evidence base to inform proactive policy. Moreover, understanding the implications of hygiene poverty given the dual threats of inflation and the pandemic is equally critical to formulating a viable policy response.

The issues arising from hygiene poverty have significant implications beyond core hygiene issues alone and may give rise to mental harm consequences and may impede or preclude participation in basic activities. There is evidence suggesting a strong association between hygiene and entering into the workforce, and subsequent job attainment. Similarly, and equally concerningly there is evidence suggesting that learner participation in a classroom setting, co-curricular activities and social activities may be impacted by hygiene poverty. This assertion is a particular source of consternation and in part the impetus behind this broad study of hygiene poverty. Little is known about the impact of hygiene poverty in early education, on future learner participation in education.

To date, there appears to be a genuine shortage of research that informs policy debate discussion pertaining to these issues. The present report is commissioned and broadly disseminated with the goal of informing further discussion pertaining to the needs of those facing hygiene poverty.

Part A considers the health and wellbeing impact of hygiene poverty.

Part B provides one of the first estimates of the extent of hygiene poverty within Australian schools.

We encourage and invite discussion pertaining to this critical set of issues.

About Pinchapoo

Pinchapoo (a play on the expression Pinch-a-shampoo) is proudly responsible for creating a cheeky hotel toiletry 'pinching' movement 13 years ago, and for good reason.

Using this world first, modern day Robin Hood concept together with landfill stock rescue programs, we have redistributed more than 8.5 million personal hygiene products to hundreds of thousands of disadvantaged men, women and children nationally each year.

Pinchapoo is the biggest national not-for-profit supplier of personal hygiene essentials and works with over 850 + leading organisations, community groups and government institutions as a total hygiene solution, providing a reliable source of customised, culturally appropriate and gender inclusive packs to everybody in every situation of need.

The team work passionately to advocate access to hygiene products for both men and women equally. 1 in 3 Australians experience hygiene poverty and are forced to make the heart-breaking choice between buying food and personal hygiene products every week. It is their vision that every Australian has access to this basic human right essential to our mental and physical wellbeing and this alarming statistic eradicated.

www.pinchapoo.org.au

About EEA

Economic Evaluation Australia is team of economists, data scientists, impact evaluators, multi-disciplinary professionals and associates.

EEA started with the simple goal of making impact evaluation available to all organisations. Understanding and maximising impact is beneficial to all organsiations and supports organisations on their journey to greater scale and impact.

Their founding members are passionate supporters of the NFP sector, and social enterprise models, and understand these models well. They seek to use their skillset to champion change at all scale levels.

www.evaluationaustralia.com

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The preparation of this report, was entirely independent. The EEA team procured guidance from the Pinchapoo team regarding scope and dissemination. The research funders did not influence the research process or the conclusions presented herein.

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PART A – Exploring the health and wellbeing impacts of hygiene poverty

PART B – Estimating the extent of hygiene poverty within Australian Schools

Statement from the Pinchapoo Chief Executive Officer

Hygiene poverty does not just impact a small, isolated group of Australians Our research suggests that hygiene poverty is a national crisis that must be acknowledged through greater investment in alleviation efforts, and the co-ordinated distribution of relief packages.

Building a critical ecosystem of provider supports through integrated distribution of overstock goods appears to be compelling from both a hygiene poverty alleviation and from an environmental impact reduction standpoint. These dual benefits necessitate a considered review of the role that ecosystem providers and cultivators that presently facilitate such registration employing only limited philanthropic funds. These ecosystem providers are the essential intermediaries in the redress of hygiene poverty.

Given the prevalence of hygiene poverty within Australia and the dearth of research exploring these issues, Pinchapoo partnered with BF Foundation and Economic Evaluation Australia (EEA) to deliver a critical research output that establishes the impact of hygiene poverty on low-income families and children. The organisations partnered to deliver essential category specific research and evaluation outputs. More specifically; EEA conducted a survey of the extant literature on hygiene poverty and the critical role of alleviation services in the redress of poverty, exploring domestic and foreign research. EEA also employed spatial analysis and statistical methods to determine the extent of alleviation needs within the community. We hope this analysis will encourage key stakeholders to advance this important debate and invest in critical alleviation services.

Research Approach

To establish a viable framework for analysis, we engaged with a number of stakeholders, and brought together a research reference group, and research team with the expertise necessary for the completion of the research program. We established a research strategy to address the research scope presented by the commissioning entity that sought to better enumerate understanding pertaining to hygiene poverty, establish the demand for hygiene products, and to quantify the extent of hygiene poverty. The first project within the program of research focuses on establishing the extent of hygiene poverty within schools, and the associated impacts of hygiene poverty on school aged children. Forthcoming studies provide a broader review of policy responses and a detailed review of the hygiene intermediary model.

Research Strategy and Framework

Upon establishing the research framework, guidance and research assistance was sought from the research reference group pertaining to the following matters.

The design of the survey and broader MERL process

The principal focuses of the survey

The dissemination of the research findings and analysis

Research Reference Group

The researchers would like to acknowledge the following members of the Research reference group, and the Pinchapoo CEO, Kate Austin, and Pinchapoo CIO, Felix Arena for their value insights and support in the dissemination of the survey and research tools.

Kate Austin
CEO
Pinchapoo

Dr. Michael D'Rosario
Principal Researcher
Economic Evaluation Australia

Felix Arena
CIO/Head of Systems and IT
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Dr. Catherine Travers
Reseach Associate

Dr. Gwen Ball
Research Associate

Mrs. Carlene D'Rosario
Research Associate

Ms. Kala Bada
Research Associate

Mr. Jay Jhaveri
Research Associate

About the

Dr. Michael D'Rosario

Michael is an experienced economist/ econometrician and interdisciplinary research lead with longstanding associations and experience working with the NFP sector, universities and social impact focused organisations. He has worked in community development in both Australia and Asia. He Is Principal Evaluator at EEA, and Chief Economist at Per Capita. Prior to working with Per Capita and EEA, Michael served as a chair at Deakin University, the manager of a large research program/organisation affiliated with the University of Melbourne, the ESG & Impact Advisor to CPA Australia, and as Research, Policy and Communications Advisor to the Victorian Aboriginal Legal Service and the National Aboriginal and Torres Strait Islander Legal service. Michael has published extensively in Economics, Data Science journals and led a number of large economic evaluations.

Michael has served as a health economist and advisor to a number of refugee, youth and health focused charities, including Anchor, YouthConnexions, NDS, Deaf Connect, Deaf Australia, as well as peak hygiene charity Pinchapoo. In addition to working with Per Capita, Michael advises on the design of courses in Research Methods with a leading Australian university. Prior to working in the NFP sector Michael worked with PwC, KordaMentha, AusAid, Victoria University and the University of Melbourne.

Dr. Catherine Travers

Dr Catherine Travers is a Senior Research Fellow with the Dementia Centre for Research Collaboration at QUT. Her research interests include ageing, dementia and interventions to improve older people's quality of life including those with dementia. Dr Travers is a Clinical Psychologist who previously worked in both hospital and community settings where she gained extensive experience in the assessment and management of psychological and psychiatric problems in adults. In addition, she has a considerable number of recent publications in international peer-reviewed journals, has presented her work at national and international conferences and has experience in teaching and supervising both undergraduate and postgraduate psychology students.

Dr. Gwendolyn Ball

Dr. Gwendolyn Ball is a policy analyst specializing in U.S. health policy. Dr. Ball holds a PhD in economics and an M.S. in statistics from the University of Illinois (UIUC) and a JD from George Mason University where she was a Levy Fellow in Law and Economics and managing editor of the Journal of Law, Economics and Policy.

Mrs. Carlene D'Rosario

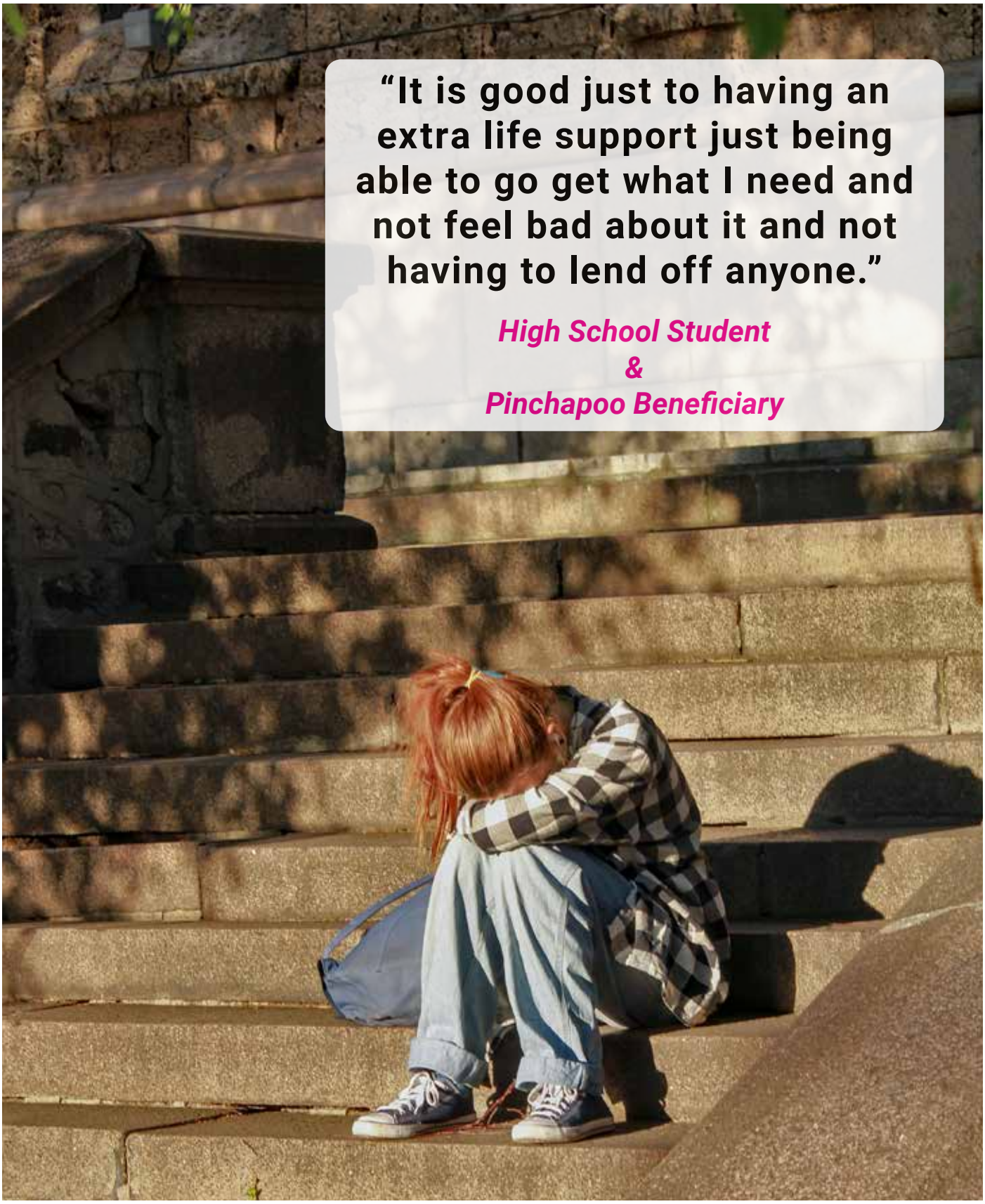
Carlene is an experienced researcher, having worked with VALS, and as an independent researcher exploring the impacts of RoboDebt on mental harm; with the findings published in the International Journal of Strategic Decision Sciences. Carlene is currently completing a Bachelor in Dementia Science, at the University of Tasmania. She specialises in aged care and dementia support. Carlene leads the design and dissemination of research findings through data and infographic visualisation.

