Mental Models

underpinning early child development systems and outcomes in Australia

Prepared by the Telethon Kids Institute

Early Years™ Catalyst

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Contents

Table of figures

1 Executive Summary

1.1 What this report aims to do

This report presents a deep dive into 'mental models' that are influencing current early child development (ECD) outcomes in Australia. This process was designed to identify mental models that hold the current system in place and how these could be shifted to create positive change in ECD outcomes.

This report builds on prior systems mapping work undertaken for the Early Years Catalyst (EYC)[1]. Together, this will inform the development of a long-term strategy for transforming Australia's early years system.

1.1.1 What is a mental model?

A mental model is a deeply held societal belief or narrative that shapes the way people interact with each other and the system. They function in societies as a shared set of self-evident truths, although the core ideas and values upon which they are based often remain unstated and unexamined. To create transformational change in the system, it is critical to understand how systemic actions and behaviour are shaped by and reinforce these implicit forces and how the mental models people hold can be reshaped to shift ECD systems and outcomes.

1.1.2 Our approach to deep dives

A two-phased approach was taken to (i) build an understanding of mental models holding current ECD conditions in place and (ii) surface promising practices for shifting them.

Figure 1 Phased approach to deep dives

Prior systems mapping work	Conceptual framework	Phase 1: Deep Dives	Phase 2: Design Thinking
• Prior systems mapping work undertaken for the EYC identified a complex system of structural forces and narratives holding the **current state** of ECD in place, and (from the perspective of providers) features of a desired **future state** of ECD in Australia.	• We undertook a thematic analysis of prior systems mapping work undertaken for the EYC, and identified four **deep dive focus areas**, each concentrating on a unique facet of early childhood development.	• To build a view of mental models holding current conditions in place, we undertook: (i) **desktop synthesis** of current research, (ii) **consultations** with 69 consumers and service providers, and (ii) **sentiment analysis** of Australian social media commentary.	• To explore ideas about how to shift the four selected mental model focus areas, we undertook: (i) **design workshops** with 28 policy makers, service providers and researchers in the early years field, and (ii) analysed **case studies** of approaches to shift mental models.

It is important to note that the sample size for consultations was limited, impacting the nature of conclusions that can be drawn about existing mental models and their influence on the current state. Within the constraints of the project, we made concerted efforts to include representatives from diverse disciplines, subject matter areas, and perspectives. This approach aimed to enhance the richness of the discussions and the solutions proposed.

1.1.3 What does the EYC and wider field need to understand about the mental models that are holding current conditions in place and the mental models that are required to support the desired future state of Australia's early years system?

1.1.3.1 What is the current state of ECD in Australia?

Since 2009, the Australian Early Development Census (AEDC) has found that 22% of children are developmentally vulnerable on one or more domains in their first full time year of school[2]. In over a decade, there has been little change in national results, although some states and territories have seen improvements alongside dedicated change efforts. Research using the AEDC has demonstrated that in Australia, children's development and life chances[3] are set in early childhood and are strongly patterned by parental education and community socio-economic resources[4].

1.1.3.2 Current evidence on mental models in Australia

While there has been significant effort in Australia dedicated to exploring mental models about child development and parenting[5], mental models connected to broader issues impacting ECD systems and outcomes in Australia (e.g. poverty, inequity, racism) are less well understood. Insights to shape future research efforts related to these mental models can be drawn from the international literature and related fields of study (i.e., attitudinal and behaviour change research fields).

1.1.3.3 Prominent mental models holding conditions in place

Through the deep dives (i.e., Phase 1 in Figure 1), we identified 22 prevailing mental models influencing current ECD systems and outcomes in Australia, drawing from the desktop review, consultations, and sentiment analysis (see Figure 2).

1.1.3.4 Prominence of deficit-based language

The mental models that emerged through the deep dive process were rooted in a deficit frame. This is perhaps unsurprising given the focus on identifying mental models underpinning current problems. To give voice to those with lived experience, we present the mental models in the way they were described to us in consultations. Notably, statements largely represent participants' perceptions of what the majority believe, rather than participants' individual beliefs. This does

not preclude the possibility that more positive mental models of ECD can and do exist in Australia.

Figure 2 Mental models identified in the deep dives and their contribution to the current state

Focus Area 1: Mental models about child development and parenting	
Mental model	**Connection to current state**
Child development MM 1: Child development is simple. MM 2: Children are resilient. MM 3: Parents are the primary influence on child development.	• Expectation that parents are solely responsible for their children. • The erosion of the village and stigma around seeking help. • The devaluation of care across personal and professional settings. • Exclusion of fathers from ECD programs and policies.
Parenting and the gendered nature of care MM 4: Parenting and families look a certain way. MM 5: Parenting is easy. MM 6: Providing care is integral to women's identity and power. MM 7: Men are not nurturers.	

Focus Area 2: Proactive, efficient governments and policymaking	
Mental model	**Connection to current state**
The place of children in government policy MM 8: Children are not a collective responsibility. MM 9: Children aren't contributing citizens.	• Lack of demand for government investment in prevention and social care services. • Lack of trust in government. • Expectations to parents to "hold the whole".
The nature of government MM 10: Government intervention means there's something wrong with you. MM 11: Governments can't be trusted.	

Focus Area 3: Breaking the cycles of inequity and disadvantage	
Mental model	**Connection to current state**
Poverty MM 12: Australia is a meritocracy. MM 13: Life is tough: deal with it. **Mental models about inequity in child development** MM 14: White is right. MM 15: People with disabilities don't hold equal value in Australian society. MM 16: You get what you deserve.	• Differences between individual values and perceptions of social values. • Failure to address the complexities and underlying causes of poverty. • Systems that undermine Aboriginal and Torres Strait Islander prosperity.

Racism MM 17: Racism is not a problem/Racism is not my problem. MM 18: Racism is inevitable. MM 19: Racism is warranted.	• Denial of racism towards Aboriginal and Torres Strait Islander peoples.

Focus area 4: Integrated, connected, and proactive early childhood development systems	
Mental model	**Connection to current state**
The nature of systems MM 20: Systems answer to no-one. MM 21: Systems failures are other people's problems.	• Preferences toward market-based systems. • Market and systems failures treated as failures of individuals. • Stigma concerning the sorts of families who receive government intervention and require government support.
The importance of family choice MM 22: Families deserve a choice – if they can afford it.	

1.1.3.5 Core mental models impacting all focus areas

In our consultations and design thinking workshops (i.e., Phase 2 of Figure 1), mental models about inequity, disadvantage, race, and racism were identified as having a pervasive influence on the current state, impacting mental models across all four selected focus areas. For example, our consultations uncovered the ways in which beliefs about disadvantage drive a preference for market-based systems of ECD care even when these systems fail or have high barriers to access. Participants also spoke to the way that internalisation of mental models about gender, cultural group, or ability can influence an individual's behaviour or self-concept, even where the individual does not personally endorse these mental models (e.g., people experiencing poverty may internalise stigmatising messages).

1.1.4 What are the strategies to shift mental models holding current conditions in place and which of these will be most effective?

1.1.4.1 Evidence on shifting mental models

Current research on strategies to shift mental models emanates from diverse fields. We reviewed research in three main fields: (i) framing and communications science, (ii) behavioural and social change in public health, and (iii) organisational interventions and practices.

1.1.4.2 Effective strategies for shifting mental models

Mental models are shaped and reinforced through interactions with systems, known as *reciprocal determinism*. Therefore, creating sustained transformations in mental models demands a multifaceted approach addressing attitudes (motivation), behaviour (capability to change), and organisational/environmental conditions (opportunity) across multiple points of

the system. It is crucial to recognise that merely shifting attitudes or mental models, without enhancing capability and opportunity for change, may yield counterproductive outcomes. For example:

- Shifting views about the value of seeking support must be paired with supports being available and accessible; and
- Shifting views on the importance of quality interactions between children and caregivers must be paired with increasing understanding of what constitutes quality interactions.

To assist the EYC and wider field in understanding interventions and approaches to shift mental models, in the body of this report, we present a range of potential initiatives and case studies. These include, but are not limited to, training and awareness approaches, community development approaches, framing strategies, and culturally led models of care. These initiatives aim to either directly alter mental models or influence the conditions that uphold them. We also provide insights into the supporting evidence for these initiatives and identify areas where further research is needed.

1.1.5 What is the recommended approach to shifting the mental models shaping ECD outcomes in Australia today?

Achieving shifts in mental models at scale is complex, encompassing not only individual shifts, but a holistic transformation spanning multiple points of the system and simultaneously tackling several interrelated but different mental models. Based on the deep dives and design workshops, we recommend several key actions that the EYC and wider field can take to catalyse sustained shifts in the mental models identified in this report with the intended aim of shifting system behaviour. The recommendations reflect the three elements identified in this report as critical to generating shifts in mental models: motivation, capability, and opportunity. The recommendations highlight where there is evidence that can be implemented and where there are gaps in which further work is needed to develop a strategy to shift mental models.

The recommendations emphasise a proactive approach that is multilevel in nature and includes bottom-up dynamics. Crucially, organisations play an important role in maintaining and sustaining efforts to shift mental models by holding government to account and spanning government cycles.

For each recommendation, we identify key stakeholders and representatives who would play an important role in development and implementation of each activity. The recommendations have been presented in this way to enable individuals or groups at any point in the system to galvanise efforts to shift mental models, whether it be the EYC, government, organisations, or community groups.

1.1.5.1 Strengthen motivation

Recommendation	Purpose	Who
Clearly and succinctly articulate the desired future state and the mental models that underpin it. This requires incorporating the views of a broad range of stakeholders and centering the voices and experience of those most impacted by disparities.	Develop a shared vision	National multi-stakeholder working group
Identify key stakeholders who hold mental models that are barriers to progress. Prioritise these stakeholders based on their influence and the significance of their mental models.	Education and awareness	Stakeholder analysis team
Tailor targeted communication strategies and narratives to engage and shift the mental models of priority stakeholders. Draw on learnings from other fields in developing communications for different audiences. Community must be at the heart of the development of the narrative. Utilise social media platforms to promote the alternative mental models, champions and thought leaders in the field.	Education and awareness Normative pressure	Researchers Communications experts Community representatives
Develop a robust monitoring and evaluation framework to measure the success of interventions over time. Planning should be flexible to adapt to findings from ongoing research and evaluation, ensuring the strategy remains effective and relevant.	Evaluation, feedback, quick wins	Evaluation experts Program managers

1.1.5.2 Strengthen capability

Recommendation	Purpose	Who
Create a central repository of resources, research, and best practices for stakeholders to access. This will ensure everyone is working from the same foundational understanding.	Efficacy Unified messaging Personal mastery experiences	Knowledge management team Organisational leaders
Encourage organisations and change agents to explore their implicit beliefs and assumptions.	Efficacy Social modelling	Organisational leaders Community leaders
Adopt and support a strengths-based orientation. While the mental models uncovered through our consultations were deficit-focused, strength-based approaches are critical to empowering families and shifting mental models. This requires narratives which foreground strengths of individuals, families, and communities, and challenge us vs them thinking.	Social modelling	Program designers Community leaders

Harness the capacity of organisations to develop and implement community programs and interventions aimed at changing behaviours which, in turn, can shift mental models.	Local capacity Social modelling	Organisational leaders Program developers
Prioritise genuine collaboration with, and leadership by, people from diverse and marginalised backgrounds, including those with lived experience of racism, disability, and poverty, throughout all stages of development and implementation. Partner with key target groups to co-design strategies and amplify lived experience.	Local knowledge Honour lived experience	Organisational leaders Project leaders Community leaders
Identify and strategically engage key leaders and influencers from prominent sectors including education, healthcare and community development to buy-in to the new mental models.	Connective leadership Leverage relationships	Partnership coordinators

1.1.5.3 Strengthen opportunity

Recommendation	Purpose	Who
Devise a multi-year funding plan setting out the quantum and sources of funding required to action strategies to shift mental models. The plan will likely comprise a combination of government funding, private sector involvement, and philanthropy. This is to enable mobilisation of resources and execution of initiatives.	Sustainable resource base	Funding development team
Develop a risk management strategy for the process of shifting mental models to minimise potential negative consequences.	Legitimacy Risk mitigation	Risk management experts Program managers
Ensure efforts to shift mental models are informed by those most impacted by current mental models. Promoting truth telling - openly sharing truths associated with conflict and injustice - is critical to giving voice to lived experience and addressing mental models.	Inclusive governance	Community leaders Storytellers Communications experts
Identify and resource leadership to drive change actions. At any point of the system in which a strategy to shift mental models is implemented, clear leadership and responsibility must be identified and resourced.	Leverage relationships	Governance / leadership Trusted leader

2 Background and introduction

The Early Years Catalyst (EYC) commissioned Telethon Kids Institute to undertake a deep dive into *mental models* underpinning the early years systems and outcomes in Australia. A mental model is a deeply held societal belief or narrative that influences how we see the world, including expectations, values, and norms. This work forms part of a major systems mapping strategy that the EYC is undertaking to better understand the forces influencing early childhood development (ECD) outcomes in Australia and possible leverage points for future transformational change.

2.1 Why this report was commissioned and what it aims to do

This report presents a deep exploration into how the Australian public thinks about different factors that shape ECD systems and outcomes. In particular, our primary goal was to unpack the underlying ideas, beliefs, and stories that are holding current ECD conditions in place in Australia and identify promising practices for shifting these. This process was designed to understand how these mental models influence the system and how we can shift them to create positive change in ECD systems and outcomes. This will help inform EYC's long-term strategy and implementation plan to foster the big societal shifts needed if we are to truly transform Australia's early years system.

Early Childhood Development (ECD) refers to the physical, cognitive, emotional, and social development of children from birth to age eight. Early childhood is a critical period in development that can shape life outcomes[6]. Early childhood systems include a range of services and supports that families may access during this time, including healthcare, education, and social services, which support optimal development. These are underpinned by socioeconomic and political systems and mental models that influence who and what is prioritised.

The overarching guiding questions for this project were:

1. What does the EYC and wider field need to understand about the mental models that are holding current conditions in place and the mental models that are required to support the desired future state of Australia's early years system?
2. What are the strategies to shift the mental models holding current conditions in place and which of these will be most effective?
3. What is the recommended approach to shifting the mental models shaping ECD outcomes in Australia today?

This project builds on extensive prior systems mapping work conducted for the EYC[1] . This prior work identified a highly complex system of structural forces and societal narratives that are holding current ECD realities in place in Australia and possible leverage points for change across the system[1]. This work also identified several features of a 'desired future state' of ECD in Australia, with a focus on improved equity, that might be achieved through systems change.

Building on this prior work, this report considered how the desired future state could be realised by shifting **mental models** which underpin the current state in Australia. This information can assist the EYC and wider early years field to:[7]

- Challenge our understanding of where current ECD challenges lie and highlight new solutions for improved outcomes.
- Unearth aspects of relationships and power dynamics that influence the capacity for change; and
- Identify assumptions that need to be tested, become the focus of future research and/or policy development.

What is the current state of ECD in Australia? Data from the Australian Early Development Census (AEDC) indicates that 22% of children are developmentally vulnerable on one or more domains in their first full time year of school[2]. Over four successive collections, spanning over a decade, there has been little change in national results, although some states and territories have seen population shifts. Research exploring AEDC results and their connection to later outcomes for children in Australia, has demonstrated that children's development and life chances[3] are set in early childhood and are strongly patterned by parental education and community socio-economic resources[4].

Prior systems mapping work undertaken for the EYC identified a highly complex system of structural forces and societal narratives that are holding these current ECD realities in place in Australia. [1] These included deeply held beliefs about parenting, care and markets, along with the challenges associated with ECD service access, inequity, quality, integration and the sustainability of the workforce and services.

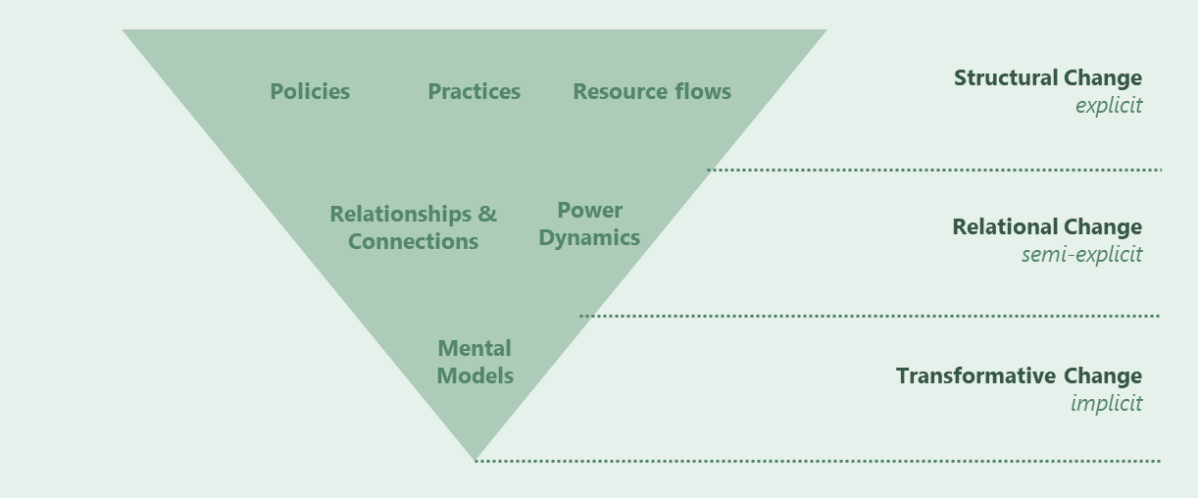
2.2 'Systems thinking' to create ECD systems change

This report is premised on the idea that in order to create tangible, equitable, and sustainable change in ECD systems and outcomes in Australia, we need to focus on shifting the conditions that are holding the problem in place.[8] **Transformational ECD change is likely to occur only when we can identify and act on the deep forces underpinning current ECD systems and outcomes**.

The Waters of Systems Change Model identifies six components that need to be shifted to generate systems change[8] (Figure 3). These components operate at different levels and are interdependent; accordingly, change needs to occur simultaneously across all levels for tangible and sustained impact.

At the level of *structural change*, policies, practices, and resource flows are explicit entities that are often the primary focus of attempts to change ECD systems and outcomes.[7] Policies are instruments of power that classify and organise ideas and social relations to sustain or change the current social order.[9]

Figure 3 Six conditions of systems change from The Waters of Systems Change[8]



At the level of *relational change,* power dynamics and relationships between actors in the system are semi-explicit and influence who stands to benefit from the status quo, as well as from any proposed changes to the system. Power shapes our identity, values and behaviour. It makes existing institutions, social relations and structures seem natural and invisible.[9] The recent systems-mapping effort for the EYC found that discourse around ECD systems change is characterised by **avoidance of power dynamics and relationships across all of the systems that influence ECD outcomes.**

At the *transformative change* level, mental models are often-implicit ways of thinking that are rarely the focus of change efforts. It is proposed that to drive sustainable systems change, we must be prepared to work at the explicit, semi-explicit, and implicit levels.[8] **This report focuses specifically on this implicit level by exploring the mental models underpinning ECD systems and outcomes in Australia today.**

2.3 What are mental models?

Mental models are deeply held beliefs and assumptions that influence how we think, what we do, and how we talk.[8] Mental models are influenced by relevant knowledge and beliefs, including how we see connections between different aspects of our experience, and who we see as being responsible for changing current conditions. Mental models affect how we process information:[10] it is easier to acquire and integrate information that is consistent with what we already believe, even if it is not accurate. In this way, mental models can become self-sustaining.

FrameWorks Institute[11,12] identifies three broad clusters that specific mental models can be grouped into.

- **Individualism**. This mental model frames individual choices, values, and behaviours as the causes of social problems, and by extension assumes that solutions should occur at the level of individual choice or behaviour. For example, poverty is a choice and should be punished.
- **Us vs them thinking.** This mental model reflects the assumption that another social group, preference, or experience is fundamentally different from our own. In most cases, juxtapositions are made at the individual level (e.g., *there are 'good mothers' and 'bad mothers*'), however us vs them thinking can also be applied to structural phenomena (e.g., free markets vs nanny state). In us vs them thinking, the "other" is usually seen as problematic and sometime inferior, though not always.
- **Fatalism**. This mental model reflects the assumption that the problem cannot be fixed because the problem is too large or complex, or those in charge of solving it are not motivated or competent enough to do so (e.g., *big reform is impossible*).

3 Structure of our approach

3.1 Advisory groups

At the outset of the project, a Consumer Advisory Group (CAG) and Professional Advisory Group (PAG) was established to inform and guide the project activities. The CAG comprised 12 parents and caregivers of children (0-8 years). The PAG comprised ten individuals with expertise across a range of areas, including: early childhood development, health, policy making, systems change, place-based approaches, Aboriginal-led services, integrated early years services, education, social disadvantage, policy, and advocacy.

The role of the CAG and PAG was to:

- Provide input into project methodology, including relevant stakeholders.
- Review and provide feedback on evidence generated through the project.
- Provide input into recommendations arising from the project.
- Provide feedback on the language and images used in project reporting.

3.2 Phase 1: Deep dives

To answer the research questions, we first undertook a series of deep dive analyses into mental models underpinning current ECD conditions in Australia. The deep dives drew on multiple data sources, including academic and grey literature, interviews and focus groups with consumers, service providers, subject matter experts, and sentiment analysis of social media comments on relevant issues.

The aim of these deep dives was to:

- Draw together diverse ideas, concepts, schemas, and ideologies, with a view to building a deeper understanding of which mental models are underpinning the current state and how they influence current conditions.
- Unearth evidence for how these mental models might be shifted, as well as highlighting potential obstacles and risks of change.

Data sources for our deep dives are summarised in Figure 6, including the purpose, strengths and limitations of each source.

3.2.1 Consultations

Our interviews and focus groups were facilitated conversations designed to identify patterns of reasoning, tacit assumptions and implicit understandings connected to specific “current state” issues and broader focus areas. Consultations were designed to unearth the mental models that are holding current conditions in place. Participants were recruited from across Australia, via our professional networks, social media, and consumer advisory groups. Consultation included focus groups held with and facilitated by Aboriginal and Torres Strait Islander people, although we note that Aboriginal and Torres Strait Islander people were also involved in focus groups held with non-Aboriginal peoples.

During these consultations, we observed that participants primarily spoke to what they thought “society” or “the public” believed, rather than their personal beliefs. While participants sometimes acknowledged a gap between their personal beliefs and their perceptions of societal beliefs, they also recognised that these perceptions influenced their behaviour and expectations across a range of current state issues.

Figure 4 Participants involved in the Phase 1 deep dive consultations

Participants	Number
Parents, providers, and members of the general public	53
Subject matter experts	10
Aboriginal and Torres Strait Islander people	6

It is important to note that the sample size for consultations was limited, which in turn affects the reliability and generalisability of the results. It's crucial to emphasize that the objective of the consultations was not to systematically measure current mental models in a representative manner, but rather to explore the existing mental models and their potential influence on the current state.

3.2.2 Desktop Synthesis

We reviewed a large body of research to understand societal beliefs about each of the four deep dive focus areas that had previously been identified in Australia or overseas. We note that a large body of work on mental models has been generated by the FrameWorks Institute, and this served as a starting point for our deep dives. In addition to providing important insights about mental models about child development and parenting in Australia, our review of their reports helped to uncover specific questions to explore in our interviews and focus groups. It also

provided insights into evidence for changing mental models that could be tested in our interviews and focus groups. In addition, we examined Australian survey data on related topics, for example the Mapping Social Cohesion Survey.[13]

3.2.3 Sentiment analysis

Finally, we conducted a sentiment analysis of Australian social media commentary on issues connected to both the current state and desired future state. This allowed us to understand diverse aspects of public dialogue and sentiment that were not represented in our interviews and focus groups.

3.3 Phase 2: Design thinking workshops and case studies

3.3.1 Design thinking workshops

To explore ideas about how to shift mental models holding current conditions in place and move Australia toward the desired future state, we held a series of workshops with EYC members, policy makers, and the wider early years field. Participants included Australian researchers, those working with children and families, policy makers and community members. This included a dedicated workshop with Aboriginal community members facilitated by a Nyoongar woman on our team to explore Aboriginal and Torres Strait Islander experiences and perceptions of mental models and the actions that could be taken to shift them.

Figure 5 Participants involved in the Phase 2 design thinking workshops

Participants	Number
Service providers, peak organisations, subject matter experts	18
Government policy makers	6
Aboriginal and Torres Strait Islander people	4

The design thinking workshops focused on identifying promising practices and key actions to shift mental models in two particular focus areas: (i) Focus area 1: Child Development and Parenting, and (ii) Focus Area 3: Breaking the Cycle of Inequity and Disadvantage. These two focus areas were selected because they are pertinent issues presently impacting equity in ECD and thus could provide a unifying focus for design thinking discussions. This decision was informed by both the professional advisory group and workshop participants. Without

addressing inequities in the ECD sector, it was felt that change initiatives are likely to compound disparate outcomes and perpetuate the status quo.

It is important to note that the sample size for the workshops was limited, which in turn affects the nature of perspectives offered and conclusions that can be drawn. Given the scope of the project and the constraints of limited timeframes, we made concerted efforts to include representatives from diverse disciplines, subject matter areas, and perspectives as extensively as possible. This approach aimed to enhance the richness of the discussions and the solutions proposed.

3.3.2 Case studies

In addition, a series of case studies were collated to illustrate approaches that have worked to shift mental models holding adverse conditions in place in both early childhood development and other fields including health, wellbeing, and education. These are presented at various points of implementation across the system, to demonstrate the range of strategies employed. Case studies were developed using publicly available information.

Figure 6 Data sources for deep dives

Data Source	Purpose	Constraints
Review of FrameWorks Institute findings and recommendations regarding mental models.	FrameWorks Institute are one of the only organisations worldwide with established expertise in interrogating mental models in relation to ECD; in many cases, areas of interrogation map closely to the focus areas highlighted in this report.	While FrameWorks have conducted extensive research on child development and parenting in Australia, findings in other areas largely pertain to the US and the UK. It is often unclear how mental models differ across Australia and globally, and whether evidence-based recommendations for change apply to Australia.
Australian national public opinion survey data on issues connected to each focus area.	In many cases, these surveys provide current data from representative samples of the Australian population.	The surveys are not designed to answer the specific questions posed by the current project, and therefore require a degree of extrapolation to apply findings to this context.
Sentiment analysis of comments on Australian social media campaigns linked to	This data may have a higher level of ecological validity than data collected using	This data is drawn from a non-representative sample and likely represent “polarised” views on a particular subject.

current state or desired future state issues.	traditional research methods (e.g., surveys, focus groups).	
Interviews and focus groups with consumers, service providers, and subject matter experts.	Participant engagement allowed us to probe the deep dive questions more deeply with a broad range of participants and uncover assumptions underlying thinking about different ECD issues.	Participant engagement was conducted with a non-representative sample and may be influenced by social desirability responding.
Review of findings from other published, peer-reviewed literature pertinent to each focus area.	This literature provided important context and theory for each focus area and uncovered how thinking in each area has evolved over time. They also provided evidence of practices which aren't directly designed to change mental models but may hold promise for doing so.	These studies were not designed to answer the specific questions posed by the current project, and therefore require extrapolation to apply findings to the current project. Because of the breadth of focus areas, evidence for promising practices could not be systematically reviewed. Most studies of "promising practices" do not measure change in mental models as an outcome.

4 Analysis of mental models

Cautions and prominence of deficit-based language.

The following sections present the prominent mental models that emerged through the deep dive consultations. These contain deficit-based language that is highly stigmatising.

Specifically, statements in Focus Area 2 largely represent the lived experience of people from marginalised social and cultural groups, including Aboriginal and Torres Strait Islander people and those with lived experience of disability. To give voice to those with this lived experience, we have presented it in the way it was told to us.

Where statements were made by people from dominant social and cultural groups, they largely represent **perceptions of cultural models** (i.e., what the majority believe) rather than individual beliefs.

Please take care when engaging in this content, particularly if it is close to your own lived experience.

4.1 Current work and thinking on mental models in Australia

Overall, our desktop review revealed a scarcity of Australian research dedicated to the identification and exploration of mental models that underlie current ECD systems and outcomes in the country, as well as potential strategies for shifting mental models in ECD.

Within the Australian context, one prevalent approach to altering mental models involves the use of **framing strategies.** Framing strategies are ways of communicating about an issue to evoke a desired response in the audience.[14] Within this body of work, extensive efforts have been directed toward scrutinizing mental models related to child development and parenting from a communications science perspective[5,15]. This substantial body of work has been primarily focused on the development of evidence-based framing strategies with the aim of promoting a more constructive comprehension of child development. The ultimate goal has been to mobilize public support for policies and programs intended to enhance the well-being of children and families in Australia, thus facilitating a transformation toward more equitable child development outcomes.

Furthermore, there exists a substantial body of research centred on **opinion polls** and population surveys. These investigations delve into public attitudes and beliefs on various topics linked to child development, such as multiculturalism, the economy, and justice[13,16]. Additionally, a comprehensive body of evidence on **behaviour change** theory and practice, particularly within the realm of public health, is concerned with human biases and norms and their influence on

decision-making and behaviour, notably in areas like smoking and vaccination[17]. Consequently, behaviour serves as the primary outcome measure in these studies.

Lastly, a substantial body of work has focused on **ECD programs and practices** largely within organisational settings to shift attitudes, values, practices, and behaviours within the early childhood field[18,19]. These initiatives include staff training, models of care, and parent education programs, among others.

Thus, it is important to note that the current literature on mental models, and their relationship with behaviour, emanates from diverse fields. Importantly, the literature identified demonstrate no prior research that was specifically designed to address the precise questions posed by the EYC. Consequently, extrapolation was necessary to apply these findings to the specific inquiries driving the current project.

In this report, we summarise findings and recommendations from this prior work, and through consultations explore other mental models that may be contributing to the current state. Further, we explore promising practices from the evidence that may collectively contribute to addressing current state issues and the mental models that underpin them.