Ms. Kala Bada

Kala Bada is a researcher in the field of psychology, education and broadly, development studies. Over the past four years, Kala has worked in the field of educational research, consulting for schools as well as working alongside one of India's largest charitable organisations. With a passion for research and acumen for strong writing, Kala takes up work which, at its core, is development-based. She is currently pursuing her Masters in Clinical Psychology and as already completed a research based postgraduate degree in Sustainable Development Practices. Kala also possesses a Bachelors degree in Anthropology and English Literature.

Mr. Jay Jhaveri

Jey Jhaveri is a research analyst with experience in data analysis pertaining to macroeconomic data, FMCG demand forecasting and systems analysis. Jey possesses a Masters degree from Deakin University, and has a strong interest in the NFP sector.


“It is good just to having an extra life support just being able to go get what I need and not feel bad about it and not having to lend off anyone.”
High School Student
&
Pinchapoo Beneficiary

Introduction

There is a genuine dearth of research exploring the impact of the provision of hygiene resources on the health, and wellbeing of Australian children. While it is predictable that the benefits are significant particularly with regard to health, there is little known about the ancillary impacts of such provisions. Notably within Australia accessing hygiene products remains challenging for many low-income families, given the significant costs attaching to such goods and their limited availability through giving/donation programs.

Understanding the critical role that access to such goods plays in the life of a child is of immense importance. The benefits of access to hygiene products transcend the notion of hygiene alone, likely conferring significant benefits to reduced absenteeism, reduced presenteeism, improvements in mental health and better engagement with school and civic systems. These impacts, in turn, are likely to improve academic performance and may be associated with better educational outcomes in terms of educational attainment. A heartening trend in recent times has been the movement to address period poverty, and the associated research evidencing the benefits of such programs. Yet, there is a shortage of research exploring both the need for and the impact of hygiene product provision beyond access to sanitary products for women.

While period poverty is a significant subset of hygiene poverty, addressing period poverty in isolation, absent of broader hygiene poverty responses is undesirable, given the significant and deleterious impacts of hygiene poverty. A small number of hygiene ecosystem enablers have played a central role in responding to the hygiene poverty crisis through the distribution of both crisis and ongoing supports to schools (and civil sector organisations) to improve the hygiene health and wellbeing of young Australians. These hygiene products, while often taken for granted are essential to the health and wellbeing of recipients. The essential goods provisions include, toothpaste, and toothbrushes, soaps, shampoos, razors, shaving cream, hand washes, hand sanitisers, deodorants, lice treatments, combs and women's sanitary products. Understanding how such product provisions support better wellbeing outcomes will undoubtedly inform better policy and support determinations pertaining to the provision of critical funding, to support the sustainability and furtherance of this initiative. Establishing the extent of hygiene poverty within Australian schools, is a critical first step. Identifying viable and coordinated approaches to responding to this silent epidemic, is the essential second step to ensuring no child is subjected to hardship deriving from hygiene poverty. This set of analyses offers some of the first estimates of the extent of hygiene poverty within Australian schools and outlines the critical role 'hygiene ecosystem' enablers play in the redress of hygiene poverty.

Scope of Research

The present study seeks to quantify the extent of hygiene poverty within school level learner cohorts, and unsated community demand. The study also provides mapping of extant hygiene poverty within school cohorts. The study presents the phase one results of the "Survey on Hygiene Poverty in Australia". The study explores the impact of hygiene poverty on absenteeism, presenteeism, and peer engagement.

The research is supplemented by a forthcoming research project with a complementary focus, titled Hygiene Poverty and its Implications, the forthcoming study seeks to summarise the extant literature exploring hygiene poverty, with a particular emphasis on the health, wellbeing and proximate impacts of hygiene poverty. Given the dearth of research within Australia, the study relies upon literatures from comparable OECD economies.

Key Terminology

Self-harm – intentionally causing injury to oneself, typically as a manifestation of a mental condition

Hygiene Poverty – an inability to afford everyday hygiene products, this includes shampoo, sanitary items, deodorant, soap, etc. Although individuals and families may experience hygiene poverty differently, some of the hardships they face can include the inability to take a shower with shampoo, conditioner and soap.

Cost of Living – the amount of money required to cover basic expenses. This includes housing, food, taxes, as well as medical expense.

Inflation – a general increase in prices and fall in the purchasing value of money.

Personal maintenance – a self-care routine that individuals undertake in order for them to present to the outside world. This includes body maintenance, dressing well, makeup, body sprays, such as deodorant and perfumes.

Period Poverty – to lack the ability to access sanitary products, as well as having a poor understanding of menstruation which is often a result of financial hardship.

Acronyms

WASH – Water, Sanitisation and Hygiene for All

OECD – Organisation for Economic Cooperation and Development

ABS – Australian Bureau of Statistics

AIHW – Australian Institute of Health and Welfare

CALD – Culturally and Linguistically Diverse

EEA – Economic Evaluation Australia

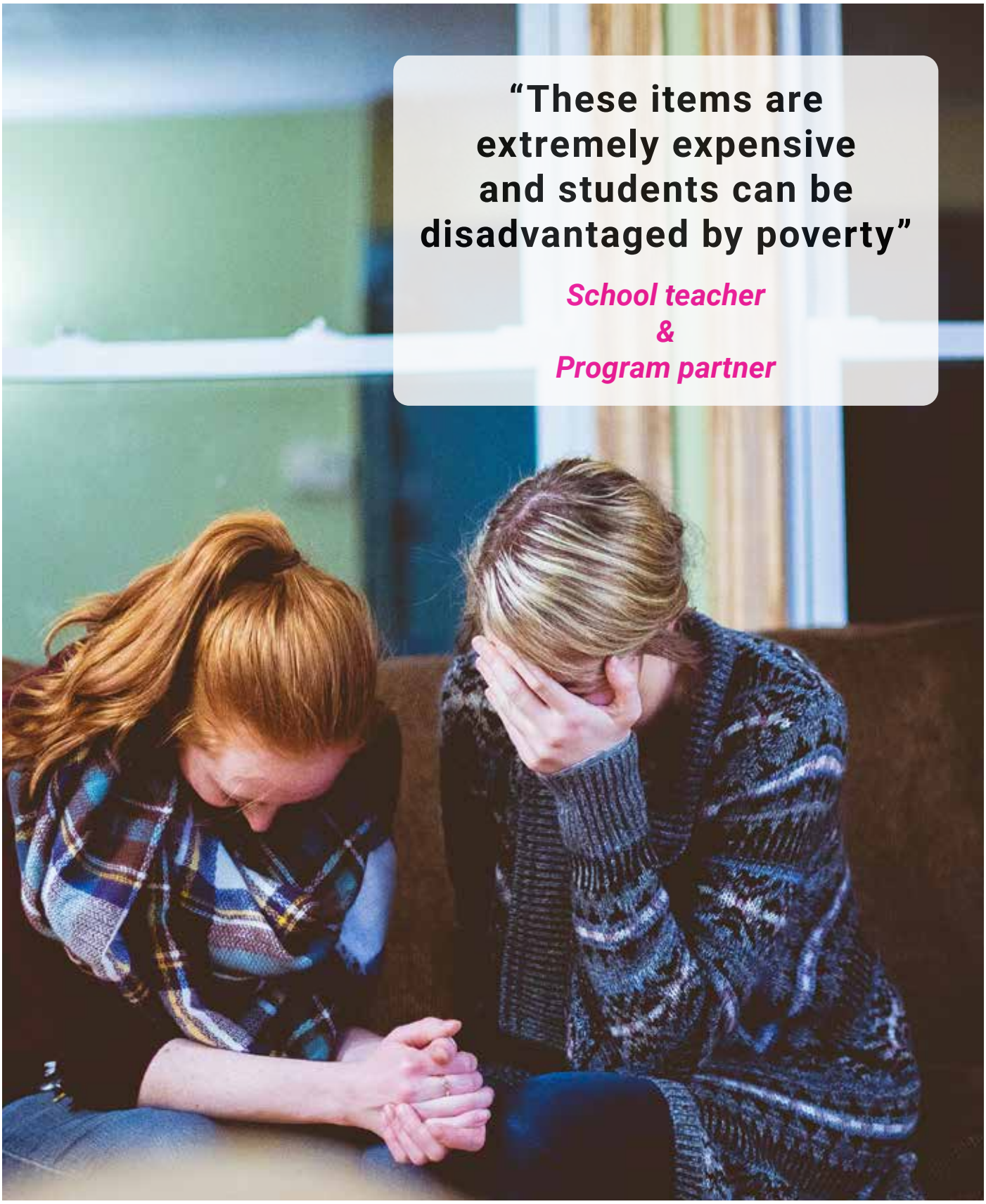
LGA – Local Government Area

IMF – International Monetary Fund

WDI – World Development Indicators

"Hygiene care particularly for the older students is crucial for their wellbeing. In their desire to be accepted by their peers hygiene poverty is a blocker."

School teacher
&
Program partner


“These items are extremely expensive and students can be disadvantaged by poverty”
School teacher
&
Program partner

Executive Summary

Hygiene poverty is the inability to meet basic hygiene and sanitation needs. It is not a challenge synonymous with advanced economies such as Australia, yet the analysis herein evidences that hygiene poverty is a hidden epidemic within Australian society.

The idea that many children are going without necessities such as toothbrushes, toothpaste, soap, and shampoo, as well as other essentials as they reach adolescence such as menstrual hygiene products, deodorant and razors, is confronting.

These simple but essential products influence the health and wellbeing of children, and impact peer associations, absenteeism and presenteeism. Children that lack access to these essential goods are placed in a position of disadvantage.

Our analysis suggests that the extent and impact of hygiene poverty within Australian schools is significant. Surveying a cohort of school leaders and educators (n = 33), we identified that many Australian children lack access to hygiene and sanitation products, beyond those provided by Pinchapoo. The research also identified a dramatic escalation in the demand for hygiene products consequential to the COVID pandemic and recent inflationary conditions. The analysis evidences the significant need for greater investment in hygiene poverty alleviation.

Key Findings

Channels of access to hygiene products and frequency of provision

91% of educators/respondents have provided children with hygiene products procured by the comissioning charity. 78% regularly supply children with hygiene products. In addition to procuring hygiene and sanitation products from the commissioning charity, 72% of participants have purchased hygiene products for students using their own money.

Hygiene poverty and curricular/co-curricular engagement

Concerningly, 78% of respondents stated that they observed children being teased because of their hygiene, while 6.1% of respondents asserted that this teasing was a regular occurrence.