4.2 Conceptual framework

As outlined above, previous systems mapping efforts conducted for the EYC identified a wide range of societal beliefs that have contributed to the present condition of early childhood systems and outcomes in Australia. These efforts also identified numerous attributes characterising an envisioned future state aimed at establishing a more equitable early childhood system in the country. To advance upon this foundation, we conducted a thematic analysis of the current and future states outlined in this body of work, with the objective of identifying a set of **deep dive focus areas** to unpack in this report. This process yielded the formulation of four distinct focus areas, each concentrating on a unique facet of early childhood development:

1. Focus area 1: Child development and parenting
2. Focus area 2: Proactive, efficient governments and policymaking
3. Focus area 3: Breaking the cycles of inequity and disadvantage
4. Focus area 4: Integrated, connected, and proactive early childhood development systems

These focus areas were positively framed to highlight the desired future state while also focusing on current state issues that preclude the realisation of the desired state.

Informed by previous EYC systems mapping work, we identified four deep dive focus areas which form the basis of this report:

- **Focus area 1: Child development and parenting**. Includes mental models connected to the nature of child development, gendered nature of care, the erosion of the village, and parenting stigma. Orange Compass identified that the desired future state for this area is *strengthening and valuing families in all their different forms and their communities*.
- **Focus area 2: Proactive, efficient governments and policymaking**. Focuses on mental models related to the place of children in public policy, the role of governments and its capacity to change. Orange Compass identified that the desired future state for this area is *Government and service providers being held publicly accountable for the developmental outcomes of all children*.
- **Focus area 3: Breaking the cycles of inequity and disadvantage.** Includes mental models connected to inequity in child development, poverty, and racism. Orange Compass identified that the desired future state for this area is *a system that is strengthened by difference*.
- **Focus area 4: Integrated, connected, and proactive early childhood development systems**. Focuses on mental models underpinning service fragmentation and siloing. Orange Compass identified that the desired future state for this area is characterised by *accountable, high-quality, proactive ECD systems with a focus on integration, prevention, and high-quality workforce*.

Each deep dive focus area is presented as follows: (1) prominent mental models that emerged through our desktop synthesis and consultation process; and (2) how mental models are thought to influence the current state.

4.3 Focus Area 1: Mental models about child development and parenting

4.3.1 Background

This focus area centred on mental models underpinning **current state issues** relating to understandings of child development (including who is responsible for it), the gendered nature of care, the erosion of the village, and parenting stigma. These include the ideas that:

- There are good mothers and bad mothers.
- Parenting comes naturally.
- Care is women's work.
- Care is not "real" work.
- It is not the government's responsibility to ensure the village is there to raise the child.

The desired future state outlined in the Orange Compass Systems Mapping report[1] can be broadly described as "**strengthening families, parents, and carers."** Specific desired future state outcomes articulated in the report include:

- Strengthening and valuing families in all their different forms.
- Strengthening parent/carer/community capacity and confidence.

Accordingly, our deep dives focused on three main areas:

- Mental models about the nature of child development.
- Mental models about parents and parenting.
- Mental models about the gendered nature of care.

4.3.1.1 Prior research on how Australians think about these issues

Prior work in Australia by the FrameWorks Institute in collaboration with local partners has documented the way that the Australian public thinks about early child development and parenting and compared this to expert perspectives[15,20-22]. Understanding how the Australian public think about ECD issues is important for several reasons: (1) to help communicators pre-empt public resistance or challenges in how messages about ECD are received; (2) to identify unhelpful "thinking traps" to avoid when communicating about ECD; and (3) to identify helpful mental models that can be built upon when generating a more constructive understanding of ECD in Australia. Key studies and findings from this body of research include:

- In 2014, FrameWorks Institute and the Centre for Community Child Health compared perspectives from ECD experts and the Australian public regarding what ECD is about, what develops during early childhood and how, what undermines development, and how positive development can be supported. Several key gaps between expert and public understandings of ECD were identified, as well as some key overlaps. [21]
- In 2016, FrameWorks Institute and the Parenting Research Centre conducted research on expert and Australian public opinion on effective parenting: what it is, what influences it, why it matters, and how it can be promoted.[22] They found that the Australian public had an appreciation of the fact that parenting is important, but their understanding of *why* it is important was limited; further, they did not have a clear picture of what effective parenting entails, the myriad factors that influence it, or why specific policies and programs to support parenting matter.
- In 2020, FrameWorks Institute, together with CoLab published a series of reports outlining a new "Core Story" for ECD,[15,23] which built on prior work. These reports noted progress in the extent to which the Australian public understand that ECD initiatives are important to support learning and brain development.

4.3.2 Mental models about child development

MM 1: Child development is simple. The predominant mental model about child development unearthed in our consultations suggests that children's needs are relatively straightforward and that young children in particular can "look after themselves." In discussing this mental model during consultations, it was often expressed in comments like:

- *"Child development doesn't take much effort."*
- *"Young children can entertain themselves."*
- *"Anyone can do it (raise children)."*
- *"You shouldn't need to take a break from it."*

This mental model echoes findings documented in previous FrameWorks Institute research in Australia. Specifically, prior work has found that the Australian public tends to believe that child development "just happens" and is a relatively simple process.[24] Additionally, prior work has emphasised that the Australian public tend to see child development as a unidirectional process in which children passively absorb information from their parents.[20,25] This is contrasted with expert perspectives, which characterise child development as a bidirectional, complex process.[20,25] Participants in our consultations linked this mental model to several current state issues – including lack of support for families and the expectation that parents are solely responsible for their children.

MM 2: Children are resilient: Additionally, participants identified a belief that children – particularly young children – were resilient, with ample time to bounce back from any difficulties that they might experience. According to this mental model, early childhood is seen as a time when difficulties were not as consequential as they may be in later life.

During the consultations, this was expressed in comments such as:

- *"Kids are resilient – they have time to bounce back."*

To some extent, this contrasts with previous work which found that the Australian public engage in fatalistic thinking about early adversity – i.e., thinking that not much can be done to support children who have experienced difficulties in early life.[24] However, these mental models are not necessarily mutually exclusive – indeed, participants reflected that black and white thinking characterised issues around child wellbeing and development:[24]

- *"It's not a problem until it's really serious."*
- *"It's black and white – either you do need help, or you don't."*

Of note, prior work by the FrameWorks Institute has found that Australians tend to see childhood as being threatened by medical models that overpathologise normal behaviours and developmental processes.[20] It is therefore plausible that the perspective that "kids are resilient" reflects a desire to separate ECD from "medicalising" child development issues.

MM 3: Parents are the primary influence on child development. Participants identified a mental model which proposes that individual choices (in this case, choices made by parents) are the primary determinant of child outcomes. This mental model stems from individualistic thinking. In describing this mental model, consultation participants largely referred to the role of mothers in their children's development:

- *"Mothers are the primary influence on their child's outcomes."*
- *"Mums returning to working full time are neglecting their children."*
- *"Parents are the most important thing for kids."*
- *"Parents should have control over their families."*

The belief that parents (and particularly mothers) are primarily responsible for their children's development has been highlighted by FrameWorks Institute's prior research in Australia,[24,25] and reflects a broader assumption that the parent-child relationship is more significant and influential than other relationships children might have (e.g., with siblings, aunties, grandparents). In non-dominant cultures, relationships that children have with other figures in their life may be seen to contribute substantially to that child's development and wellbeing, in addition to the relationships between parents and children. While these extended family relationships could be conceptualised as a strength, they are often viewed in a deficient manner.[26]

In line with this prior work, participants in our consultations were less clear on the connection between broader societal issues and child development. While economic security was raised as an increasing pressure on parents, people we spoke to seldom raised ideas about the impact of economic security – and associated issues, such as housing security - on child development. Participants in our consultations described resentment about what they perceived as "mixed messages" regarding the centrality of parents in providing care for children and more recent messages in which parents felt pressured to engage their children in early childhood education and care (ECEC). The consequence of this was a sense of cynicism that messaging around ECEC had an economic imperative only and was designed to get women back in the workplace, despite mothers staying home being seen as "what is best for children."

4.3.3 Mental models about parenting and the gendered nature of care

MM 4: Parenting and families look a certain way. Several beliefs were unearthed in our consultations around expectations around family structure and parenting roles and behaviours being limited to Western and dominant cultures and literature. This mental model is framed in an 'us versus them' manner and views models of parenting and family structures that aren't the 'norm' as deficient and as harmful for the child's development. For example, children in out-of-home care, single parents, same-sex parents, non-biological parents, and other family structures. Further, mental models about parenting expectations were based on assumptions about a "primary" (usually maternal) caregiver; with judgement about parenting behaviours that don't fit these norms. During consultations, this mental model was said to underly beliefs such as:

- *"Aboriginal parents 'pass around their children', which means they don't care about the child."*
- *"Foster care is a bad experience for kids."*

MM 5: Parenting is easy. Linked to the idea that *child development is simple*, this mental model takes an individualistic frame towards parenting that suggests it should come naturally and easily to those who are "good" parents. In our consultations, this was expressed in comments like:

- *"It's like people believe parenting is easy, that anyone can do it."*
- *"People believe that all parents are equally equipped to care for their children – and if you're not, there's something wrong with you."*

This mental model aligns with prior research conducted by the Parenting Research Centre and FrameWorks Institute which unearthed several pervasive beliefs held by the Australian public about parenting.[25] These include the belief that good parenting comes naturally and reflects how much love parents have for their children.[25] This contrasted with the views of researchers, practitioners, and policy experts, who framed effective parenting as a set of skills and capacities that can be learned.[25] As described in our consultations and documented in prior research, the implications of this mental model are that people believe not much can be done to change the way people parent,[24,25] while those who need assistance are stigmatised. On the latter point, participants expressed comments such as:

- *"Asking for help means you are lazy."*
- *"Only vulnerable families need help from governments."*

MM 6: Providing care is integral to women's identity and power. When describing *who* is responsible for parenting and providing care to children, people told us that the provision of care is something that is innate to women. In describing expectations of women to provide care

for children, either in personal or professional settings, participants expressed comments such as:

- *"Supporting children is integral to maternal identity."*
- *"Women enjoy providing care."*
- *"Child development is the last bastion of women's influence."*

In describing this mental model, participants in our consultations told us that women who went back to work, needed help with parenting, or struggled to manage the demands of parenting were seen as "bad mums" who are "neglecting their children."

MM 7: Men are not nurturers. This mental model frames men as "providers" in contrast to "nurturers" and, in its extreme form, leads to assumptions that men are redundant in direct child rearing practices or unequipped as parents. In discussing why dads are not expected to play as much of a role in child development, participants discussed beliefs such as:

- *"Men don't have a natural parenting instinct."*
- *"Dads don't know what they are doing with children."*
- *"Dads are not necessary for children's development."*

Because of this mental model, people told us that acts of care that men do (such as providing for the family) are not seen as acts of nurturing. Men told us that these mental models were experienced at an individual level (i.e., "I don't know what I'm doing") and that their uncertainty around caregiving was reinforced by services that framed the mothers as the primary parent and saw fathers either as a secondary parent or in no role at all.

4.3.4 How do these mental models influence the current state in Australia?

Belief that the family is private, and families should have a choice when it comes to ECD services. Families described a complex struggle with the societal assumption that "it is easy to find care – ask your family or pay for it" and how this impacted on them professionally and personally. However, our consultations also reflected the degree to which parents had internalised the idea that they alone were responsible for their children, despite the degree of pressure this placed on them. In many of our conversations, parents equated responsibility with autonomy and choice to do "what is best for their child." They connected these beliefs with the idea that the "family is private" and that government intervention "means there is something wrong with you." Furthermore, families described their resistance towards initiatives such as universal, government supported ECEC which they saw as impinging on their right to choose what is best for their child, as well as creating additional stigma and judgement regarding family choices to engage their child in ECEC or not.

The erosion of the village and stigma around seeking help. People told us that the mental model that the *gendered nature of care*, coupled with the mental models that *child development is simple* and *parenting is easy* gave rise to expectations that care for children can be easily handled by families. This societal expectation was connected to stigma around asking for help and the perception that care (and the people who need it) are a burden on society. The latter belief was seen to contribute to the erosion of the village, particularly when coupled with pragmatic challenges (e.g., rising cost of living) that reduce family capacity to actively participate in the community.

The devaluation of care. Across our consultations and literature, the child development is simple mental model was described as contributing to the devaluation of care across personal and professional settings. Additionally, the gendered nature of care was identified both as a current reality and a mental model that contributed to devaluation of care and those who provide it, as well as more generally to an undervaluing of children's issues. Furthermore, the gendered nature of care also contributed to devaluing aspects of care traditionally associated with women: namely, care, connection, and trust.

Exclusion of fathers from ECD programs and policies. People in our consultations described a feedback loop in which assumptions about the gendered nature of care led to the exclusion of fathers from communications about ECD, as well as from policies and programs designed to support parents and children. In turn, this undermined fathers' confidence and reinforced beliefs about fathers as secondary parents.

4.3.5 Summary

Figure 7 Focus Area 1: Child Development and Parenting - Summary of Mental Models

Mental model	Current state conditions
Mental models about child development MM 1: Child development is simple. MM 2: Children are resilient. MM 3: Parents are the primary influence on child development.	• Belief that the family is private, and families should have a choice when it comes to ECD services. • Expectation that parents are solely responsible for their children. • Assumption that the parent-child relationship is more significant and influential than other relationships children might have. • The erosion of the village and stigma around seeking help. • The devaluation of care across personal and professional settings. • Exclusion of fathers from ECD programs and policies.
Mental models about parenting and the gendered nature of care MM 4: Parenting and families look a certain way. MM 5: Parenting is easy. MM 6: Providing care is integral to women's identity and power. MM 7: Men are not nurturers.	

4.4 Focus Area 2: Proactive and efficient governments and policymaking

4.4.1 Background

A natural extension of the mental models described in Focus Area 1 is that the government shouldn't try to "overstep" in the lives of families, given that children are the primary responsibility of their parents. This thinking was reflected in Orange Compass' Systems Mapping work for the EYC, which documented the assumption that "the family is private" and "the government can't and shouldn't do too much to interfere in people's lives." These mental models are reinforced by the belief that government intervention "means there is something wrong with you."

To explore these issues further, we aimed to understand what role Australians see for government and policy in supporting ECD. Our deep dive in this focus area centred on mental models underpinning the current state issue identified by Orange Compass' Systems Mapping report[1] of "**governments avoiding accountability for ECD outcomes**." Current state issues identified in the Systems Mapping process include:

- Governments avoid accountability for ECD outcomes.
- There is no political reward for reform; and
- Prevention doesn't make economic sense.

The desired future state outlined in prior reports can be broadly described as "**Government and service providers are held publicly accountable for the developmental outcomes of all children**." It is important to note, however, that implicit in this desired future state statement is an assumption that governments and service providers should be the responsible groups for child development outcomes.

Our consultations centred on two key areas of enquiry:

- Mental models about the place of children and parenting in government policy and
- Mental models about the role and capacity of governments in supporting children and families.