In play-based/recreational settings, 57% of respondents asserted that they observed children experiencing hygiene poverty being less engaged with their classmates; than their peers that were not experiencing hygiene poverty.

Within a classroom setting 93% of respondents asserted that they observed children experiencing hygiene poverty being less engaged than their peers.

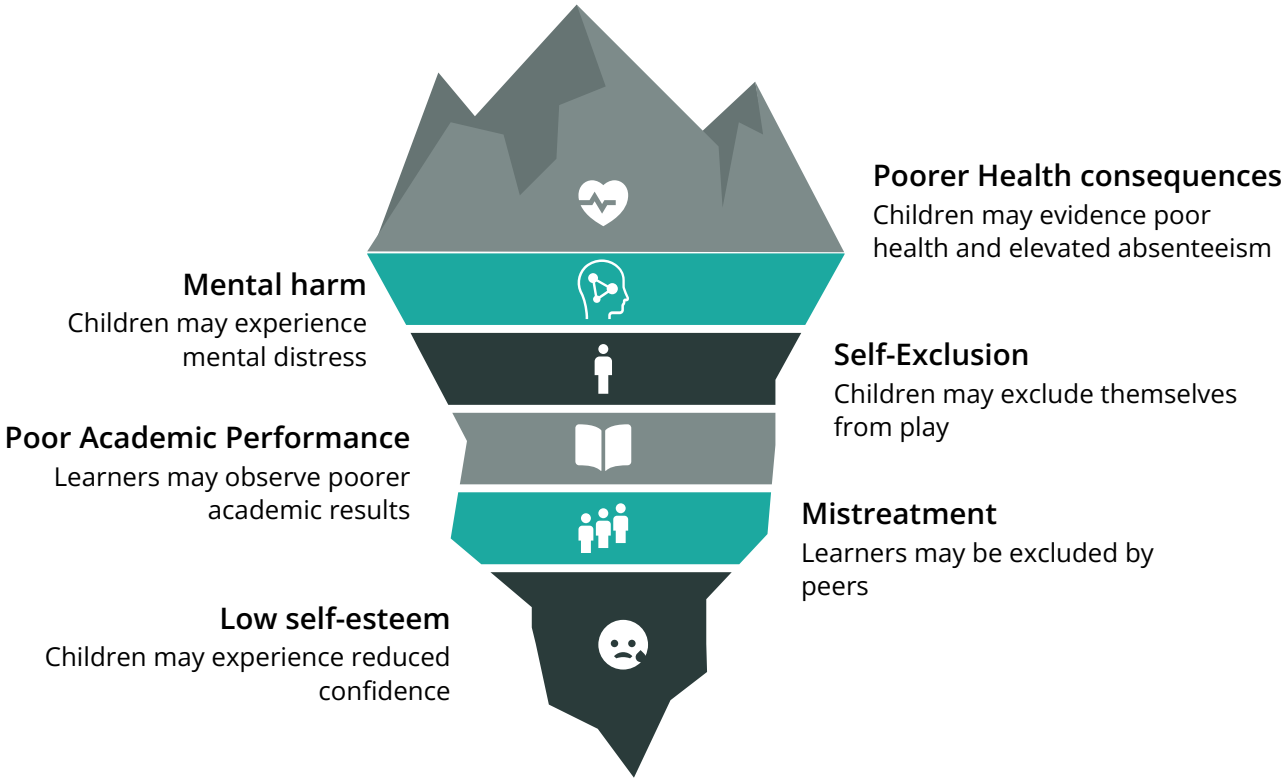
Absenteeism and Academic performance

81% of respondents identified that children evidencing hygiene poverty were more absent than peers not experiencing hygiene poverty. The frequency of additional absence was 13.84 days on average. 61% of respondents asserted that children experiencing hygiene poverty performed more poorly academically than those that were not experiencing hygiene poverty.

Unsated demand for hygiene products amongst children

The extent of unsated demand for hygiene goods is a proxy for hygiene poverty. The analysis examined request data supplied by 1168 Australian schools currently seeking hygiene poverty products. The extent of unsated demand equates to approximatly 301,047 children, or 7.46% of all learners within Australian schools. This estimate is highly concervative as it accounts for the hygiene poverty needs of 12.19% of all schools. Given the present rate of poverty within Australia we estimate that up to 770,000 learners may be experiencing some degree of hygiene poverty.

Figure 1 – The hidden costs and consequences of hygiene poverty



While poorer health outcomes may be the more visible and measurable aspects of hygiene poverty, the analysis suggests that other non visible factors may be equally significant. Learners may be experiencing significant mental distress, consequential to their lack of access to essential goods, learners may also be self excluding from both academic enrichment activities and co-curricular activities, limiting their job prospects and aspirations. Students experiencing hygiene poverty are also observed to perform more poorly academically and be less engaged within class.

These early life impacts and hinderances will have implications for students through adolescence, and potentially in later life. Addressing hygiene poverty through a child centric model that minimises harm is critical to protect young Australians from the harm consequences of deprivation from essential hygiene goods.

Poverty and its impact on Australian families

While poverty can be defined and measured in different ways, within Australia, poverty is generally considered in relative, rather than absolute terms (lacking resources for life's most basic requirements, i.e. food, clothing and shelter). Relative poverty refers to those who have low incomes or resources relative to others, and who are unable to achieve a standard of living considered acceptable in society at the time (page 11, Davidson et al., 2020a). In their most recent report on poverty in Australia, the Australian Council of Social Services (ACOSS) defined poverty more specifically as having a household income of less than 50% of the median household income and is the definition adopted in this report.

ACOSS reported that, among OECD countries, Australia has relatively high rates of poverty, and that 3.24 million Australians including 774,000 children lived in poverty in 2017 (after taking into account the cost of housing). This number represented 13.6% (around one in eight people) of adults and 13.9% of children (one in six). The highest rates of poverty were found in those who rely on social security as their main source of income including the unemployed, public housing tenants, children living in sole-parent households and people aged over 65 years who rent accommodation (see Table 1; Davidson et al., 2020b).

Table 1. Poverty in Australia – Groups with the highest rates of poverty#

People in households where the primary income-earner is unemployed	66%
Public housing tenants	58%
People in households in which the primary income-earner is of working age and is out of the labour force	45%
Children in sole-parent households	44%
People in households whose primary income-earner receives Youth Allowance	43%
Newstart Allowance	57%
Parenting Payment	54%
Disability Support Pension	41%
People aged 65 years and over who are not home-owners or purchasers	39%

#Source: Poverty in Australia 2020: Part 2, Who is affected? (Davidson et al., 2020b)

Thus, while Australia is one of the wealthiest countries in the world (Credit, Suisse, 2019), a very substantial number of Australians (13.6% of adults and 13.9% of children) live in poverty, and struggle to afford housing, electricity, transport, food and other essential items. Many of the groups noted in Table 1 are likely to be amongst the groups facing the greatest challenges with hygiene poverty.

It is important to acknowledge that hygiene poverty is largely a by-product of broader economic poverty, individuals facing poverty must make complex choices between other subsistence goods and services and hygiene products, this often involves choices between subsistence goods such as basic foods, medical care expenditure and hygiene goods.

This places them in a precarious position because the shortage of hygiene products, being in hygiene poverty, may result in greater levels of illness, elevating their costs of care, and reducing their earnings potential, through absenteeism or potentially through self- exclusion.

Cost of living pressures, the COVID pandemic and hygiene poverty consequences

While little research has been conducted into hygiene poverty, analyses of data supplied by the commissioning charity pertaining to product provision requests suggests that hygiene poverty has been an endemic challenge for a significant period, predating recent price escalation.

However, it is evident that price escalation has likely exacerbated the hygiene crisis, given that many are living paycheck to paycheck. Additionally, cost of living pressures deriving from the escalation in asset prices, most notably, used vehicles and house prices, coupled with higher costs of borrowing have caused many to forgo essential goods to meet their elevated repayment requirements.

Recent trends in inflationary conditions have been particularly severe, with CPI measures reaching record levels. Given the absence of comparable wage growth, many families are having to choose between essential subsistence goods and essential hygiene products. It is highly plausible that this has resulted in substantial elevations in the level of hygiene poverty amongst families and consequently school aged learner cohorts. To determine the extent of Covid specific and inflationary impacts on hygiene poverty, we surveyed school leaders and educators supplying their learner cohorts with Pinchapoo supplied hygiene products. The findings are summarised in the latter portion of the report. They evidence a dramatic escalation in hygiene poverty, notwithstanding the already endemic level predating the pandemic