4.4.1.1 Prior research on how Australians think about these issues

Prior work in Australia has found that thinking about social issues and the government's role in solving them is influenced by unhelpful mental models, including:

- The belief that social problems (including ECD outcomes) cannot be meaningfully improved[20],
- The belief that policy does not have much of a role to play in supporting parenting[25] and

- Limited understanding of the role of governments in promoting ECD outcomes.[23,24]

Additionally, findings from the recent Mapping Social Cohesion survey highlight a relatively high degree of mistrust in government. For example, the 2022 survey found that only 41% of survey respondents endorsed the belief that the Australian Federal Government 'can be trusted to do the right thing for the Australian people' all or most of the time, while 79% of respondents agreed that 'government leaders abuse their power' at least some of the time, with 24% believing that abuse of power happens most or all of the time.[13]

4.4.2 Mental models about the place of children in government policy

MM 8: Children are not a collective responsibility. This belief, driven by individualistic thinking, is based on the idea that children's wellbeing is primarily the responsibility of their parents (MM 3-5). In discussing this mental model during consultations, it was often expressed in comments like:

- *"The government is not responsible for the difficulties families face."*
- *"Parents are ultimately responsible for the wellbeing of their children."*
- *"Parenting is a private and personal thing."*

In line with MM 4, an extrapolation of this mental model is that parents who expect government support are a burden on society. This thinking was exemplified in the following comments, taking from our sentiment analysis of social media comments on a campaign for more accessible early childhood education and care:

- *"Shouldn't people plan ahead and decide if and how they can afford to have and raise children? Why do I have to pay my taxes for someone who just expects the government (we the taxpayers) to pay for everything?"*
- *"Simple answer to this, bring up your own children. Don't leave it to others and then complain that you have to actually pay for the service they are providing you. It's called living within your means. Greed is the problem, not the government or the early childhood industry."*

Our sentiment analysis highlighted a division in public opinion in which a distinction between those who see child wellbeing as a social investment and those who don't. Commentary in this area reflected a blend of individualism (your choice, your problem) and us vs them thinking (people who choose to have children versus those who don't).

Rejection of the idea that children are a social investment, was exemplified by the following exchange during consultation:

- *"Parents should pay for their own life choices – why should the taxpayer subsidise others' decisions?"*
- *"Oh dear! Surely, it's a social investment not just a personal good."*
- *"Hospitals, education and transport are social investment. Paying for others' families is just socialism. Pay for your own family."*

This 'us vs them' thinking (i.e., people who have children versus everyone else) was also connected to perspectives that people who have children are a drain on society, particularly if they need government support.

MM 9: Children aren't contributing citizens. This mental model framed children as lesser citizens who did not hold power in adult issues. In our consultations, this was expressed in comments such as:

- *"Children are not fully formed humans"*
- *"Children can't change government"*
- *"Children should not have a say in adult issues"*

According to this mental model, children should not have a say in adult issues, and were not relevant to policy decisions simply because they do not hold enough power and do not contribute much to society. People told us that parents acted as a "proxy" for children's interests, however these were still not seen as relevant to social policy given the prevailing view that "families have to fix their problems, not the government."

4.4.3 Mental models about the nature of government

When describing mental models about the role of government, the nature of governments, and their capacity to change, people described two prominent mental models: (1) government intervention means there's something wrong with you; and (2) governments can't be trusted.

MM 10: Government intervention means there's something wrong with you. In our discussions of MM 7, we explored some conditions under which government assistance might be considered appropriate. Discussions tended to focus on issues connected to child safety and "vulnerable" families: that is, people told us that government intervention is justified when children are at risk and that the first thing that comes to mind when government involvement in child development is mentioned is "child safety and risk issues." In turn, we unearthed stigma associated with those who need to rely on government support that reflected a strong degree of us vs them thinking. In discussing this mental model during consultations, it was often expressed in comments like:

- *"When children are at risk, governments should intervene."*
- *"It's black and white: either you need help, or you don't."*

- *"If you rely on government handouts, there's something wrong with you."*
- *"Asking for help means that you are lazy, that you're a failure as a parent."*
- *"Government interference means something bad is happening – like losing a child."*

This mental model provided some additional context to the belief that "parenting is a private and personal thing" – in addition to conveying a need for autonomy and responsibility within the family unit, this belief also reflected stigma connected to families who require government intervention or support.

MM 11: Governments can't be trusted. This mental model reflects beliefs about governments in general, rather than a specific government. In describing this mental model, people described both beliefs "held by the government" as well as beliefs "held by society about governments". These two are intrinsically connected – that is, people's beliefs about how government perceives its roles and responsibilities contribute to public sentiment about governments and how much they can be trusted. Comments describing beliefs that reflect this mental model included:

- *"The government is out of touch with what families really need."*
- *"Government has its own best interests at heart."*
- *"Governments are volatile."*
- *"Governments compete, not collaborate."*
- *"Those in government will cover each other's mistakes."*
- *"We don't want an oppressive 'Big Brother' government in our society."*

While research conducted by FrameWorks Institute in Australia has uncovered unhelpful mental models about government that align with these findings (i.e., that they are ineffective, obtrusive, or authoritative),[25] this prior work also found that Australians can tend to see the government is a partner in supporting children and families. Accordingly, they recommend using this mental model as a springboard for supporting more constructive thinking about the role of governments in promoting ECD outcomes.

4.4.4 How do these mental models influence the current state in Australia?

Alongside the mental models in Focus Area 1, the mental models in Focus Area 2 were connected to a vast range of current state issues previously identified by the EYC.

Lack of demand for government investment in ECD. People told us that together, the mental model that *governments can't be trusted,* and *children are not a collective responsibility* contributed to a lack of demand for government investment in prevention and social care services. They described how governments were not expected to act with children's best interests in mind because (a) children are the responsibility of their parents; and (b) governments cannot be trusted to deliver the services that families need. Furthermore, the

mental model that *children should not have a say in adult issues* was connected to the belief that reorienting government toward focusing more on children's issues was not a national priority. This undermining of the rights of children reinforced the power and responsibility of parents, and in turn, minimised the role of governments in promoting ECD.

Expectations of parents to "hold the whole". The mental model that *children are not a collective responsibility* was seen to contribute to the belief that the government is not responsible for addressing ECD outcomes through the provision of universally accessible, coordinated services. Instead, their personal choices to have children means that it is "on parents" to access, navigate and pay for the services their children need. This expectation that it is parents' rather than governments' responsibility to "hold the whole" was seen as a contributing factor to service siloing. Driven by the mental model that *government intervention means there's something wrong with you*, stigma connected to families from underrepresented and disadvantaged backgrounds (see Section 4.5) was extrapolated to government services such that families described a desire to distance themselves from government services, which in turn was connected to pro-market-logic sentiment and the endorsement of "families as private". This was underscored by the mental model that *governments can't be trusted.*

4.4.5 Summary

Figure 8 Focus Area 2: Proactive, Efficient Governments and Policymaking - Summary of Mental Models

Mental model	Current state conditions
Mental models about the place of children in government policy MM 8: Children are not a collective responsibility. MM 9: Children aren't contributing citizens.	• Lack of demand for government investment in prevention and social care services. • Lack of trust in government. • Expectations of parents to "hold the whole".
Mental models about the nature of government MM 10: Government intervention means there's something wrong with you. MM 11: Governments can't be trusted.	

4.5 Focus Area 3: Breaking the cycle of inequity and disadvantage

4.5.1 Background

Our deep dive in this focus area centred on mental models underpinning the **current state issues** connected to equity for Aboriginal and Torres Strait Islander and migrant families, families living with socioeconomic disadvantage, and people with disabilities. Current state issues identified in the EYC Systems Mapping process[1] that fall under this focus area include the following:

- What is not "normal" is "other",
- We are a society that is prepared to accept poverty; and
- Systems compound First Nations trauma.

The desired future state can be broadly described as "**a system strengthened by difference**." Underneath this umbrella, specific desired future state outcomes include:

- Addressing the underlying causes of disadvantage,
- Strengthening and valuing families in all their different forms; and
- All children and families have their basic material needs met.

To understand the mental models underlying the current state, our literature review and consultations for Focus Area 3 focused on three broad areas:

- Mental models about poverty,
- Mental models about inequity in child development (including racial inequities, socioeconomic disparities, and exclusion of families with disability)
- Mental models about racism.

4.5.1.1 Prior research on how Australians think about these issues

Contradictory beliefs about poverty were found in one study, which reported that while Australians support the concept of the welfare safety net, those who use it were viewed negatively, as both lazy and unmotivated to work.[16] However, a more recent survey by Anglicare Australia, using a nationally representative sample, found that many respondents expressed sympathetic views toward those receiving welfare.[16,27] Further, the survey found that the Australian public were split on the issue of whether anyone could work their way out of poverty if they tried hard enough, with 38% agreeing with this statement and 35% disagreeing.

Interestingly, the survey found that among the Australian public, those who had experienced poverty themselves were less likely to have sympathetic attitudes towards those in poverty.[27] This phenomenon has been linked to the 'negative self-stereotyping' of people experiencing

poverty, which may lead them to internalise stigmatising messages or attempt to distance themselves from a stigmatised group.[28] An exception in Anglicare Australia's findings was people living outside metropolitan areas, who were consistently more likely to hold sympathetic views towards those living in poverty than respondents from metropolitan areas. In addition to rural and regional respondents, the most sympathetic attitudes were consistently held by women and those who were older.[27]

In Australia, previous quantitative research has examined the nature and prevalence of racism, dedicating considerable attention to understanding its various dimensions and consequences. Various empirical studies, relying on surveys, have examined racism alongside related issues such as discrimination, prejudice, Islamophobia, and anti-immigrant sentiments[29]. These studies vary widely in terms of their core concepts, measurement methods and research objectives, leading to varying reported beliefs and prevalence rates. Consequently, the prevalence of racism in Australia, according to these studies, falls within a broad range, spanning from 9% to 40%[29]. However it is important to note contrasting perspectives; for instance, in the Face Up to Racism initiative, 79% of participants agreed that racial prejudice exists in Australia generally, while only 11% identified themselves as holding racist beliefs[29]. This underscores a distinction between what individuals believe, and what they perceive others to believe. This has important implications for how interventions are designed and delivered to shift mental models.

4.5.2 Mental models about poverty

Two major mental models about poverty emerged through our literature review and consultations: *Australia is a meritocracy* and *Life is tough, deal with* it. Ultimately, both models stem from **individualism** – they blame poverty on individual character flaws. Additionally, poverty beliefs were compounded by factors that people believe to be parallel with poverty, such as race and cultural background, family structure and dynamics, and mental health difficulties. Across these mental models, **fatalist** beliefs were also apparent: the problem of poverty is seen as an intractable one in which welfare assistance is unlikely to help those "who won't help themselves." In our consultations, **us vs them thinking** also gave rise to the mental model that people living in poverty can be classified as "deserving" or "undeserving" of help. Following from this is the belief that those who ask for help are less deserving of it.[30]

MM 12: Australia is a meritocracy. According to this mental model, Australian society is an equal playing field. The implications are that we don't see the obstacles faced by the socially disadvantaged and we centre individual choices, values, and behaviours as the primary drivers of poverty. This mental model was reflected in the following beliefs unearthed in our consultations:

- *"With enough hard work, anyone can succeed."*
- *"Poverty is the result of bad choices."*

- *"Poverty is the result of failure to take advantage of opportunities."*

Although these mental models emerge when people are asked to think about how Australian society views poverty, recent data suggest that very few Australians believe that the country is a meritocracy. For example, in 2019, the Mapping Social Cohesion study found that 19% of respondents expressed strong agreement for the statement that 'Australia is a land of economic opportunity where in the long run, hard work brings a better life'; in 2022, this figure was down to 14%.[13]

MM 13: Life is tough: deal with it. According to this model, Australians should be prepared to have a go, regardless of the odds and refuse to admit defeat in the face of great difficulties.[31] In contrast to the meritocracy mental model, this model does not assume that everyone has equal opportunity; rather, that life can be tough and you need to battle your way through regardless.

This mental model parallels the "Bootstraps" narrative around poverty that has been found to operate in the United States.[32] The implications of such models are that people who are unable to work their way out of poverty are just not tough enough[33] and therefore nothing should be done to help them. This mental model was reflected in the following beliefs that emerged from our consultations:

- *"Poverty is the result of laziness."*
- *"Poverty is the result of not being tough enough."*
- *"Dole bludgers" are a burden on society."*

This individualist view of poverty represents a failure to comprehend the complexities and underlying causes of poverty. Accordingly, in addition to undermining support for initiatives that aim to support the most disadvantaged, this mental model may mean that people assume that financial supports are 'enough' – i.e., that support provided to individuals who are struggling is sufficient to get them out of it.

4.5.3 Mental models about inequity in child development

Mental models about inequity in child development were pervasive across our consultations. Regardless of the topic on which we were consulting, there were persistent mental models that specific groups should have different expectations of services (e.g., those living in rural areas should "expect less" in terms of service availability and accessibility) and, in turn, should have different expectations for the developmental outcomes of their children. These mental models were largely based on **us vs them thinking**, applied across diverse contexts including:

- Aboriginal and Torres Strait Islander and non-Aboriginal and Torres Strait Islander children and families.
- Families living in metropolitan areas and those in rural areas.

- Families with socioeconomic disadvantage and those with privilege.
- Children with disability and neurotypical or able-bodied children.

Mental models about these groups were also laden with **individualist** thinking that suggested that it was individual choices or behaviours that led families to experience inequities in service access or outcomes.

MM 14: White is right. This mental model encompasses various deficit-based narratives surrounding Aboriginal and Torres Strait Islander children and families and those from culturally and linguistically diverse backgrounds. It frames Aboriginal and Torres Strait Islander cultures and ways as less sophisticated than Western ways, and at times as 'primitive'. These mental models showed up across conversations about poverty, education, parenting and families, domestic violence and trauma, and social change (Figure 9). Notably, these us vs them thinking mental models were primarily raised by Aboriginal and Torres Strait Islander peoples in our consultations. When non-Aboriginal and Torres Strait Islander people were asked to reflect on why society tolerates racial inequities, they tended to draw on individualism, specifically to the idea that "you can't help those who won't help themselves" – i.e., racial inequities are an issue of the individual experiencing them, not society. Thinking in this area also reflected a sense of fatalism – specifically that issues faced by Aboriginal and Torres Strait Islander communities are intractable.

MM 15: People with disabilities don't hold equal value in Australian society. This mental model encompasses several facets of deficit-based thinking about people with disabilities, including narratives that are sympathetically framed which imply that people with disabilities are less valuable (e.g., *you should feel sorry for parents who have a child with a disability*). This mental model reflects both us vs them thinking (people with disabilities are flawed, vulnerable, and scary), individualism (exclusion of people with disabilities is because of the way they are, not the way the system is), and fatalism (people with disabilities are too complicated). Examples of specific beliefs that emerged in our consultations include:

- *"My children might be disadvantaged if they play with children with disabilities."*
- *"Children with disabilities are unpredictable."*
- *"Children with disabilities aren't as cute."*
- *"With less intellectual capacity, you are less valuable to society."*

Figure 9 Examples of stigmatising beliefs that consultation participants identified exist in relation to Aboriginal and Torres Strait Islander Peoples

Category	Belief

Poverty	*Aboriginal peoples are dependent on welfare.* *Aboriginal peoples don't want to work.* *Aboriginal peoples get things for free.* *Aboriginal peoples are poor.*
Education	*Aboriginal peoples aren't educated.* *Aboriginal kids don't want to learn at school.* *Aboriginal families don't value education.* *Aboriginal kids come to school with no prior knowledge.*
Domestic violence and trauma	*Aboriginal peoples are inherently violent.* *All Aboriginal children have experienced trauma or domestic violence.*
Parenting and families	*All Aboriginal parents are bad parents.* *Aboriginal families have too many kids.* *Aboriginal parents drink through pregnancy.* *Aboriginal kids will have more opportunities if they are removed from their families.*
Social change	*Aboriginal peoples aren't capable of self-governing.* *Social change efforts won't work for Aboriginal peoples.* We should all have the same laws.

MM 16: You get what you deserve. Like individualist mental models that blame people living in poverty for their socioeconomic circumstances, this mental model blames inequities in child development outcomes on parental choices and values. According to this model, wealthier parents who live in metropolitan areas have earned their right to more choice and higher quality services by virtue of where they live, how much they earn, and how educated they are. In addition to general beliefs about "us vs them," this mental model is heavily laden with racist stereotypes. In discussing this mental model during consultations, it was often expressed in comments like:

- *"There are good parents and bad parents."*
- *"Aboriginal parents drink during pregnancy."*
- *"You (migrants) should be grateful to be here."*
- *"If you live outside city centres, you should expect less from services."*
- *"Wealthy families deserve better quality care."*
- *"Government services are only good enough for people who can't afford better."*

4.5.4 Mental models about racism

Racism in Australia has its roots in colonisation and the othering of Aboriginal and Torres Strait Islander and migrant peoples. Racist stereotypes contribute to Australian attitudes toward inequity, described above. However, perspectives of *racism itself* also are highly influential in

how Australians perceive inequities and what they expect in terms of societal action on racial justice.

The predominant mental model underpinning unhelpful beliefs about racism is **individualism.** This perspective denies structural racism and situates racism as an issue of a few problematic individuals. In doing so, it invokes **us vs them** thinking. People who conceptualise racism in this manner may be less likely to act, as they may not see it as a widespread issue or that 'I'm not the problem'.

MM 17: Racism is not a problem/Racism is not my problem. This mental model encompasses both denying that racism exists as a societal issue and denying personal responsibility for racism and its effects. These are not mutually exclusive; someone may appreciate racism as an issue though continue to deny responsibility to it. It was demonstrated in the following comments that emerged in our consultations:

- *"Racism doesn't exist."*
- *"Racism is just a few bad apples."*
- *"I'm not racist so it's not my problem."*
- *"Colonisation was ages ago – get over it."*
- *"I wasn't the coloniser; therefore, racism is nothing to do with me."*
- *"The system favours Aboriginal people."*

MM 18: Racism is inevitable. In contrast to the denial mental model, this mental model treats racism as a real, immutable phenomenon, though it suggests that racism is such an entrenched phenomenon in Australia that change efforts are unlikely to work. Beliefs unearthed in our consultations also reflected fear of drawing attention to oneself or being seen as overly "politically correct" or "left wing" when taking a stand against racism:

- *"I won't stand up for racism because people won't change."*
- *"I'm wasting my time and energy trying to solve this."*
- *"I don't want to stand up to racism because I don't want to cause a fuss."*

MM 19: Racism is warranted. This mental model suggests that racism is justified because of the perceived characteristics or behaviour of the stigmatised group. Examples of beliefs that emerged in our consultations that fit this mental model include:

- *"Racist stereotypes reflect reality."*
- *"Aboriginal people and ways are 'primitive'."*
- *"Aboriginal people are to blame for their problems".*

To a lesser extent, this mental model implies that racism is justified because racial minority groups represent a threat to white people. The following beliefs emerged in our consultations,

but were framed as an outdated mode of thinking that is only used by some groups in society to justify racism:

- *"Aboriginal Australians will take our (white people's) land."*
- *"Migrants "will take our (white people's) jobs."*

4.5.5 How do these mental models influence the current state in Australia?

Mental models about poverty underpin thinking about inequities in child development (see below) but were also implicated in some of the mental models unearthed in Focus Area 1.

Differences between individual values and perceptions of social values. Findings from Anglicare Australia call into question whether it is public attitudes about poverty that really need changing. Specifically, while most respondents (86%) agreed that no one deserves to live in poverty,[27] only 52% of respondents believed that most Australians were sympathetic to those living in poverty.

Critical reflection point: What implications does the difference between individual values and beliefs and perceptions of social values and beliefs have for how we design and deliver strategies designed to tackle unhelpful mental models?

Prior research has found that people who mistakenly assume that others don't share their compassionate values are less likely to act on them.[34] Accordingly, it may be that a key focus for changing mental models about poverty in Australia is changing *what the Australian public believes about others' attitudes and beliefs*. Evidence suggests that political discourse drives public attitudes, rather than vice versa. It may be the case that - like findings from the UK[35] – public perceptions of declining support for welfare systems are driven by political discourse, rather than reality. Indeed, the role of Australian media and politics in constructing a "totally false polarity" of *taxpayers versus those who receive benefits* has previously been highlighted.[27]

Systems that undermine Aboriginal and Torres Strait Islander prosperity. In our consultations, the impact of deficit-based thinking about Aboriginal and Torres Strait Islander peoples on child development outcomes was encapsulated by the following quote: *"There are different child development goals for Indigenous and non-Indigenous children – the goal for non-Indigenous children is to help them reach their full potential, the goal for Indigenous children is to keep them alive and out of prison*."

These lowered expectations about Aboriginal and Torres Strait Islander children are reflected in available evidence. Using data from the Longitudinal study of Australian children, Peacock et al.[36] found that while parents of Aboriginal and Torres Strait Islander children maintain very high expectations of their children across their schooling years, teachers' expectations decrease

substantially over the same period. This is important given the influence that expectations can have on children's aspirations. Further, in our consultations with Aboriginal and Torres Strait Islander participants, these deficit models were also seen to sometimes lead to internalised stigma: "If that's what they think of me, then that's what I'll be/do."

The narrative that Aboriginal and Torres Strait Islander cultures and ways of being lack sophistication, or are 'primitive', and thus that cultural practices are a thing of the past also appears to underpin beliefs about the role of Aboriginal and Torres Strait Islander languages and cultural education in Australian schools. Viewing cultural practices as a thing of the past as they are 'primitive' is disassociated from viewing cultural practices as dynamic in an ever-evolving world, and from acknowledging the harmful and pervasive impacts of colonisation and entrenched racism on continued cultural ways of being. For example:

- *Cultural activities are just for Aboriginal kids' benefit*
- *Aboriginal culture is only relevant to Aboriginal people*
- *I don't need to know about culture because I don't practice it*
- *Aboriginal histories and cultures don't belong in the curriculum*
- *Standardised schooling is more important that cultural education*
- *Aboriginal children speak "Aboriginal"*
- *Aboriginal English is not real English*

Based on the recent Mapping Social Cohesion survey[13], support for these beliefs is mixed. For example, 87% of respondents agreed with the statement that 'it is important for Aboriginal and Torres Strait Islander histories and cultures to be included in the school curriculum,' however, only 38% of respondents agree that 'ethnic minorities in Australia should be given Australian Government assistance to maintain their customs and traditions'. While this is an increase from 30% in 2018, there is still a sizeable gap between this figure and the proportion of Australians who endorse the idea that 'we should do more to learn about the customs and heritage of different ethnic and cultural groups in the country' (68%).

Denial of racism towards Aboriginal and Torres Strait Islander peoples. In a 2013 paper, Nelson[37] identified four discourses that underpin denial or minimisation of racism, which have implications for social change, these are described in Figure 10 below:

Figure 10 Discourses around racism

Discourse	Definition	Implications for Social Change
Temporal deflection	Highlights that minorities today experience less racism than in the past.	Undermines the need for anti-racism efforts by suggesting that things are better now than they used to be (i.e.,

		they are improving of their own accord).
Spatial deflection	Suggests that racism is worse in other countries or is a problem only in certain areas in Australia.	Undermines the need for anti-racism efforts by suggesting that things are better than they are elsewhere (i.e., focus your efforts elsewhere).
Deflections from the mainstream	Emphasises that racism is an issue of a small cohort of individuals rather than a societal problem.	Allows for anti-racism efforts but only within a small scope.
Absence discourse	Involves outright dismissal of racism.	Anti-racism action is not necessary. Without racism, there is no case for anti-racism.

Prior work has also highlighted that when Australians do acknowledge racism, racism is largely considered at the individual level. In a 2013 study, Walton et al.[38] found that most participants associated racism with negative focuses on differences, discrimination and disadvantage based on race and nationality, lack of acceptance, and denial of a common humanity. The definitions put forward by participants identified the blatant and individualistic expressions of racism but failed to identify its more subtle manifestations and systemic nature.[38]

In 2022, the Mapping Social Cohesion survey[13] found mixed beliefs regarding whether racism is a problem in Australia: 14% of respondents believed it is a very big problem, 47% believe it is a big problem, 37% believe it is not a very big problem, and 2% believe it is not a problem at all.[13] Additionally, positive feelings towards immigrants vary substantially depending on the immigrant's origin.[13]

It is unclear to what extent Australians endorse fatalist or blame-based beliefs about racism.

Recent research has found that while threat-based mental models may form part of what Australians think other people believe, the beliefs themselves are not endorsed by the majority. In 2022, 78% of respondents to the Mapping Social Cohesion survey[13] disagreed or strongly disagreed with the statement that ‘immigrants take jobs away’.

Together, these findings suggest that (1) beliefs that racism is a problem in Australia are far from unanimous; (2) Australians who believe that racism is a problem don’t necessarily support policies that would benefit people from racial minorities; and (3) beliefs that racism is a problem which may be subject to unhelpful nuances that suggest that racism is more acceptable toward some groups.

Levels of Racism[39]

Structural racism: This refers to the way systems and institutions operate to maintain advantages for some racial groups, while disadvantaging others. Structural racism is often invisible and is manifested in policy, power dynamics, and institutional practices.

Cultural racism: This refers to public messaging that suggests that whiteness is both the norm and favourable. Cultural racism manifests through media and public discourse however is not always explicit, nor easy to identify.

Interpersonal racism: This refers to individual acts of bias, discrimination, and violence toward people from different cultural backgrounds. It manifests in individual interactions and may be explicit or implicit.

4.5.6 Summary

Figure 11 Focus Area 3: Breaking the Cycles of Inequity and Disadvantage - Summary of Mental Models

Mental model	Current state conditions
Mental models about poverty MM 12: Australia is a meritocracy. MM 13: Life is tough: deal with it. **Mental models about inequity in child development** MM 14: White is right. MM 15: People with disabilities don't hold equal value in Australian society. MM 16: You get what you deserve.	• Differences between individual values and perceptions of social values. • Failure to address the complexities and underlying causes of poverty. • Systems that undermine Aboriginal and Torres Strait Islander prosperity. • Denial of racism towards Aboriginal and Torres Strait Islander peoples.
Mental models about racism MM 17: Racism is not a problem/Racism is not my problem. MM 18: Racism is inevitable. MM 19: Racism is warranted.	

4.6 Focus Area 4: Integrated, connected service systems

4.6.1 Background

Our deep dive in this focus area centred on mental models underpinning the current state issues connected to service fragmentation and siloing. **Current state** issues identified in the EYC Systems Mapping process[1] that fall under this focus area include a lack of prevention and early intervention and social services operating within a market logic.

The desired future state can be characterised as "**accountable, high-quality, proactive ECD systems."** Specific desired future state outcomes identified in prior EYC initiatives include:

- Preventative approaches to child safety and wellbeing,

- Accountability for outcomes for children and families; and
- Service systems backed by high-quality workforces.

Mental models in this focus area are underpinned by a broad question regarding who holds responsibility for the whole. Accordingly, several of the mental models identified in Focus Area 1 also influence thinking in Focus Area 4.

A key area of enquiry for our consultations was how the Australian public thinks about systems, including who is responsible for ensuring the systems function effectively and who should be served by such systems.

4.6.1.1 Prior research on how Australians think about these issues

Our review of the literature found several examples of where ECD service systems failures occur in Australia. Echoing findings from the EYC systems mapping process, these reports characterise ECD service systems as fragmented, difficult to access, difficult to navigate, territorial, and inefficient. In addition, there were some recent examples of initiatives where service integration and coordination have been successfully co-designed with the people they are intended to serve. What was less clear from the literature was how people tend to perceive systems, or how these perceptions influence expectations.

Guided by findings from the EYC systems mapping process[1], another area of interest surrounds public preferences for market-based systems and why these persist even in the face of system inefficiencies and failures. The rise of neoliberal values in the 1980s and 90s in Australia provides some context to current mental models, representing a cultural shift toward an increased focus on efficiency, competition, and reduced government spending. Over time, this thinking has led to a dominance of the market as the key institution around which everything else must revolve and an assumption that economic outcomes are the primary concern. Accordingly, concepts such as efficiency and growth tend to overshadow more socially transformative concepts about rights and collective action.[9]

4.6.2 Mental models about the nature of systems

MM 20: Systems answer to no-one. This mental model frames systems as complex phenomena that "just happen" and that no one is responsible for. In turn, people described fatalistic thinking about systems failures: these were seen as part-and-parcel of the nature of systems. Systems change was therefore not seen as feasible. Furthermore, the concept of what comprises a system was a fuzzy one – people either tended to think in terms of individual services or "the system" as an abstract, monolithic construct. In describing the nature of systems, people told us:

- "*Systems just evolve – no one is responsible for them.*"

- *"Systems failures are inevitable and unavoidable."*
- *"The system is an entity unto itself."*
- *"It's an out-of-control behemoth – how could anyone keep the systems working together?"*

MM 21: Systems failures are other people's problems. This mental model builds on the "deeply seated belief that poor developmental outcomes are 'those' people's problems" identified in prior mental models research in Australia.[5] People told us that government service systems cater to the "other" – which was described as "the average," "vulnerable families," or "families with risk issues." Accordingly, systems failures were seen as other people's problems – in part because of the assumptions embedded in MM17, that those with the means can work around gaps and inefficiencies in service systems and are in fact motivated to do so.

4.6.3 Mental models about the importance of family choice

MM 22: Families deserve a choice – if they can afford it. Our discussions on service provision consistently revealed a desire to distance one's family from government service provision wherever possible. Whereas government services were characterised as "catering to the average" and addressing "baseline" needs only, people told us that the market "offers a larger range of services" and that market-based solutions are "flexible to family needs and beliefs." Further exploration also revealed that families equated more expensive, tertiary services with better value and more appropriate care.