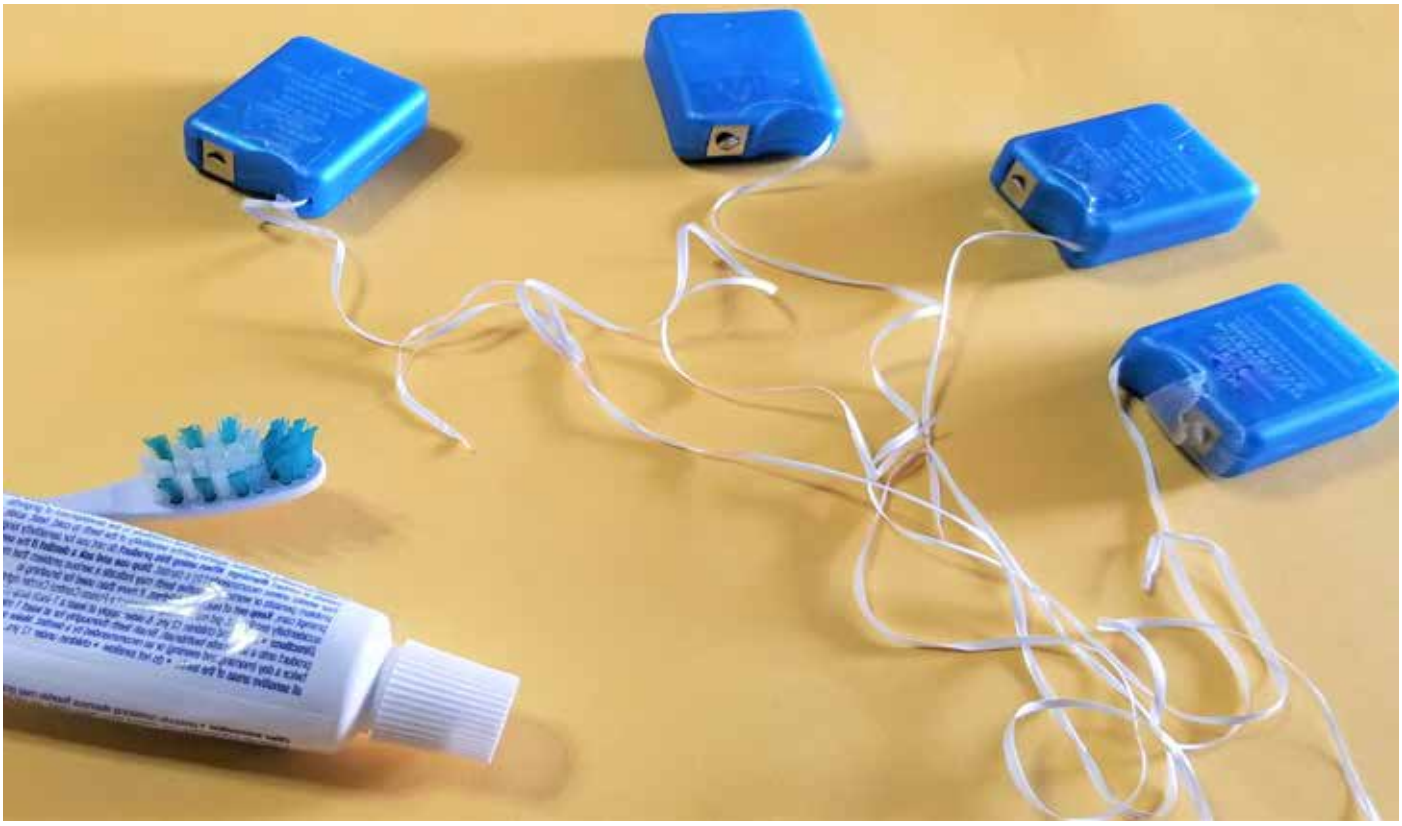
Poverty and Health

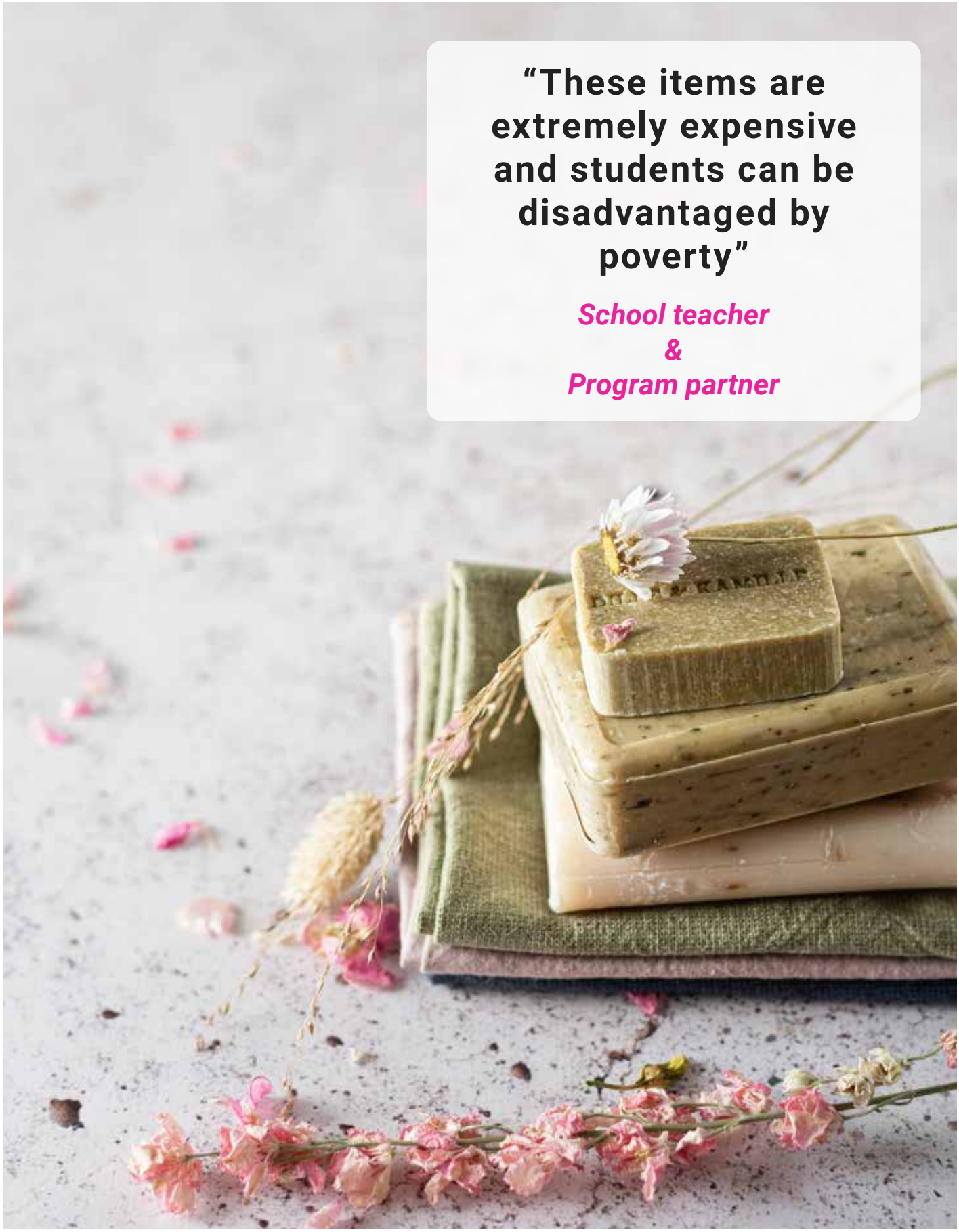
The association between poverty and mental health is well established. Poverty and mental health also influence and moderate the opportunities available to individuals. Consequently, employing Amartya Sen's capability framework; poverty and poor health may be observed as capability inhibiting.

Buddelmeyer and Lixen (2009) note that both health and poverty are important measures of personal wellbeing, and they are closely related in their evolvement. Understanding how health and poverty are determined and evolve over time has important policy implications. Numerous international studies have documented a close association between socio-economic status (SES), often measured by income, and health (see Adams et al., 2003 and references therein).

The results indicate that the causality between health and poverty runs both ways, and the relationship is confounded by unobserved heterogeneity. In particular, it is found that families headed by a person in ill-health are more likely to be in poverty compared with families headed by a person with good health. On the other hand, a family head whose family is in poverty in the current year is more likely to be in ill-health in the next year compared with a family head whose family is not in poverty. In addition, there is evidence that health and poverty are affected by correlated unobservables, causing health to be endogenous to poverty even in the absence of a reverse effect from poverty on health. Consequently, treating health as exogenous in a poverty equation would produce biased estimates.

Hygiene poverty is a specific by product of economic poverty, whereby individuals lack essential hygiene goods including those necessary for oral, skin, hair health and sanitation. Period poverty is a specific subset of hygiene poverty. While the relationship between poverty and wellbeing has been explored extensively within a number of literatures from psychology to development economics, it remains underexplored in the context of hygiene poverty. Similarly, specific subsets of hygiene poverty pertaining to oral hygiene and menstrual hygiene are increasingly explored (albeit under explored) within the health literature. Several recent studies identifying the impact of limited access to oral hygiene products and period products on health outcomes, with the extant research evidencing the deleterious impact of menstrual hygiene poverty and limited access to critical oral hygiene products.





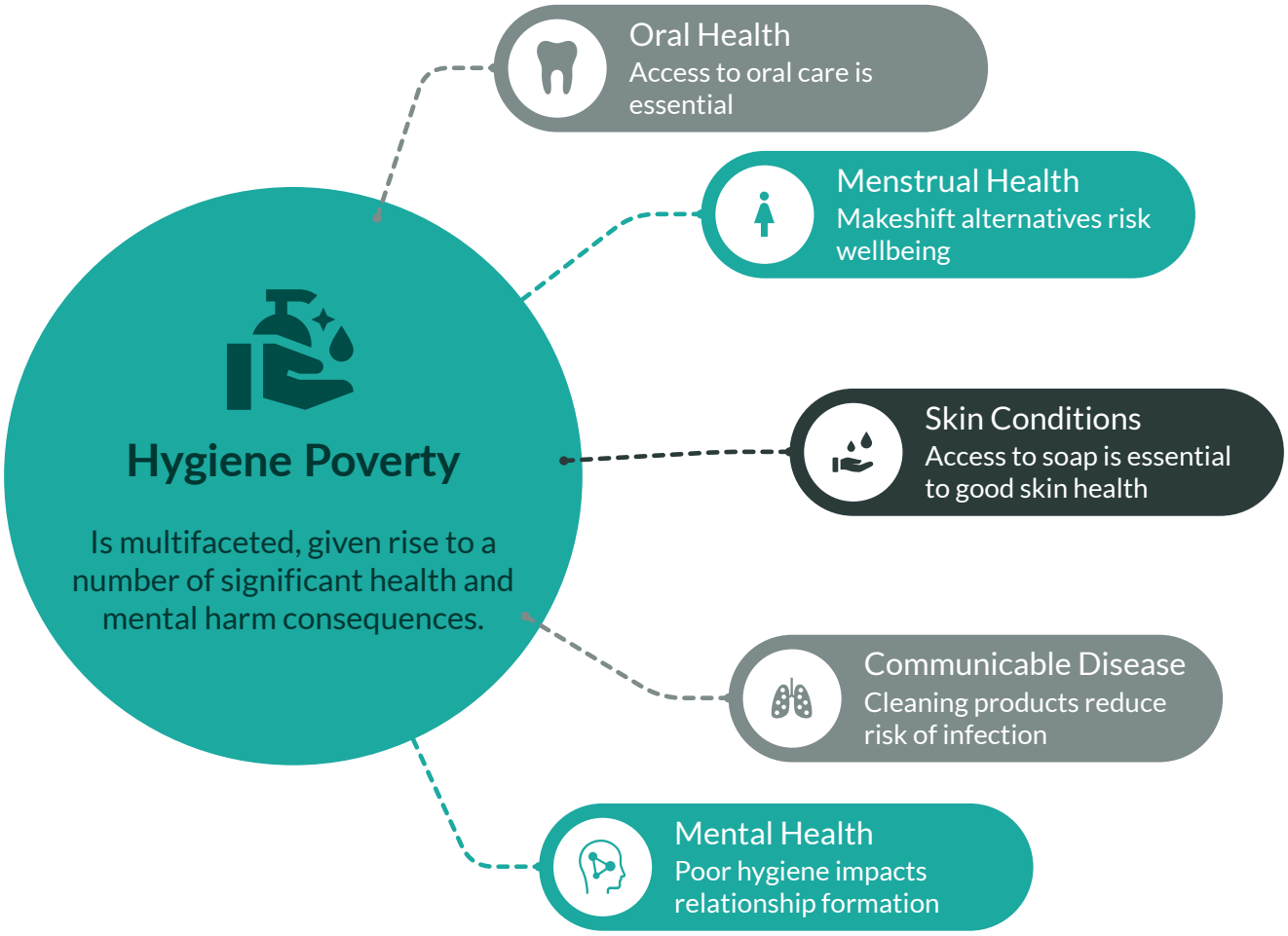
“These items are extremely expensive and students can be disadvantaged by poverty”

School teacher
&
Program partner

Hygiene Poverty and its implications for physical wellbeing

Hygiene poverty may be one of the most significant and consequential aspects of economic poverty for a child's health. Not being able to access essential hygiene products has significant implications for different aspects of the child's health. A dearth of oral hygiene goods may have implications for a child's early life and ongoing oral health. Poor access to soaps, and cleansing products may result in unsafe substitution effects, and result in skin irritation and infection. Similarly, poor hygiene is strongly associated with elevated frequencies of intestinal illness and respiratory illness. Being unable to access treatments for lice or scabies, may result in more dangerous infection. These are not inconsequential health and wellbeing impacts. These health impacts may also have broader implications for childhood mental health and educational outcomes.