4.6.4 How do these mental models influence the current state in Australia?

Preferences toward market-based systems. In addition to mental models that equated higher cost with higher value, our consultations revealed that preferences towards market-based services were driven by two sets of negative beliefs: one characterised by mistrust in governments and their agendas, and the other characterised by deep stigma concerning the sorts of families who receive government intervention and require government support. When asked to think about what comes to mind when considering government involvement in early childhood, the dominant frames of reference for people that we spoke to was "child protection" and "vulnerable families". This us vs them thinking meant that government services were either unwelcome due to associated stigma, or adequate for "them" but not for "us." Specifically, people told us: "wealthy families deserve better quality care. They have earnt their right to have more choice and better options."

Market and systems failures treated as failures of individuals. Mental models about the nature of systems, together with fuzzy or stigmatised ideas about the role of governments in ECD service provision and coordination create conditions in which market failures are treated as failures of individuals. Across our consultations, families described feeling responsible for

making the system work for them, and discussions unearthed implicit beliefs that with enough money, time, or inside knowledge, this might be possible. These findings are congruent with prior work which found that while the Australian public believe that the government has a role to play in supporting ECD, they are not clear on what that role should entail.[5]

4.6.5 Summary

Figure 12 Focus Area 4: Integrated, Connected, and Proactive Early Childhood Development Systems - Summary of Mental Models

Mental model	Current state conditions
Mental models about the nature of systems MM 20: Systems answer to no-one. MM 21: Systems failures are other people's problems.	• Preferences toward market-based systems. • Market and systems failures are treated as failures of individuals. • Stigma concerning the sorts of families who receive government intervention and require government support.
Mental models about the importance of family choice MM 22: Families deserve a choice – if they can afford it.	

4.7 Summary of Deep Dives

Through the deep dives, we identified 22 prevailing mental models influencing current ECD systems and outcomes in Australia, drawing from the desktop review, consultations, and sentiment analysis. The mental models identified in each focus area, and their connection to current state conditions, are summarised below.

Figure 13 Summary of Mental Models Identified in the Deep Dives and Connection to Current State Conditions

Focus Area 1: Mental models about child development and parenting.	
Mental models about child development MM 1: Child development is simple. MM 2: Children are resilient MM 3: Parents are the primary influence on child development.	**Connection to current state conditions** • Belief that the family is private, and families should have a choice when it comes to ECD services.

Mental models about parenting and the gendered nature of care MM 4: Parenting and families look a certain way. MM 5: Parenting is easy. MM 6: Providing care is integral to women's identity and power. MM 7: Men are not nurturers.	• Expectation that parents are solely responsible for their children. • Assumption that the parent-child relationship is more significant and influential than other relationships children might have. • The erosion of the village and stigma around seeking help. • The devaluation of care across personal and professional settings. • Exclusion of fathers from ECD programs and policies.

Focus Area 2: Proactive, efficient governments and policymaking	
Mental models about the place of children in government policy MM 8: Children are not a collective responsibility. MM 9: Children aren't contributing citizens.	• Lack of demand for government investment in prevention and social care services. • Lack of trust in government. • Expectations to parents to "hold the whole".
Mental models about the nature of government MM 10: Government intervention means there's something wrong with you. MM 11: Governments can't be trusted.	

Focus Area 3: Breaking the cycles of inequity and disadvantage	
Mental models about poverty MM 12: Australia is a meritocracy. MM 13: Life is tough: deal with it. Mental models about inequity in child development MM 14: White is right. MM 15: People with disabilities don't hold equal value in Australian society. MM 16: You get what you deserve.	• Differences between individual values and perceptions of social values. • Failure to address the complexities and underlying causes of poverty. • Systems that undermine Aboriginal and Torres Strait Islander prosperity. • Denial of racism towards Aboriginal and Torres Strait Islander peoples.
Mental models about racism MM 17: Racism is not a problem/Racism is not my problem. MM 18: Racism is inevitable. MM 19: Racism is warranted.	

Focus area 4: Integrated, connected, and proactive early childhood development systems	
Mental models about the nature of systems	

MM 20: Systems answer to no-one. MM 21: Systems failures are other people's problems.	• Preferences toward market-based systems. • Market and systems failures are treated as failures of individuals. • Stigma concerning the sorts of families who receive government intervention and require government support.
Mental models about the importance of family choice MM 22: Families deserve a choice – if they can afford it.	

5 Strategies for Shifting Mental Models

This section presents an overview of the literature exploring the mechanisms for shifting deeply held mental models at the societal level over time and common features of effective change initiatives. This is illustrated through a series of case studies which illustrate how these elements work together to contribute to shifting mental models at multiple points in the system. In addition, we present a series of promising practices from the literature which have been shown to contribute to shifting the specific mental models identified in Phase 1 of this project. It is important to note that this evidence synthesis was not intended to be exhaustive, but rather to identify key considerations in developing any initiative to shifting mental models.

Current research on strategies to shift mental models emanates from diverse fields. We reviewed research in three main fields: (i) framing and communications science, (ii) behavioural and social change in public health, and (iii) organisational interventions and practices.

5.1 Summary of evidence and theory for shifting mental models

5.1.1 Mental models theory and evidence

The construct of mental models was created to help explain the way people interact with and within systems. In essence, mental models were developed as an organising principle that attributes common understandings to people about the system with which they interact[40]. As Rouse and Morris described in 1986, the construct was created to explain drivers of human behaviour, but raised additional questions, among them the questions of how you identify and subsequently change mental models[40]. Rouse and Morris (1986) described how the phrase mental models had become ubiquitous in the literature and intuitively accepted, in spite of the elusive nature of mental models, which makes them difficult to objectively measure[40].

The question remains today, repeated in the questions posed by the EYC, guiding the current work. While a review of the literature demonstrated a scarcity of research dedicated to investigating the strategies specifically designed for shifting mental models in ECD systems (as described in 4.1), **mental models have been drawn upon in a variety of fields of inquiry**. In searching for evidence of efficacy related to specific strategies to shift mental models, we found examples of research that spanned broad organisational change, team dynamics, farming, environmental and food choices, computer security behaviour, and driver education programs[41-44]. Repeated across the body of research, approaches to shifting mental models tended to rely firstly on the identification of prevailing mental models underlying a range of specific actions

people take and subsequently identifying communications that elicit a particular mental model or mental models that was found to be related to people taking the desired actions. The elicitation of desired mental models is termed framing. The strongest evidence for shifting mental models by changing how people articulate, or 'frame' the system, comes from empirical studies that identified people's model of a discrete system (e.g., how a machine works) and their associated actions driven by their 'model' of this system. In these types of studies, participants were provided with information to influence the 'model' they held about the system, and their actions emanating from this revised model were then observed. Mental models research methods have also been applied to relatively closed social systems such as teams with some success in shifting actions within teams in response to tweaking identified 'models' of team function. We have described elsewhere in this report explorations in relation to mental models about parenting and child development but found no such research for other mental models identified relative to the current state (proposed by Orange Compass).

In brief, reframing is used as a term in the literature that deals with how the ideas people have formed about how a system works can be reshaped by new information[45]. Applying this to service systems, Vink and colleagues (2018) developed a conceptual framework for how mental models are shifted in the process of service design. In their ethnographic study they highlighted the role actors within the system have in holding the system in place and thus the role they play in creating alternative systems, and through this work shifting their own mental models about how the system functions. This reflects a concept inherent to reframing theories – the idea that **mental models are formed through and reinforced by experiences in interacting with systems**, that shared experiences generate shared mental models and that people's mental models shift and change as a matter of course as they have new experiences[45,46]. As described by Johnson-Laird (2013), the extent to which mental models shift, how they are shifted through experiences that counter expectations, and how lasting these changes are is theorised but not clearly evidenced[46].

While the questions guiding the current scope of work related to mental models, the concepts of attitudes and beliefs are more commonly studied relative to societal behaviour change. Strategies for creating societal shifts are described in social and behaviour change theory and research that has been applied in public health and community settings. The body of literature concerned with cognitive and social change is vast and a detailed examination of this is out of scope of the current review. Thus, whereas theories of how to shift mental models take a focus on shifting the way people predict and in turn respond pre-emptively in their interactions with and within systems, cognitive and social change research concerns itself with shifting attitudes, stereotypes, and associated behaviour.

5.1.2 Social change theory and evidence

A significant body of research has delved into theories of social and behavioural change, examining both individual and population-level dynamics. These theories encompass a range of theories and perspectives, including social norms, social cognitive theory, the theory of reasoned action, and diffusion and innovation theory, among others[47]. This extensive body of work has shed light on the **complex interplay between attitudes and behaviours**. Indeed, each theory or approach to social change brings its unique set of assumptions and limitations regarding behaviour, available resources, and motivational factors. Generally, social change research emphasises the early formation of beliefs in life and their reinforcement through reciprocal interactions with the environment[48], including social structures and power dynamics. Importantly, this underscores the challenge of modifying established beliefs and behaviours (referred to as inertia). While social change is indeed possible, it requires considerable and sustained efforts[48,49]. Typically, social change is initiated by proactive 'innovators' and 'early adopters' before gaining momentum to influence a broader population (known as diffusion of innovation)[49]. **Positive social change can vary in terms of both the nature, speed, and quality (pervasiveness and durability) experienced.**

There is a significant body of national and global precedents for efforts to change social norms and behaviours, especially in areas of health and wellbeing. Examples include shifting social norms and behaviours in relation to health issues such as mental health, disability, HIV/AIDS, smoking, bullying, or drink driving[50,51]. Additionally, a diverse body of literature has investigated topics relevant to the mental models identified through our consultations (i.e., racism, socio-economic inequity, and feminism)[52]. A strong focus of these change initiatives, especially in health and wellbeing, has been on using strategies that target changing community attitudes, with a secondary focus on behaviour as a secondary outcome[50]. The implication is that **both attitudes and behaviour are important, and both should be targeted for change and measured**. Comparatively, the literature within this field on addressing structural, systemic issues is still developing. For example, in examining the role of implicit bias in systemic racism, Payne and Hannay (2021) argue that changes are needed to be targeted at policies and processes rather than attitudes in order to effect and sustain change.

5.2 Case studies of demonstrated approaches to shifting mental models

We present here three case studies to illustrate elements of initiatives that have contributed to shifting attitudes, behaviours, or mental models. These were selected to demonstrate the

breadth of actions that have been taken to generate societal shifts. Case studies were developed in the absence of examples that specifically document shifts in mental models holding in place systems similar in scale and complexity to the early childhood system. Case studies were developed using publicly available information in Australia and were selected to highlight scalable strategies that demonstrate evidence of improved outcomes. These are presented at various points of implementation to provide guidance to the EYC about the types of strategies that could be driven across the system to achieve widespread change.

In considering these case studies, it is important the EYC note that it is not possible to retrospectively identify mental models from an earlier time that may have since shifted. Historical mental models that are likely to have been acted upon through the initiatives were instead inferred from published information that described the situation and actions taken.

5.2.1 Framework for interpreting case studies

To anchor case studies to a framework, actions taken in each example were aligned to the Stephan, Patterson, Kelly and Mair's (2016) proposed integrative framework for change processes[53] presented in Figure 14. In their systematic review of mechanisms driving positive social change, Stephan et al. (2016) identified two overarching approaches: deep-level social change and surface-level impact. Deep-level social change was characterised by its quality and durability. It was said to alter beliefs and attitudes, leading to pervasive, durable, and embedded transformations that evolve slowly over time. In contrast, surface-level change was thought to produce rapid behavioural shifts, often driven by extrinsic motivations like financial incentives or social pressure. However, such changes were described as tending to be temporary.

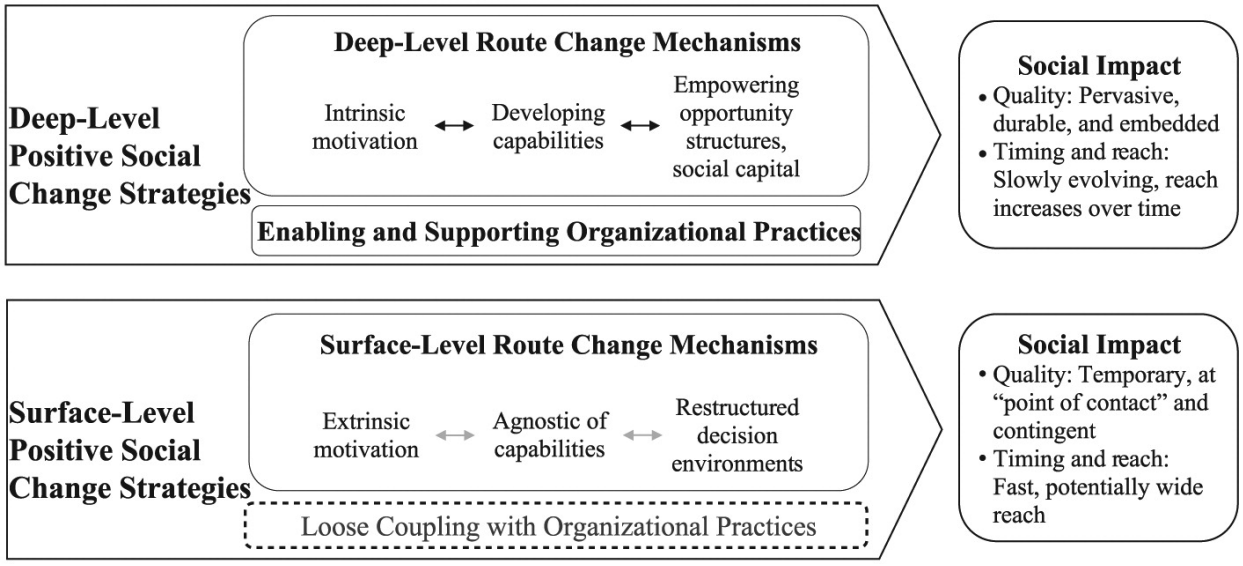
To facilitate deep-level social change, the authors posited that several key features were essential, which can be applied to approaches to shifting mental models[53]:

1. **Motivation – Focus on Intrinsic Motivation:** Strategies should target intrinsic motivations, addressing attitudes and beliefs. Effective practices include establishing an inspiring and shared vision to instil a sense of collective purpose and providing mechanisms for continuous evaluation and feedback. These practices demonstrate quick wins and motivate progress toward project goals.
2. **Capability – Empower Actors:** Simultaneously developing capabilities is crucial to empower actors to drive change. When individuals possess motivation but lack the necessary skills or resources, it can lead to resistance and feelings of overwhelm. Practices for empowerment include harnessing local capacity, fostering connective leadership to maintain alliances among diverse stakeholders, and enhancing actors' skills and efficacy for engagement.

3. **Opportunity – Establish Empowering Structures:** Creating empowering structures and practices is essential for facilitating change. This may involve inclusive project governance, reconfiguring environments, and structures, and building sustainable resource bases that encourage innovation rather than hinder it.

While this framework was developed to organise evidence for social change initiatives that target attitudes and behaviours, and it has not been evidenced for shifting mental models, it provides principles that could be tested for implementing efforts to shift mental models at scale. Importantly, we recognise this framework has limitations in broad application to mental models. Mental models can take many forms, and not all mental models are likely to be shifted in the same way. Rouse and Morris (1986) categorise the variety of mental models that people hold on two dimensions – level of behavioural discretion (none to full) and nature of model manipulation (implicit to explicit)[40]. In this categorisation, mental models about social systems and child development would primarily be categorised as implicit with a high level of behavioural discretion. That is, people are not explicitly aware, nor can others readily observe, how mental models are being applied in decision making (implicit rather than explicit) and actors have choice in what actions they take or do not take (high choice tasks are those that involve problem solving and decision making). We considered Stephan et al.'s (2016) framework to have relevance to mental models with high levels of behavioural discretion that are implicitly applied, with attitudes and behaviours sharing these characteristics, thus enabling application within the context of this report.

Figure 14 Integrative framework for positive social change processes by Stephan et al. (2016)



5.2.1.1 Case study 1: A local approach to improving the development of children in a socio-economically disadvantaged community

The challenge:

In 2009, 71.4% of children starting school at Westfield Park Primary School were developmentally vulnerable on one or more domains of the AEDC[54]. "Westfield Park Primary School serves a highly transient and fractured low socio-economic community in Perth's south-east corridor. The school caters for children from Kindergarten to Year 6 and has approximately 260 children enrolled. One quarter of families are from culturally and linguistically diverse backgrounds. A high level of need and low level of service uptake has historically presented challenges to the school."[54]

Potential mental models holding conditions in place:

Understanding of mental models was developed through interviews with school principal and social worker in 2017:

- Low expectations for children and of families (MM 11 Australia is a meritocracy; MM 15 You get what you deserve)

Actions taken to shift mental models:

1. **Focus on community development**: employed a community development worker (social worker) in the school to facilitate partnership building with the community.
2. **Invested in early intervention**: school established activities to connect with families earlier in the life of the child to provide support to families in the community prior to children commencing school.
3. **Strengthened the school's student support services**: built expertise of staff to support children with developmental difficulties, trauma, attachment issues and to understand families living in poverty.

Resources committed:

- Dedicated leadership with a vision for how the school could partner with the community in the interests of children.
- Funding allocated to change initiative and invested in evidence-based responses relevant to the context of the community.
- Dedicated staff employed to enact change initiatives.

Results:

- Reduced developmental vulnerability for children to 26% in 2015, sustained over successive AEDC collections[54].
- Increased parental engagement in school activities, including those prior to starting school[54].
- Parents connecting with school to discuss challenges they are facing[54].

Alignment to social change framework:

Practices evident:

- Motivation: building a shared vision, generating quick wins, evaluating and providing feedback:
    - Actions: strong organisational leadership to build a shared vision, data driven communication and education of staff about the context of children and the community, framing of the issues and effective routes to mitigate these helped

educators see the potential to be better equipped to work with children and the community (intrinsic motivation)

- Capability: building on local knowledge and local capacity, involving relevant stakeholders, developing project skill base:
    - Actions: training for staff, employing skilled social worker, connecting with community
- Opportunity: leveraging project relationships, building a sustainable project resource base, innovating new opportunities:
    - Actions: partnering with local services; making spaces in the school available for 'non-school' activities, creating opportunities for connections with families outside of routine school business

5.2.1.2 Case study 2: A statewide approach to responding more effectively to children's behaviours in educational settings

The challenge:

Children present with challenging behaviours in school environments that can interfere with their engagement, learning and social interaction, and impact teachers and other students. Exclusions often result from behavioural incidences, and these are disproportionately experienced by children living in poverty, with disability or with an Aboriginal or Torres Strait Islander background[55].

Potential mental models holding conditions in place:

- Children make behavioural choices (individualism – problems are the result of the individual rather than broad societal issues; us vs. them thinking - good vs bad children)
- Poor behaviour must be responded to with a consequence to reduce its occurrence (individualism – solutions should occur at the level of individual choice or behaviour)

Actions taken to shift mental models:

1. **Increased research:** Contributed to a growing understanding that trauma impacts children's brain development and behaviour[56]. South Australian research identified that the rate of children experiencing trauma is higher than typically expected with around one in four children notified to child protection by 10 years of age[57].
2. **Policy focus:** Inquiry into Suspension, Exclusion and Expulsion Processes in South Australian Government found that exclusionary discipline is not effective in reducing challenging behaviour and can exacerbate challenges and inequities experienced by students in the education system[55].
3. **Champions shifting practice:** Schools with high rates of behavioural challenges recognised a need to do things differently and implemented new approaches to shift school policies, practices and environments. Early adopters of trauma-informed practices shared their approach with other schools.
4. **Invested in early intervention:** Department invested in a pilot program to deliver trauma-informed practice training to schools and evaluated the implementation of learnings about the pilot. Lessons from the evaluation have been applied to the continued roll out of the initiative.

Resources committed:

- Researchers invested time and resources to identify prevalence and apply learnings about children's brain development to a challenge that was being experienced in schools. This enabled communication to government about the need for action at a population level.
- Schools invested time and resources to shift practice. This required dedicated leadership, time, and environments that were supportive of educators to enable their learning, reflection, and personal and professional development.
- Department invested resources to pilot and evaluate an initiative to apply the change in practice more broadly across the school system.

Results:

- Schools that have embedded trauma informed practices reported reductions in challenging behaviour, calmer classrooms, and improved teacher wellbeing[58].

- Shifts across the system need to be sustained to track longer term impacts on student engagement, suspensions and exclusions, and learning outcomes.

Alignment to social change framework:

Practices evident:

- Motivation: building a shared vision, evaluating and providing feedback:
  - Actions: research field invested in dissemination of information about impacts of trauma on children and their learning, school leadership invested time and effort trialling trauma-informed initiatives, schools and education department invested in identifying the current state and understanding factors influencing children's school exclusions to build a shared understanding of how these could be addressed, strong leadership within education department drove a funding case based on linking research evidence to practice challenges, framing of the issue and an evidenced response supported educators and leaders see potential to be better equipped to work with children impacted by trauma (intrinsic motivation), education department invested in evaluation
- Capability: developing project skill base:
  - Actions: training for staff, support to schools to implement approach
- Opportunity: building a sustainable project resource base, innovating new opportunities:
  - Actions: developing training delivery partnerships with researchers in trauma-informed practice;

5.2.1.3 Case study 3: A national approach to reducing smoking prevalence

The challenge:

In the 1950s smoking was a social norm. Smoking harms were investigated as early as the 1700s[59]. Harms reported by some researchers were dismissed and countered by the tobacco industry until the mid-1960s, with the first official report released by the U.S. Surgeon General on the negative health effects of smoking[60]. Smoking uptake in youth was influenced by what they observed in their homes but also in the community (peers).

Potential mental models holding conditions in place:

- Smoking relaxes you, helps you manage a stressful day
- Smoking is cool (movie stars/characters in movies/shows smoked)

Actions taken to shift mental models:

1. **Awareness campaigns:** Universal and targeted anti-smoking campaigns and communications that raised awareness about the harms of smoking and denormalised smoking (through the media, on packaging, by health professionals, through school education)[61]
2. **Championing new programs:** Support programs and technologies developed to help people quit smoking
3. **Policy focus:** Changes to laws to place limits on smoking in public places. Imposition of taxes to reduce the affordability of tobacco products.

Resources committed:

- Decades of research in a battle against tobacco industry funded research was undertaken to demonstrate smoking related harm and the costs to individuals and societies.
- Research was funded to develop an understanding of factors influencing smoking uptake, addiction, and cessation – this highlighted the need to target adolescents to prevent smoking uptake.
- Social and political support for means to address the factors driving smoking uptake[17].
    - Price measures are considered a critical component of comprehensive approaches to tackling tobacco use in adults and adolescents. The impact of increasing the price of cigarettes on product demand, specifically among adolescents, has been well established for more than three decades. In Australia, increased cigarette prices have been strongly associated with reductions in smoking across the general population, lower SES quintiles and adolescents.
    - Appropriately funded, sustained smoke-free environment policies targeted at the adult population (in particular, stronger clean indoor air restrictions) and adult-targeted mass media campaigns (as part of overall per capita national tobacco control funding) to reduce smoking by adolescents[62].
- Sustained effort over time[17]
    - Sustained efforts have been applied in education, monitoring and enforcement of the law. Evidenced by the current need to tackle vaping among youth.
    - For cigarette sales, noncompliant retailers face substantial fines. For example, in NSW the Act imposes penalties of up to $11 000 for individuals selling a tobacco product to

a minor, and $55 000 for corporations, with higher penalties for repeated breaches. Similar laws exist in other Australian states and territories.

Results:

- Australia has seen consistent and marked reductions in both adolescent (aged 12–17 years) and young adult (aged 18–24 years) smoking.[17]
- The average age of smoking initiation, or first full cigarette smoked, has increased from 14.2 years in 1995 to 15.9 years in 2013[17].
- Smoking continues to be disproportionately taken up in communities facing socio-economic hardships.[17]

Alignment to social change framework:

Practices evident:

- Motivation: building a shared vision, evaluating and providing feedback, generating quick wins:
    - Actions: research and its dissemination through multiple channels reframed mental models about tobacco smoking and its related health impacts (increased intrinsic motivation through provision of high quality evidence information, delivered consistently across points in the system), monitoring and tracking smoking rates and smoking uptake provided feedback on the successfulness of strategies deployed to reduce smoking behaviours, exerting normative or coercive pressure (increased extrinsic motivation) on targets through shock messaging and imagery about the harms of smoking (presented at point of purchase and in media advertising) and the application of cost pressures and restrictions on places people could smoke
- Capability: developing project skill base:
    - Actions: strong national leadership drove investment in initiatives, research and dissemination of information supported efforts across sectors (health, education, social services) and points of contact in the system with smokers to develop and implement effective smoking cessation programs and smoking prevention uptake initiatives,
- Opportunity: building a sustainable project resource base, innovating new opportunities:
    - Actions: research prioritised and funded, implementation supported by drawing on existing health service providers and resourcing to deliver evidence-based interventions, investments in development of new technologies to improve efficacy of smoking cessation programs/interventions, changes in laws to restructure decision making environments (e.g., point of sales) to facilitate implementation of framing evidence

5.2.2 Summary of case studies

Case studies illustrate the potential for the Stephan et al. (2016) framework for social change to be applied in the development of a strategy for shifting mental models holding current conditions in place in the Australian early years system. That is, elements of the framework were clearly evident across the three case studies, demonstrating key ingredients for successful implementation of efforts to impact the mental models currently operating in the Australian early years system. These ingredients could be considered to establish authorising environments that improve the success of efforts to shift mental models identified in this report. Notably, the specific ingredients at each point in the system differ to some extent, but at each point there are elements that address motivation, capability and opportunity. In the next section, we highlight current programs, training and initiatives that provide promise for informing any initiatives in relation to shifting the mental models identified in this report. Given a dearth of research specific to shifting many of the specific mental models identified in this report, we propose the EYC consider advocacy for the development of this evidence base (i.e., funding and effort directed to its development in Australia).

5.3 Programs and policies that may contribute to a shift in ECD mental models

This section presents promising practices that could contribute to shifting the mental models identified in Stage 1 of this project. For each mental model, we highlight examples of recent work and current approaches that should be trialled for their efficacy in shifting mental models before taken to scale in any national strategy. While the primary goal of this research is not always to change mental models per se, some of the interventions described (e.g., culturally led models of care, father-inclusive practice) directly challenge mental models that contribute to current state outcomes. Thus, while these studies do not directly measure change in mental models at a societal level, they provide compelling evidence of how programs and policies can change to directly improve ECD outcomes and potentially contribute to a shift in mental models.

5.3.1 Focus area 1: Strategies for changing mental models about child development and parenting

5.3.1.1 Culturally safe models of care

Culturally safe models of care are those that are responsive to the cultural, social, and linguistic backgrounds of those they serve, to provide effective and respectful care. Because culturally safe care is grounded in the needs and worldviews of people from culturally and linguistically diverse

backgrounds, it represents a promising strategy for challenging mental models that propose that parenting, families, and child development should look at certain way.

Compelling evidence for the clinical and cost effectiveness of culturally safe care is presented in a series of studies that examined Birthing in Our Community (BiOC). BiOC is a novel service aimed at reducing preterm births among Aboriginal and Torres Strait Islander babies. It operates based on Aboriginal and Torres Strait Islander worldviews and employs an Aboriginal and Torres Strait Islander workforce and governance, with a focus on connection to culture and community. Most child fatalities happen within the first year of life, half due to perinatal issues like preterm birth, with Aboriginal and Torres Strait Islander families experiencing disproportionally high rates.

Studies of BiOC compared clinical and economic outcomes for Aboriginal and Torres Strait Islander mothers receiving BiOC care with a similar cohort receiving standard care. The study was non-randomised and controlled for potential confounders through propensity score matching. Results show that BiOC care led to significantly reduced premature births, improved antenatal attendance, increased breastfeeding at discharge, and lower costs compared to standard care. These promising results show that innovative services that are culturally safe and of high quality are urgently needed to remedy the maternal and infant health disparities in Aboriginal and Torres Strait Islander peoples.

5.3.1.2 Implementing father-inclusive practice

Father-inclusive practice refers to a broad class of program, policy, and practice initiatives that aim to support fathers in their parenting role, engage them in co-parenting, and make them feel more welcome in parenting and ECD spaces. Such practices challenge mental models around the gendered nature of care, and their implementation ideally both draws on and promotes a strength-based approach to fathering.

There are widespread recommendations across jurisdictions for ECD spaces to consider efforts to adopt father-inclusive practices. Evidence regarding father-inclusive practice remains limited, both in terms of quantity and the robustness of conclusions that can be drawn from it.[63-65] The evidence base includes observational studies documenting barriers to engaging fathers in parenting programs,[63-66] and quasi-experimental and experimental evidence (e.g., randomised controlled trials) that explore how different father-inclusive practice strategies may be used to promote father engagement.[64] Specific to the Australian context, a study of 210 Australian practitioners working with families found that the vast majority believe that father engagement was important, however actual rates of father engagement in their services were low.[67]

Despite the limitations of the evidence regarding father-inclusive practice, it provides a useful case study to demonstrate how implementation of any strategy to change mental models likely

requires a sustained and multi-level approach. Examples of policy and practice implementation of father-inclusive practice are largely drawn from Lechowicz et al.'s review[63] and are illustrated in Figure 15. Additional guidance specific to the Australian context can be found in the following documents:

- Engaging fathers: Evidence review.
- Introduction to working with men and family relationships guide: A resource to engage men and their families.
- Practitioners' guide to men and their roles as fathers, men's health resource kit.

Figure 15 Putting it into practice: Implementation suggestions for father-inclusive practice

Audience	Implementation suggestions
Practitioners	• Don't assume mothers are the primary caregiver; ask families who is the relevant point of contact and how parenting decisions are made. • Directly invite fathers to participate in parenting programs. • Undertake professional development around father engagement to address deficit-based views of fathering.
Programs	• Engage both parents in parenting programs. • Highlight why father involvement is important and provide details about program content and effectiveness. • Ensure content is tailored specifically for fathers.
Organisational Policy & Practice	• Ensure that organisational policies take a strengths-based approach to fathering. • Implement father-inclusive practices, such as advertising directed toward fathers, offering sessions outside office hours.