Figure 2 – The significant dimensions of hygiene poverty



Oral Health

Oral diseases are highly prevalent in Australia, as they are worldwide, with serious health and economic impacts for both the individual concerned and society as a whole (Peres et al., 2019). While the causes of poor dental health are multifactorial, a strong association between poverty, lower SES, and poor dental health has been firmly established in the research literature (Foley & Akers, 2018; Peres et al., 2019, Schwendicke et al., 2015). Of all dental conditions, dental caries are one of the most prevalent, with untreated dental caries resulting in a plethora of adverse outcomes. The incidence of untreated dental caries in Australian children aged 5 – 10 years was estimated to be 27.1% (approximately 406,000 children) in the National Child Oral Health Study 2012–14 (Ha et al., 2016).

A review of the research literature regarding the impacts of early childhood caries (ECC), reported adverse outcomes include pain, infection, missed days at school, visits to hospital emergency departments, admission to hospital for dental infections, treatment under anesthesia (also with the potential of adverse consequences) for complex dental repairs, and occasional death secondary to sepsis in the most serious cases (Casamassimo et al., 2009). In addition to the physical and emotional cost to the child and family concerned, associations between ECC and disrupted sleep and play, failure to thrive, and reduced quality of life were also found (Casamassimo et al., 2009). While the precise contribution of hygiene poverty to these outcomes is not known, ECC is highest in the poorest and most socio-economically disadvantaged populations, suggesting it is an important contributing factor (Peres et al., 2019).

Other researchers have examined relationships between poor dental hygiene and children's healthy development, well-being and school performance (Guarnizo-Herreño & Wehby, 2012). Data from the 2007 National Survey of Children's Health, containing data of a nationally representative sample of approximately 41,000 children aged 6 – 17 years in the U.S. were analysed to explore relationships between poor dental health, psychosocial well-being and school performance (all outcomes were based on parent reports). Results showed that poor dental health was significantly associated with reduced school attendance, problems at school, poorer school performance and poorer well-being (shyness, being unhappy/ sad/ depressed), after controlling for a range of potentially confounding influences (e.g. child's gender, age, other health conditions, availability of dental services).

Conversely, good/excellent dental health was significantly associated with better psychosocial well-being (less shyness, more friendliness). The authors also reported stronger associations between poor dental health and psycho-social well-being in adolescents compared to younger children, suggesting the effects may be cumulative over time. While these findings cannot be construed as conclusive, the authors nevertheless concluded that preventing and treating childhood dental problems and improving their dental health may result in improved school performance and psycho-social development.

Menstrual Health

Menstrual health is explored extensively in the health, wellbeing and proximate literatures. Period poverty has also been the subject of significant research. The extent of period poverty (a specific subset of hygiene poverty) is well documented in low and middle-income countries with studies reporting as many as 82% of women using unsanitary absorbents and inadequate laundering of used absorbents in African countries that may result in infection (Sumpter and Torondel, 2013). Furthermore, studies in developing countries also show that many girls miss school due to period poverty. While accurate data are scarce, some studies estimate that school-aged girls in Sub-Saharan Africa (Rop et al., 2016), and Uganda (Kennedy & Severe, 2020) miss around 20% of the academic year due to their periods, with period poverty being a key reason. Clearly, missing so much school will negatively impact their educational outcomes and economic potential for the remainder of their lives. Only very recently, however, has the extent of period poverty and its impacts been investigated in developed countries.

One study conducted in the United States in 2019 examined the issue by surveying a nationally representative sample of college-aged women (aged between 18-24 years). Results showed that 14.2% of the 471 respondents (n=67), reported difficulty affording menstrual products within the past year, while an additional 10.0% (n = 47) reported having difficulty every month (Cardoso et al., 2021). The women coped in various ways including borrowing products (72.8%), using other materials in lieu of menstrual products (52.6%), using pads or tampons for longer than suggested (48.3%) and going without any products (26.3%). Another study reported that almost half (48.3%) of the 58 school students (years 9-12) attending an urban school in St Louis U.S., surveyed were unable to afford period products during the previous school year (12.1% reported this occurred nearly every month), and 17% had missed at least one day of school due to period poverty (Sebert Kuhlmann et al., 2020). SES information was not collected, however, it was reported that 98% of the school's population was African-American and over 99% were eligible for a free or reduced lunch, suggesting the students were from a lower SES background.

Similarly, results of a survey of a nationally representative sample of over 7,700 New Zealand adolescents in 2019 indicated that 19% of school-aged females experienced period poverty. It was further reported that 16% had missed school as a direct consequence with 14% missing more than one day a month, and Maori and Pasifika students were impacted disproportionately (Fleming et al., 2020). Likewise, another report indicated that over 90,000 New Zealand female students missed school due to period poverty in 2021 (Wardecki, 2021), with important implications for their ability to gain an educational qualification and employment after leaving school, further perpetuating the poverty cycle.

These findings are likely generalisable to Australian society. While period poverty has rightly received immense attention, and in recent years increased state and federal funding, the broader issue of hygiene poverty remains, with many of the deleterious social, emotional and functional impacts of period poverty potentially generalisable to other forms of hygiene poverty. The issues arising from a lack of soap/shampoo, oral hygiene goods, evidences similar potential for significant and damaging impacts to the health of children.

Skin Conditions

The evidence for reductions in infections, morbidity and mortality due to hand-washing with soap, a safe water supply and sanitation for waste disposal is well-established (Cairncross et al., 2010). It has been estimated that diarrheal diseases, caused by a lack of basic hygiene, accounted for 1.6 million deaths in 2017 (Dadonaite et al., 2018) – a number that research indicates could be reduced by an estimated 48% solely through hand-washing with soap (Cairncross et al., 2010). In comparison to developing countries where access to clean water and handwashing facilities with soap is often very poor (WHO/UNICEF, 2021), most high-income countries have well-established infrastructure to provide safe drinking water and sanitation for the majority of their citizens. However, those who are homeless frequently have difficulty accessing facilities and may shower and launder their clothes infrequently, resulting in an increased risk of parasitic skin infections (e.g. bedbug bites; Brouqui et al., 2006).

Other skin conditions associated with a lack of access to soap include impetigo (highly contagious skin or school sores), scabies, cellulitis and abscesses that result in both short and longer-term, often very serious sequelae. In the first instance, skin infections are painful and unsightly, and ongoing infections contribute to poorer overall health while untreated infections lead to secondary complications (very common in scabies) with more serious outcomes including acute rheumatic fever (with the potential for long-term cardiac damage), and sepsis resulting in death in rare cases (The Australian Healthy Skin Consortium, 2018). Unfortunately, the prevalence of impetigo and scabies in Aboriginal and Torres Strait Islander children living in remote areas is among the highest in the world, with approximately 50% of all Aboriginal and Torres Strait Islander children having impetigo at any one time, while the prevalence of scabies has been reported to range from 16.1% to 35% (Davidson et al., 2019). Furthermore, skin infections in Aboriginal and Torres Strait Islander children are among the most common reasons for clinic visits and admission to hospital.

One review of presentations to two primary healthcare clinics in remote Northern Territory showed that there were 2,978 presentations for scabies and/or skin sores in children aged 0-5 years from 2002 to 2005 and that by the age of 1, 63% and 69% of children had presented with scabies and skin sores, respectively (Clucas et al., 2008). While the reasons for the high prevalence of these skin conditions in Aboriginal and Torres Strait Islander children are multifactorial, factors include the high levels of socioeconomic disadvantage experienced by Aboriginal and Torres Strait Islander people living in remote areas of Australia, and poor access to goods including hygiene products and services. In addition, 15% of people living in very remote areas of the Northern Territory did not have access to working washing facilities for clothing/bedding, and 9% did not have access to working facilities for washing people in 2018-2019 (AIHW,2020).

Nevertheless, the burden of disease imposed by these conditions is readily preventable with adequate hygiene and there is high-level evidence that washing hands once a day with regular soap is effective in both preventing and treating impetigo (The Australian Healthy Skin Consortium, 2018). There is also high-level evidence that soap is a useful adjunct to the treatment of general skin infections (The Australian Healthy Skin Consortium, 2018).

Gastroenteritis and Respiratory illness

Handwashing is considered to be the primary method of preventing gastroenteritis (Willmott, et al 2015). Aiello et al (2008) conducted a meta-analysis of 30 studies, the analysis indicating that handwashing interventions reduce the incidence of gastrointestinal infections by 30%. A Cochrane review conducted by Ejemot-Nwadiaro (2015) identified a similar association. There is no evidence that antibacterial soaps work better than nonantibacterial soaps (Hartmann et al 2019, Willmott et al 2015).

The use of alcohol-based hand sanitizers in addition to standard handwashing education can reduce gastroenteritis can decrease school absenteeism by 30%. While good hygiene does not offer a guarantee of infection prevention it is strongly associated with better outcomes. Elliot (2014) notes that good hygiene is essential to preventing the spread of infection. This includes careful hand washing, nappy disposal, and preparation and storage of food and drinking water (Ibid, 2014).

Research published by Sandora et al (2010) in the Lancet supports these assertions. Sandora et al. (2010) note that multifactorial intervention emphasizing alcohol-based hand sanitizer use in the home, reduced transmission of GI illnesses within families with children in childcare. Hand sanitizers and multifaceted educational messages may have a role in improving hand-hygiene practices within the home setting.

Dyer et al., (2000) considered the impact of hand sanitising product supplied in schools. The study identified a 28.9% reduction in risk of gastrointestinal illness, respectively, in children in intervention group vs control. Dyer et al, (2000) also identified that hand sanitising products supplied to children resulted in a 49·7% reduction in risk of respiratory-related school illnesses. Master et al (1997) identified that handwashing with soap resulted in a 25% reduction in days of absences due to all communicable illnesses.

Consequently, access to hygiene products such as soaps, and hand sanitisers and cleaning products may reduce the frequency of illness.

Poverty, Hygiene and Mental Health

There is an established literature exploring the relationship between poverty and mental health. Kiely (2015) notes that poor mental health has been consistently linked with the experiences of economic hardship and poverty. However, the temporal association between these factors is not well understood. Kiely (2015) examined the longitudinal associations between financial hardship and mental health problems. Respondents who reported deprivation and cash-flow problems had greater risk of mental health problems than those who did not (Ibid, 2015).

Schoefield (2012) notes that mental health conditions are associated with lower standards of living. Ibid (2012) quantifies the relationship between employment, depression and other mental health conditions and being in income poverty. Amongst those with depression and other mental health conditions, those who were in employment were significantly less likely to be in income poverty than those who have had to retire because of the condition.

However, the literature exploring the relationship between hygiene and mental health is emerging. Much of the extant research focuses on period poverty, a specific subset of hygiene poverty; and suggests that period poverty is a source of significant mental harm. Similarly, the modest literature on hygiene poverty specifically emphasises its role in social stigmatisation, confidence and its impact on peer relationships. The current report also responds to the dearth of research exploring the impact of hygiene poverty on peer relationships, and social engagement within school settings.

There remains a genuine dearth of studies exploring the relationship between hygiene poverty and mental harm. Recently, a handful of quantitative studies have examined the relationship between period poverty and anxiety and depression among women. These have confirmed what qualitative studies have been finding regarding the shame, humiliation and low confidence women and girls experience due to period poverty.

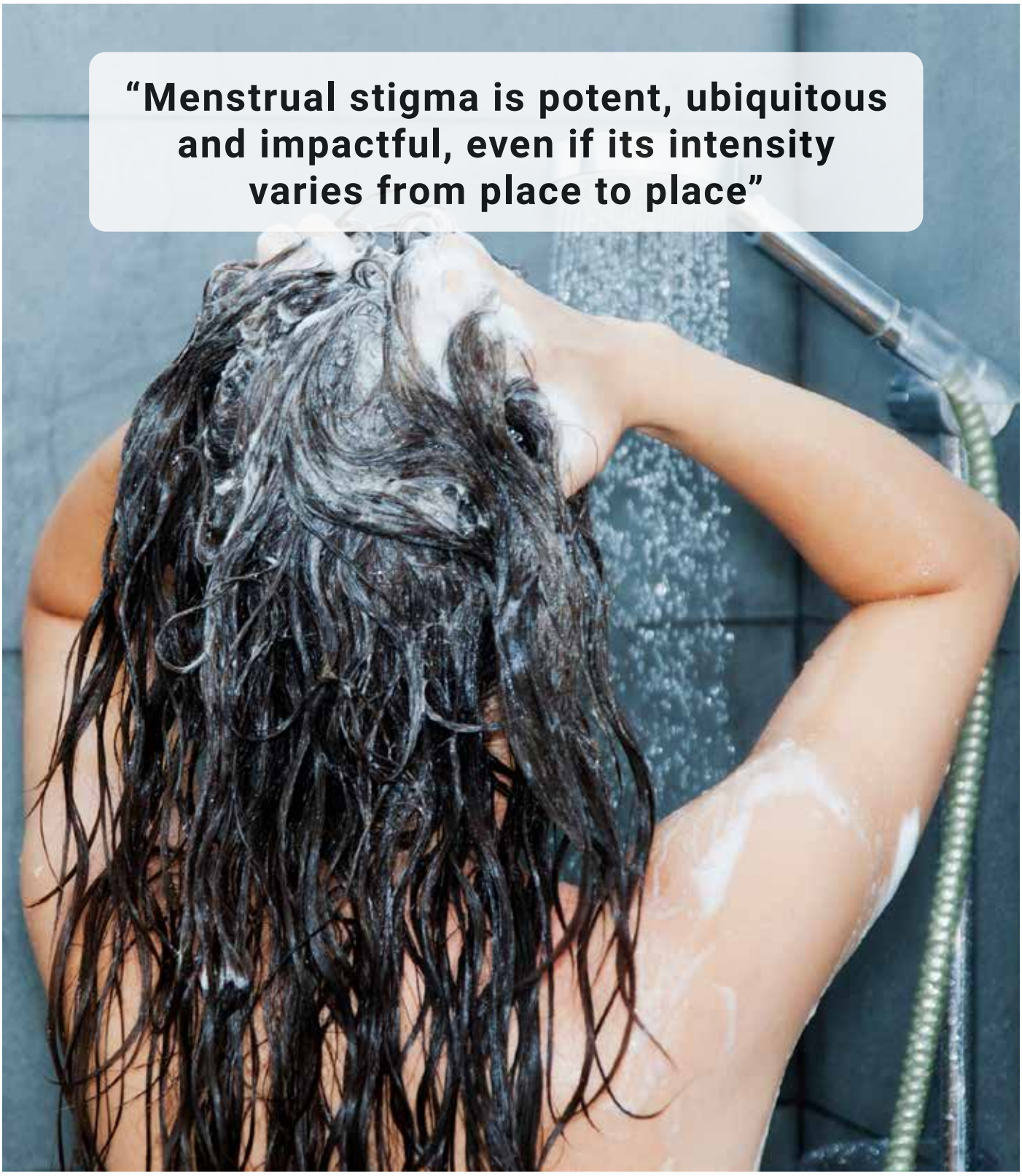
A notable study in the U.S. that used 471 respondents aged 18-24 years from a nationally representative sample found that women with period poverty were most likely to report moderate to severe depression[1] as compared to those who did not experience period poverty (Cardoso et al., 2021). Similarly, a similar study of 722 undergraduate students in the US found that those who experienced period poverty scored higher on depression scores[2], as compared to those who did not experience period poverty (Brinkley & Niebuhr, 2022). In both these studies, researchers used a diagnostic instrument (PHQ-9) which is validated and can help make a tentative diagnosis of depression in at-risk populations. The matter of mental health and period poverty, therefore, needs to be taken seriously.

Another study showed positive effects of using MHPs (Menstrual Hygiene Products) on well-being. This was a randomized controlled study conducted in West Kenya with 644 primary schoolgirls (aged 14-16), and included three treatment arms, (i) an insertable menstrual cup, (ii) 16 sanitary pads monthly (iii) control (usual practice) (Benshaul et al.,2021). The study found that physical well-being improved by 6% for the group given sanitary pads, and girls with the menstrual cup reported a 10% improvement in emotional well-being[3]. Qualitative evidence from literature often highlights the shame that comes with menstruating and recent literature has helped us with a more nuanced view of the issue (Brinkley & Niebuhr, 2022, Tull, 2019, Rossouw & Ross, 2021, World Bank Group, 2018, State of the Period, 2021, UNICEF 2015).

A qualitative meta-synthesis reviewed 45 studies from different countries[4] and included 6000 participants (Hennegan et al., 2019). This review found that across the different studies women experienced poor confidence, difficulty in managing menstrual bleeding and shame and distress associated with menstruation. Also, participants reported experiencing anxiety and depression.

It was also reported the girls felt restricted from participating in activities like playing sports or running, and also had the constant worry that they would leak through their school uniform (Hennegan et al., 2019). The fear of being teased and isolated by friends and family was of real concern (Benshaul et al., 2021, UNICEF, 2015). The children evidenced concern pertaining to exclusion from activities like going out with friends and socialising (Das, 2017). Experiencing shame while menstruating, stigmatisation and being excluded is a recurrent theme in qualitative literature. It is highly plausible that similar feelings and concerns pertaining to exclusion would be experienced by children experiencing broader hygiene poverty. The current report findings strongly support this assertion with respondents asserting that children are less engaged in both curricular and co-curricular activities.

There is limited research exploring menstrual practices amongst Australian young people, focused on stigma and mental harm. We consider the broader international literature. Social stigmas affect how women and girls conduct their menstrual health practices. A study in the Indian context found that despite being aware of the harmful effects of using cloth, some women continued using cloth as it was more absorbent, easy to wash and reuse, with no issue of disposal. Another study found that women in Zimbabwe expressed concerns about drying their cloth out in the sun[5], due to embarrassment, and a desire for secrecy (Kuhlmann et al., 2017).



Source: Tull (2019)

Other studies also found that women in some cultures and religions are ashamed to buy sanitary products and purchase the item secretly (Krusz et al., 2019). Some girls also mention that they store their cloth in places they know are unhygienic, just to be able to hide them (Kuhlmann et al., 2017). Such stigma may also dedicate to the appropriateness of using the product, such as not at home, but using it at the workplace. A study in India (Jacob et al.2014) found that women preferred to use sanitary napkins when they were at work and cloth when at home.

Lastly, while there isn't much evidence for the linkage between a psychiatric disorder and period poverty, there is evidence to suggest that psychiatric disorders are more prevalent in low-income communities/those below poverty standards (Bruce, 1991). According to Belle (1990), the positive association between poverty and mental health problems is one of the most well-established in all of psychiatric epidemiology. Also, the hygiene hypothesis suggests that several chronic inflammatory disorders (allergies, autoimmunity, inflammatory bowel disease) are increasing in prevalence in developed countries and some stress-related psychiatric disorders, particularly depression and anxiety, are associated with markers of ongoing inflammation (Rook and Lowry, 2020).

With the prevalence of poverty particularly among women, children and those from minority groups, increased attention must be paid to the mental health risks that accompany poverty (Belle, 1990). An inference from these findings suggests that low-income communities are all the more vulnerable to mental disorders in general, and there is already evidence linking period poverty with anxiety and depression. Notably emerging nations have historically evidenced greater levels of both hygiene poverty and poverty more broadly, however, given significant inflationary conditions and modest wage growth within a number of advanced economies, hygiene/ period poverty are plausibly on the rise. Consequently, the mental harm consequences of hygiene poverty may become more evident as the size of the population impacted by period poverty and hygiene poverty rises.

While the noted studies focus specifically on the mental harm consequences of period poverty, the studies remain instructive when exploring the plausible implications of broader hygiene poverty. A shortage in necessary hygiene is likely to elicit a similar response from young people, to a shortage of sanitary products. EEA did not conduct a survey-based study of adult or children's experiences of hygiene poverty given the potential harm consequences of such an exercise. For harm minimisation, EEA engaged with educators and school leaders to garner perspectives on observed and plausible harm consequences. Additionally, EEA procured non-solicited, de-identified student and parental declarations outlining experiences of hygiene poverty. The narratives emphasised experiences of stigmatization, distress and depression consequential to hygiene poverty.

Mapping hygiene poverty in Australian school cohorts

Hygiene poverty is not isolated to a handful of suburbs or LGAs. Hygiene poverty is far more widespread and has been observed within many suburbs and LGAs across all states and territories. There was little known about the spread of hygiene poverty given the dearth of research mapping hygiene poverty.

Data captured by the commissioning charity, has shed light onto the significant and endemic nature of hygiene poverty within Australia. The data offers significant insight into clustering, and unsated demand for hygiene products.

Demand patterns are broadly reflective of population densities as well as income levels, however it is critical to note that hygiene poverty has been observed not just within lower income communities, with a number of middle income and upper middle income school cohorts also evidencing high levels of hygiene poverty.

Clustering effects and spatial analysis

Amongst existing partner cohorts high demand is observed within a number of suburbs evidencing low SEIFA Q scores. Demand levels in Geelong, Ringwood and Frankston have remained particularly high. The data does not reflect the significant school level support provided through partner entities (entities taking receipt of hygiene packs supplied by Pinchapoo, and facilitating redistribution), including Aboriginal Corporations, Community organisations and benevolent organisations that also supply families with Pinchapoo sourced products.

Unsated school demand for hygiene products

Analysis of demand and request data suggests that the extent of unsated demand within the community is significant. Significant levels of unsated demand are observed within South Australia and Queensland, particularly within suburbs evidencing lower SEIFA Q scores, but unsated demand is not limited to lower income communities with a number of suburbs evidencing higher SEIFA Q scores also evidencing unsated demand.

The impact of hygiene poverty on school aged children

To establish the extent of hygiene poverty within Australian schools, we examined MERL data and survey data captured by Pinchapoo. A survey was disseminated to 355 schools with a total of 33 responses received from school leaders/educators from 33 Victorian and South Australian schools. The schools participating represented a diversity of regions and socio-economic groups, though the majority of respondents were from LGAs evidencing lower SEIFA (Socio-Economic Indexes for Areas) scores. All survey respondents were school Principals or Classroom teachers.

Analysis of ongoing service access

91% of respondents have provided children with hygiene products. 78% regularly supply children with hygiene products procured from Pinchapoo. The annual number of hygiene packs supplied per school equates 57 (on average), amongst the respondent group; with many school partners requesting in excess of 150 hygiene packs. This estimate excludes the further 322 schools participating in the Pinchapoo Schools Program, not within the survey cohort. Consequently, the extent of hygiene poverty appears to be vast.

In addition to procuring hygiene and sanitation products from the commissioning charity, 72% of participants have purchased hygiene products for students using their own money. 9.1% asserted that they regularly purchased hygiene products for their students.

51% of student recipients of hygiene packs take receipt of multiple packs during a calendar year, suggesting a significant degree of recurrent need within many school communities.

Hygiene poverty and curricular/ co-curricular engagement

Concerningly, 78% of respondents stated that they observed children being teased because of their hygiene, while 6.1% of respondents asserted that this teasing was a regular occurrence. These estimates emphasise the potential mental harm and peer relationship impacts of hygiene poverty.

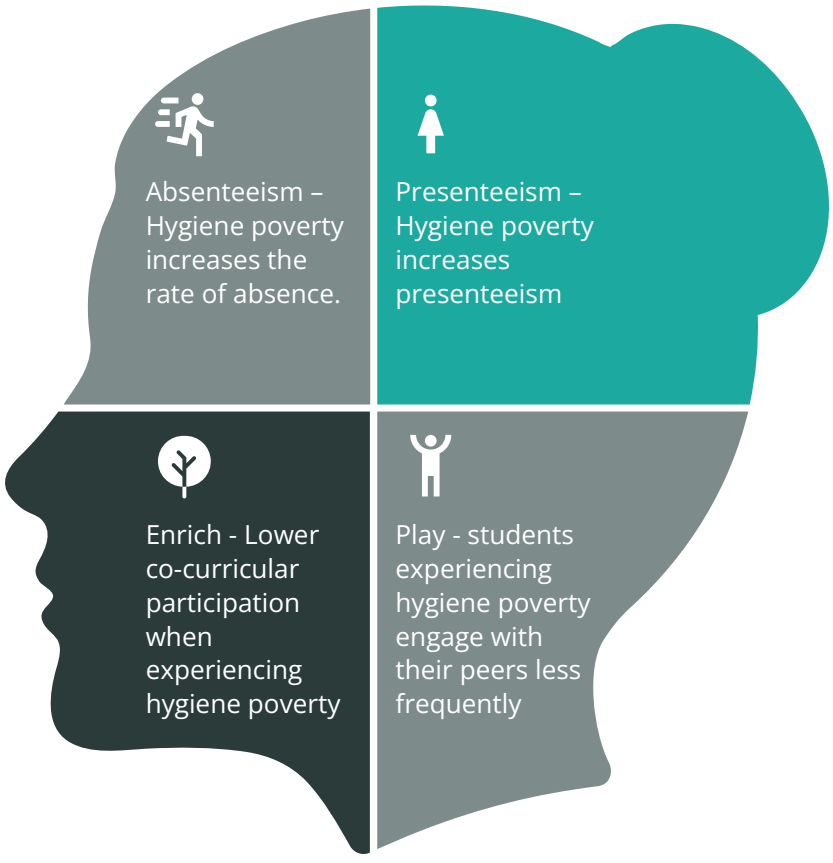
In play based/recreational settings, 57% of respondents asserted that they observed children experiencing hygiene poverty being less engaged with their classmates; than their peers that did not experience hygiene poverty. These lower levels of engagement may have mental harm consequences.

Within a classroom setting 93%, of respondents asserted that they observed children experiencing hygiene poverty being less engaged than their peers. Lower levels of engagement may result in diminished learning opportunities and learning deficits.

81% of respondents identified that children evidencing hygiene poverty were more absent than peers not experiencing hygiene poverty. The rate of absenteeism amongst students experiencing hygiene poverty is estimated to be 13.84 days higher annually, than students not experiencing hygiene poverty. Higher rates of absenteeism are strongly associated with poorer academic outcomes and completion rates.

61% of respondents asserted that children experiencing hygiene poverty performed more poorly academically than those that were not experiencing hygiene poverty. This is a significant source of consternation suggesting that hygiene poverty is plausibly impeding both academic learning and development, and consequently future academic and vocational opportunities.

Figure 3 – The critical impacts of hygiene poverty within a school setting



Analysis of COVID specific impacts

Noting our earlier discussion of the escalation in the price of goods and services, and the impact of covid specific supply chain issues on the price of essential goods, it is important to evaluate the impact of these trends on hygiene poverty.

Employing respondent data, the elevation in demand requests (a measure of elevated need) from students experiencing hygiene poverty is estimated to be 50.42%, since 2020. This suggests that hygiene poverty is increasing substantially, notwithstanding the fact that many schools and learners are not able to access hygiene products, given the limited financial support provided to hygiene poverty alleviation within state and federal budgets to peak service provider Pinchapoo.

Analysis of respondents' qualitative data

Analysis of qualitative feedback emphasised the benefits of the distribution of hygiene and sanitation goods through discrete mechanisms. These mechanisms are seen as highly beneficial given that they reduce 'scarring' and help maintain 'dignity', amongst children.

Respondents suggested that discreet school based distribution spared children/ families from 'embarrassment'. Hygiene poverty was seen as a blocker in children pursuing deeper relationships with their peers, suggesting a degree of self exclusion. This claim is also supported by the survey results. Figure 4 outlines a number of the key themes captured from school leaders, partnering with Pinchapoo to alleviate hygiene poverty within their schools.

Figure 4 – Qualitative feedback from participating schools

Analysis of unsated program demand

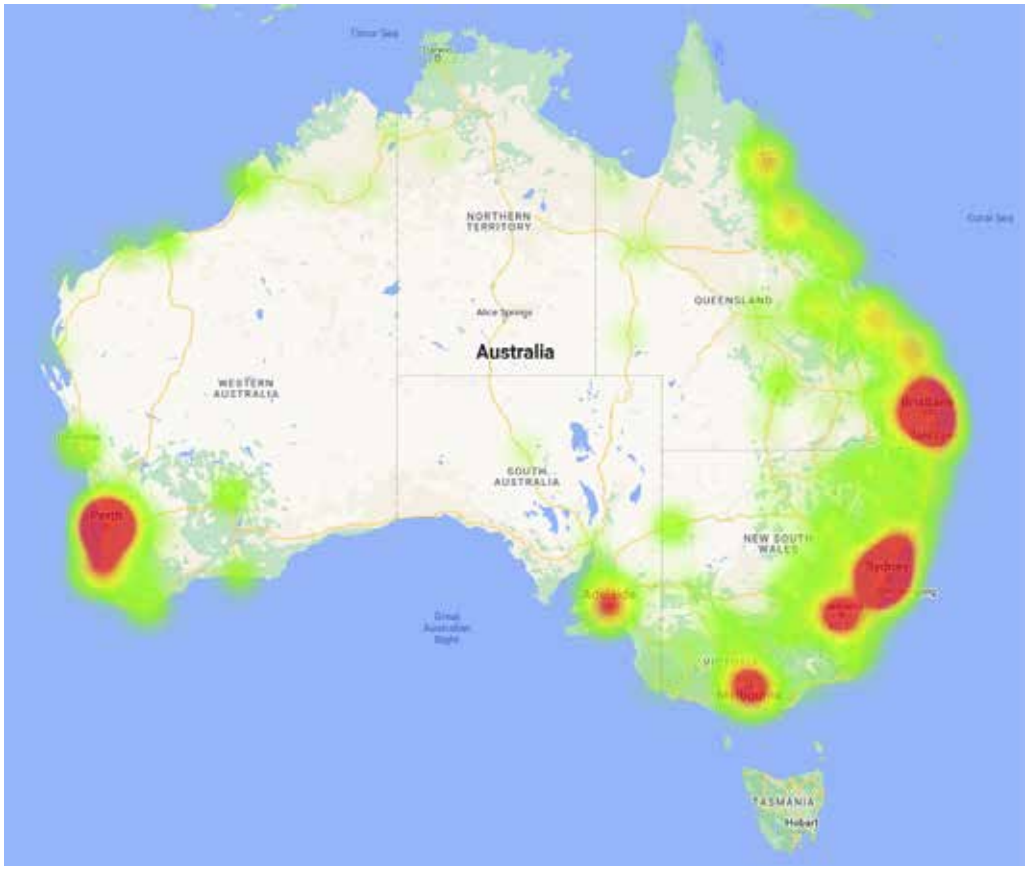
The data deriving from the Hygiene Poverty Survey offered worthwhile insight into the impact of hygiene poverty on Australian school children. The insights generaged are significant given the dearth of similar research. Nonetheless there remains limited understanding pertaining to the extent of unsated demand.

To address the dearth of research establishing the extent of demand for hygiene goods amongst children within low income families attending school we explore data procured by the commissioning charity. While the Schools program is able to support a significant number of children, evidenced funding shortages limit the scaling of the program, notwithstanding the significant requests from the community and schools cohort. Consequently, a significant number of schools have pursued partnership but have been placed on a waiting list until the charity possess the necessary funding to scale the service offering beyond the existing 235 program partners.

To examine the extent of unsated need the charity requested that entites formally quantify their need based on school learner counts and requested/ identified needs within the cohort. There are presently 1168 schools awaiting support currently lodging requests with the commissioning charity. The cohort of unsupported students represented by these 1168 schools equates to 301,047 unsupported students experiencing hygiene poverty. It is therefore, self-evident that even some modest local, state and or federal funding would enable Pinchapoo to provide necessary hygiene products to this cohort.

It is critical to note that this estimate understates the extent of hygiene poverty given that it represents a modest subset of plausible school beneficiaries. There are presently 9,581 schools (primary, secondary and specialist) within Australia, and consequently given the extent of inflationary pressures, and the rising cost of living the extent of unsated demand is plausibly far greater than 301,047. Nonetheless, this conservative estimate represents 7.46% of all children presently studying within Australia.

Figure 5 - Map of unsated demand (301,047 unsupported students)



A child-centred, school-based solution to hygiene poverty

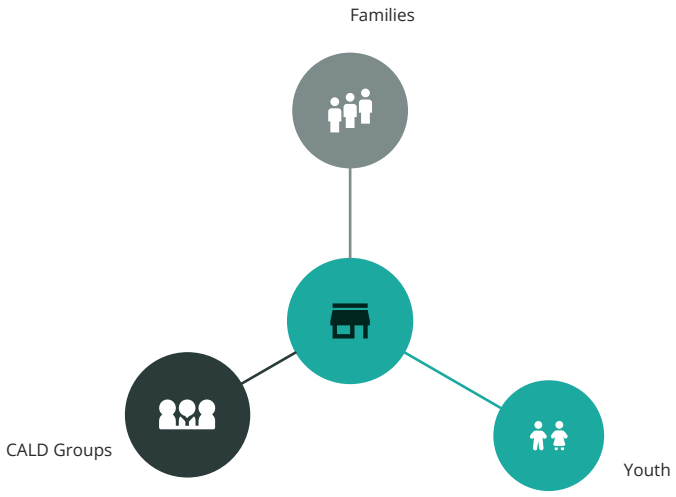
Existing responses to hygiene poverty alleviation are largely addressed through social capital and civil sector organisations. Unlike within the UK and US where large hygiene poverty initiatives have received state and federal funding, within Australia only period poverty has recently received both attention and government funding, notwithstanding a modest number of hygiene education initiatives. It is evident that given the escalating need for hygiene products, that greater investment is needed in the hygiene ecosystem.

In the context of student based provision/ access, the Pinchapoo School Program is arguably the largest, and most impactful program within Australia given its focus on place based distribution, empowering schools and partner organisations to support the communities they serve. The Pinchapoo model is facilitated through an e-ordering system, that facilitates dispatch to individual schools and partner entities to facilitate localised delivery, and reduce the burden of travel placed on the recipient. The Pinchapoo model sees Pinchapoo operate as an ecosystem intermediary empowering all other eco system members.

The model may be contrasted with traditional single collection point mechanisms (see figure 6) that require that children and or families travel to a single, location to access hygiene goods from a pantry type model, with no guarantee of access and provision.

> ***The majority of beneficiaries of gratis hygiene products procure them through donation programs, with peak sector provider Pinchapoo, often the ecosystem coordinator facilitating the procurement and delivery of hygiene products.***

Figure 6 – Traditional single point of collection model



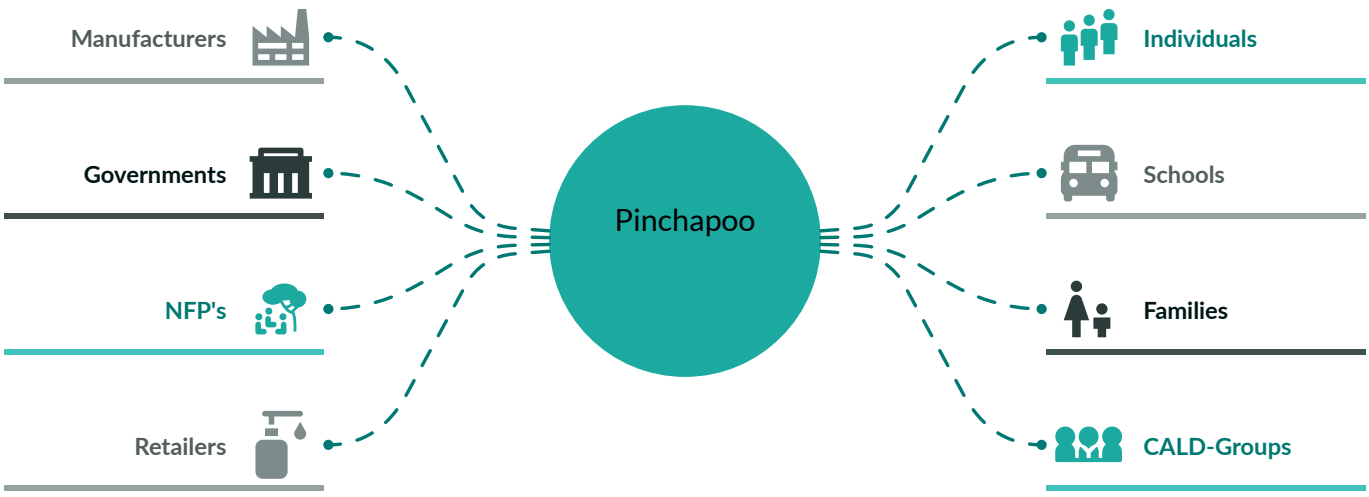
Note – The traditional mechanism of distributing goods from a single point of collection may confer significant costs on families and other parties given the costs of travel to collection points. There may also be complex challenges associated with identification that make such mechanisms suboptimal.

Facilitation of hygiene product collection via large 'Foodbank' type centres may not serve as the most viable mechanism for the distribution of hygiene and sanitation products given that their focus is on the rapid distribution of food parcels, and the complex issues and plausible social stigmas associated with accessing hygiene products, within some communities.

This modality of distribution confers costs on children and families, necessitating access to a vehicle and travel costs, and or public transportation. It creates greater potential for stigmatisation and embarrassment and may result in service exclusion behaviours. Additionally, language and cultural difference may result in service exclusion amongst CALD communities.

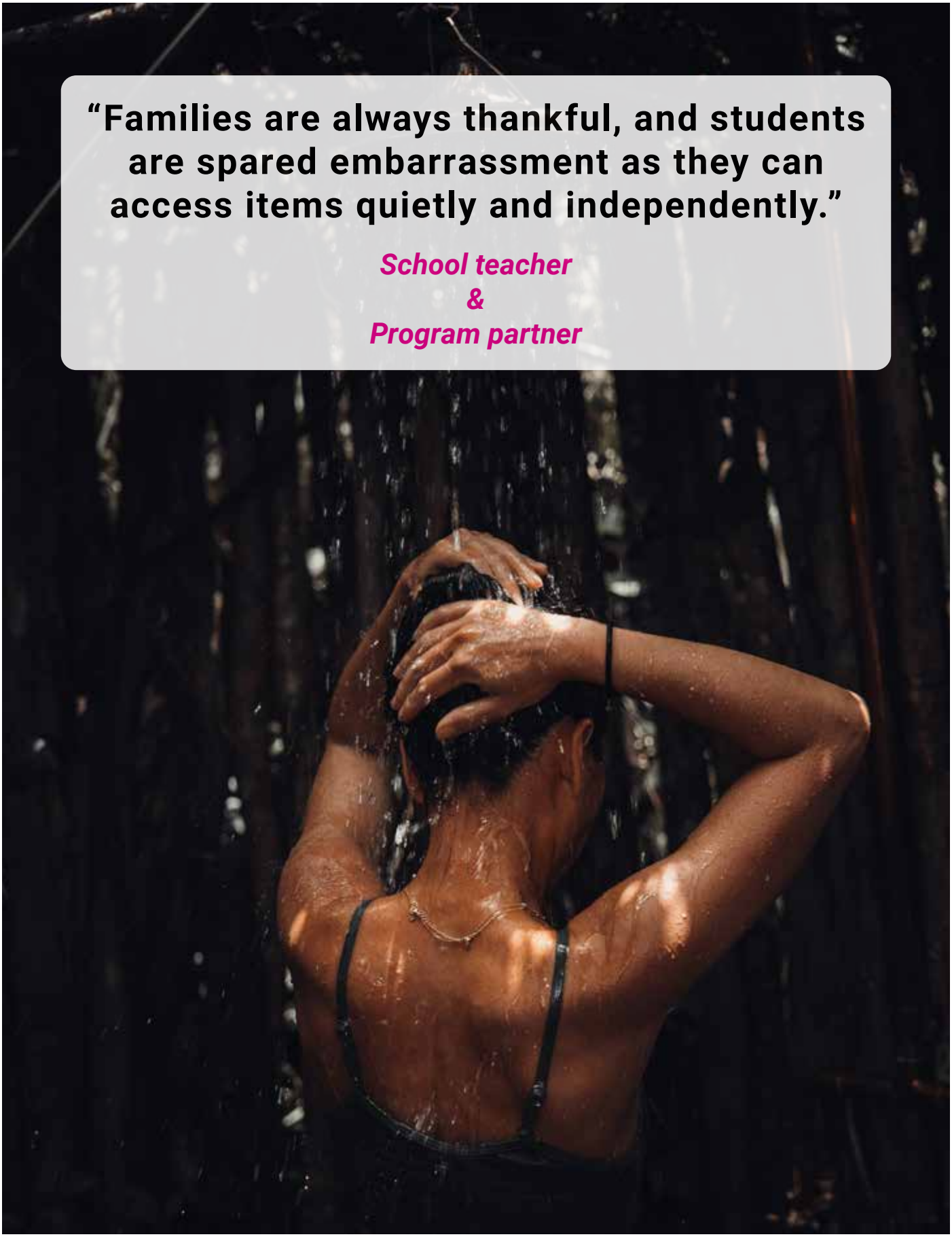
Distribution should be facilitated through intermediaries that serve as ecosystem builders capable of facilitating distribution to the diversity of endpoint distributors that enable access. This (Pinchapoo) model (see figure 7), sees the entity serve as an ecosystem builder, supporting school based, and placed based hygiene goods distribution. To explore the extant models of distribution deidentified data was procured from Pinchapoo, to determine the counterparty organisations supported by the charity. The school-based distribution mechanism was particularly successful because it was discrete, did not necessitate travel for the child/parent, did not give rise to embarrassment, and was through an existing trust based relationship, while being highly targeted.

Figure 7 – The hygiene product ecosystem and distribution model (ecosystem intermediary model)



Note: The ecosystem intermediary also plays a significant role in reducing the significant impact of hygiene and sanitation waste, resulting in a dramatic reduction in landfill, by redirecting overstocked, shop soiled and cosmetically imperfect goods to individuals experiencing hygiene poverty. Schools take receipt of the sealed and unused hygiene and sanitation products, discreetly directing them to children experiencing hygiene poverty.

The analysis has evidenced the extent of hygiene poverty and its impact on Australian children. The need for hygiene products has increased by 51% notwithstanding the many underserved communities that are not able to procure hygiene products through gratis programs, currently not participating in the Pinchapoo Schools Program. Given the success of the Pinchapoo/Ecosystem intermediary model, and its scope for scaling to address elevating needs, greater investment in the capacity of the ecosystem and the Pinchapoo Schools program would significantly improve hygiene and sanitation conditions for children, reducing the mental harm and broader health impacts of hygiene poverty.



“Families are always thankful, and students are spared embarrassment as they can access items quietly and independently.”

School teacher
&
Program partner

What are the next steps?

The research has outlined the extent and significant impact of hygiene poverty within schools and is intended to hasten support for alleviation efforts. The absence of genuine and concerted effort will result in more and more young Australians experiencing hygiene poverty. The effects of hygiene poverty are apparent and represent a significant threat to the health and wellbeing of young Australians. Cost of living pressures and inflationary conditions necessitate action. The extent of hygiene poverty and unsated need equates to a minimum of 7.46% of all school attendees. These young people need local, state and federal governments to acknowledge this silent crisis. Pinchapoo welcomes dialogue and encourages community level discussion in relation to the report and broader issue set. Further research exploring community impacts is forthcoming.

> ***Contact Pinchapoo CEO, Kate Austin, to learn more about forthcoming research, the school support program, and supporting the hygiene product ecosystem.***

1. Source: The Hygiene Bank
2. The Trussell Trust supports a network of 52 foodbanks in Scotland based in 119 locations across 28 out of the 32 local authorities. Items in the parcels distributed by the Trust include a number of essential non-food items including soap, shower gel, toothbrushes, toothpaste and nappies.
3. This study was conducted by Huggies in partnership with the National Diaper Bank Network.
4. Improved water sources are defined as those accessible on premises, water that is not contaminated and available when needed.
5. Burkina Faso, Ivory Coast, Democratic Republic of Congo (Kinshasa), Ethiopia, Ghana, Kenya, India (Rajasthan), Indonesia, Nigeria, Niger and Uganda.

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