5.3.1.3 Changing the way parenting policies and programs are framed.

Framing strategies can be used to challenge mental models that frame parents as solely responsible for ECD outcomes and encourage more support for ECD advocacy and investment.

Prior research conducted with the Australian public by the Parenting Research Centre and FrameWorks Institute directly tested the impact of different ways of framing parenting on Australian public support for different parenting initiatives.[25] The first used an *Effective Parenting*

narrative, in which the initiative was framed as supporting parents by creating conditions that enable them to parent effectively. [25] The first used an *Effective Parenting* narrative, in which the initiative was framed as supporting parents by creating conditions that enable them to parent effectively. The second used a *Child Development* frame, in which the initiative was framed as a means of ensuring that all children can thrive and in which supporting parents was highlighted as a means of achieving this.

These two different frames had pronounced effects on public support for the general initiative, as well as for specific ECD policies, including: publicly funded childcare, mandated family-friendly work schedules, publicly funded parenting centres, and support for low-income and other marginalised families. Willingness to engage in civic action or pay more taxes to support the initiative were also measured. While the *Child Development* frame increased support for the general initiative and all ECD policies, the *Effective Parenting* frame had the opposite effect, reducing support for ECD initiatives. Furthermore, the *Child Development* frame increased willingness to engage in supportive action, while the *Effective Parenting* frame reduced willingness to engage in these actions.

Putting it into practice: Resources for supporting organisations to implement evidence-based framing recommendations for communicating about parenting.

The FrameWorks Institute and the Parenting Resource Centre have made a variety of resources available for communicators wishing to engage more helpful mental models around parenting and build support for ECD initiatives. These include:

- A Reframing Parenting eLearning Course
- A Communications Toolkit
- A Reframing Parenting Webinar

Figure 16 Promising practices for promoting more helpful mental models about child development and parenting

Strategy	Description	Supporting Evidence
Culturally safe models of care	Culturally safe models of care challenge prevailing mental models about how parenting and child development services should look by centring the perspectives of Aboriginal and Torres Strait	Compelling evidence is derived from an Australian non-randomised trial comparing clinical and economic outcomes for Aboriginal and Torres Strait Islander women receiving standard maternity care versus maternity care that had been redesigned in line with Birthing on Country Guidelines.[18,68]In addition to improved clinical outcomes, including better

	Islander peoples in service design.	antenatal attendance, lower preterm birth rates and higher exclusive breastfeeding rates,[69] culturally led care was associated with cost savings of $4810 per mother-baby dyad.[70]
Father-inclusive practice	Father inclusive practice refers to policies and practices that aim to support fathers in their parenting role and engage them in co-parenting. These may be used as part of a strategy to address mental models about the gendered nature of care.	A 2019 narrative review of father-inclusive practice summarised evidence from observational, quasi-experimental, and experimental studies regarding various father-inclusive policies and practices[63], however a 2023 systematic review found that conclusions regarding specific father-inclusive practices that promote father engagement are limited by a lack of data.[64]
Framing strategies	Framing strategies are communication tools used to shift the way that the general public thinks about certain issues. There is evidence that these strategies can be used to challenge mental models around children and parenting and garner more support for ECD initiatives.	Experimental research with over 7000 Australian participants has demonstrated that changing the way parenting initiatives are framed has a significant impact on the level of public support for these initiatives. This evidence has led to the development of several resources to guide communicators when talking about parenting. However, there is currently no evidence regarding implementation effectiveness of these resources or the use of framing strategies in “real world” settings in Australia.

5.3.2 Focus Area 2: Strategies for changing mental models about governments and policymaking

5.3.2.1 Shifting power dynamics to cultivate community control and trust

A key strategy for overcoming problematic mental models that undermine engagement and trust in health services is to shift power dynamics so that those who are most marginalised within early years systems are represented in service and systems leadership. One important example of this seen in the work of Aboriginal Community-Controlled Health Organisations (ACCHOs). In Australia, ACCHOs are defined as any “primary health care service initiated and operated by the local Aboriginal community to deliver holistic, comprehensive, and culturally

appropriate health care to the community which controls it, through a locally elected Board of Management."[71] Because they are driven by Aboriginal and Torres Strait Islander leadership and are accountable to their local communities, ACCHOs generate trust and relationships with their peoples. A recent review found that investment in ACCHOs has been evidenced to provide returns in terms of access to and quality of primary health care, as well as building capacity of the Aboriginal and Torres Strait Islander workforce.[72] An important opportunity for future research is understanding how representation of marginalized groups within ECD systems might build trust and engagement with the system and shift mental models about government.

Critical reflection point: How might mental models about who is responsible for creating change stymie genuine systems transformation? How can changemakers best engage in critical self-reflection about the mental models they bring to the systems change process?

5.3.2.2 Changing how governments and their roles are framed.

Framing strategies are a promising practice for helping the Australian public see the role of governments in promoting positive ECD outcomes. To overcome confusion about what government is and does, they recommend using the *Public Structures* explanatory metaphor as a way of framing the function of government.[73] This metaphor provides a simple model of government that highlights its mechanistic function in promoting the wellbeing of the nation; and (2) draws explicit links between government and the structures that people see as a public good (e.g., hospitals, education, and transport).[74,75] Prior research in Australia has also highlighted that one positive mental model that members of the Australian public hold is the view of government as a partner.[25] Accordingly, it has been recommended that communicators attempt to leverage this mental model when describing the role of governments in supporting children and families.[25]FrameWorks Institute also provides several framing recommendations for communicators to help the public see how government policy is connected to children's issues. Specifically, it is recommended that framing strategies emphasize how broader social issues affect children, so that people can more readily appreciate the connections between social policy and ECD outcomes.[73]

5.3.2.3 Changing the way early child development is framed

Case Study: A Core Story for Child Development

Building on their prior work in Australia, FrameWorks Institute recently undertook a series of studies in collaboration with CoLab to identify framing strategies that would best support current ECD advocacy efforts in Australia.[5,15,23,76-78] The resulting approach - the *Core Story of Early Child Development* represents an empirically-tested framing strategy that helps the Australian public understand the importance of ECD as a social issue that requires sustained investment in order to achieve more equitable outcomes over the short and long term.

Based on extensive testing of different issue frames with a representative sample of the Australian population, the central premise of the *Core Story* is that promoting early development and learning greatly enhances children's *health*. With health and wellbeing taking centre stage in both politics and society, emphasising this broader goal was found to engage audiences and expand their thinking around possible solutions for ECD challenges.

The *Core Story* research also highlights the importance of drawing attention to the fact that many Australian children do not have the support they require to achieve equitable health and wellbeing outcomes. Their research found that drawing attention to these inequalities triggers a powerful sense of justice in the Australian public, driving people to act. This call-to-action gains further traction by appealing to notions of fairness, advocating for equal opportunities for all children to thrive.

Several ECD advocacy initiatives in Australia have drawn on this research, including:

- The B4 Early Years Coalition
- NAPCAN
- Words Grow Minds SA
- First 5 Forever
- Brighter Beginnings NSW
- Every Child Coalition
- Thriving Kids Queensland Partnership

Resources for supporting organisations to implement evidence-based framing recommendations for communicating about child development.

The FrameWorks Institute and the CoLab have made a variety of resources available for communicators wishing to engage more helpful mental models around early child development and build support for ECD initiatives. These include:

- Core Story eLearning Modules
- Core Story Quick Start Guide

Figure 17 Promising practices for promoting more helpful mental models about government

Strategy	Description	Supporting Evidence
Shifting power dynamics	Systems and service leadership by groups who have historically been marginalised within ECD systems is a promising strategy to build trust and engagement with systems and services, including those delivered by governments. Aboriginal Community Controlled Health Organisations are an important example of such initiatives.	A recent review documented the myriad benefits associated with ACCHOs in Australia.[72] However, to our knowledge, no research has examined how leadership by, and representation of marginalized groups within government systems and services affects mental models about government or associated metrics, such as trust and engagement.
Framing strategies – government	Prior work by the FrameWorks Institute has identified that one helpful mental model held by the Australian public is of the role of government as a partner, and it has been suggested that this is leveraged in ECD communications efforts. Further, several recommendations have been provided about how to frame connections between ECD outcomes and social policy issues.	Framing strategies to build more positive views of government have not been comprehensively tested in Australia.
Framing strategies – early child development	Extensive work by CoLab and FrameWorks Institute in Australia has led to the development of the *Core Story for Child Development*, a set of framing recommendations for communicators aiming to engage the Australian public in ECD advocacy efforts.	The framing strategies embedded in the *Core Story for Child Development* have been experimentally tested with over 7000 members of the Australian public. Furthermore, recommendations from this body of work have informed several ECD initiatives across Australia, as noted in the *Core Story* case study. However, implementation trials or evaluation of real-world change efforts are currently lacking.

5.3.3 Focus Area 3: Strategies for changing mental models about inequity and disadvantage

5.3.3.1 Changing parents' perspectives about the value of investment in children

As noted in section 4.5, one of the ways that mental models about inequality can influence ECD systems and outcomes is through internalisation by those whom the mental model is about. For example, internalisation of mental models about poverty can lead to those living in poverty to experience self-stigma and lower self-efficacy. Furthermore, prior research conducted in the US has demonstrated that parents with higher education and socioeconomic status have a better understanding of how parental investment shape child development.[79] These differences in beliefs start early in a child's life and mirror the disparities seen in children's outcomes.

To address this, US-based research has tested different ways of changing parental beliefs about child development, and whether these improve parent and child outcomes, especially among families of lower socioeconomic status. This research involved trials of two programs, across two randomised control trials.

The first program they tested focused on newborns and provided parents with videos to enhance their knowledge and skills. The second, a home visiting program, was more intensive and designed for parents of toddlers. Both programs had positive effects on parent's beliefs about child development. They found that while both programs led to short-term changes in parent beliefs, the home visiting program was the only program to lead to lasting positive impacts on parental behaviour and child outcomes. Although this evidence is promising, it is important to note that such interventions are not able to address societal stigma and social exclusion of families from low socioeconomic backgrounds. Although, it does suggest that in person engagement and relationships are important to efforts to changing mindsets (e.g., deep canvassing).

5.3.3.2 Multi-level and multi-strategy approaches to addressing individual and institutional racism

Evidence regarding initiatives to address problematic mental models about race and racism in Australia is limited, and there is a clear need for large-scale implementation trials in this area. Nevertheless, there is emerging evidence that multi-level, multi-strategy interventions hold promise, and there are some compelling examples of real-world implementation of these initiatives in Australia.

For example, one mixed-methods, quasi-experimental study considered the feasibility and acceptability of a whole-school, multi-level, and multi-strategy intervention that seeks to enhance the effectiveness of bystander responses to racism and racial discrimination in primary schools. The study found significant improvements in the prosocial skills of students and the

inter-racial climate within intervention schools in comparison to schools who did not receive the intervention. Additionally, qualitative data revealed a positive change in teacher attitudes and behaviours towards racism, as well as a reduction in interpersonal racial discrimination among students, an improvement in peer prosocial norms, a commitment to anti-racism, an increase in knowledge of proactive bystander responses, and an enhancement in confidence and self-efficacy to intervene and address racism. While these findings do not directly translate to ECD outcomes, they provide support for the malleability of mental models about race and racism in Australia and may be informative for trials of multi-level strategies to address racism in ECEC settings.

Another example of multi-strategy, multi-level approaches to addressing racism is illustrated by the recent National Anti-Racism Framework Scoping Report. These include collection of relevant data to raise awareness and track progress against targets, supporting the process of truth-telling, mandatory cultural awareness training, and media regulation and standards. While evaluating the impact of such multi-level, multi-strategy initiatives is complex, useful guidance is provided by a recent evidence review of the role systems thinking in accelerating and scaling ECD promotion efforts.[80] This review highlights the need for data and consensus on indicators that will allow for the evaluation and comparison of impacts of systems change efforts across contexts.

Case study: Hunter New England Closing the Gap

Hunter New England Local Health District, NSW has employed a closing the gap model which is aligned to the National Agreement on Closing the Gap. The Agreement commits Australian governments to reduce Indigenous disadvantage with respect to life expectancy, child mortality, access to early childhood education, educational achievement, and employment outcomes.

The Hunter New England Closing the Gap Model illustrates the need for coordinated, multi-level strategies to address individual and institutional racism, which are associated with Indigenous disadvantage across multiple health outcome indicators. The model seeks to advance the aims of Closing the Gap, by building a culturally safe and respectful organisation and realising three impact areas or objectives:

- culturally competent staff,
- culturally safe workplaces, and
- culturally respectful health services.

Key strategies to achieve this include leadership; consultation and partnerships; data, evidence and evaluation; policy and procedures; strategic and service planning; specific Aboriginal health initiatives; resource allocation and accountability; recruitment and retention; staff education and training; physical environment; performance monitoring and feedback.

Examples of specific initiatives associated with the above strategies and intended to address racism include forming an Aboriginal and Torres Strait Islander Strategic Leadership Committee, consulting local communities, establishing a Counter Racism Policy, launching a Cultural Redesign Initiative, adding Cultural Appropriateness as a condition of employment, and rolling out a cultural respect education program.

This model has not yet been comprehensively evaluated. Hunter New England reports some outcomes have been stable, some have improved and some have worsened. Improvements include reduced gaps between Indigenous and non-Indigenous patients regarding unplanned and emergency ED attendances and acute mental health readmissions within 28 days.

However, Hunter New England also reports that programs which have sought to confront institutional racism, such as cultural respect programs, have been challenging for staff, contributing to tensions in some cases. They have found that these tensions are most effectively addressed through leadership, team building to foster understanding.

5.3.3.3 Changing the way poverty, racism, and inequities are framed.

Across the broad areas that comprise Focus Area 3, one recommendation with some evidence of effectiveness is to use framing strategies appeal to the Australian public's belief that society should be fair and equal.[5] Based on research by FrameWorks Institute and CoLab, it is recommended that any call to action on addressing inequities be made with an explicit appeal to supporting all children to thrive, no matter what their circumstances are.

Recommended framing strategies for addressing mental models about poverty, inequities in child development, and racism **have largely been drawn from the FrameWorks Institute and tested with US and UK audiences.** While recommendations drawn from Australian literature and our consultations were consistent with these recommendations, these require testing with Australian audiences to determine their effectiveness.

Framing recommendations from the FrameWorks Institute[39,81] for communicating about racism include emphasising what structural racism looks like and using a systems design lens when talking about racism. A systems design lens can be used to highlight the ways in which structural racism is part of a system that has been intentionally designed. This opens up opportunities to think about the ways that such systems can be intentionally dismantled. Further, it is recommended that communicators highlight the role of policy and programs in addressing or compounding racial inequity,[39] and provide examples of feasible actions that can be taken to address racism at the organisational, community, state or national levels.[81] Finally, it is recommended that communicators foreground the ways in which racism harms children, while also conveying that racism creates whole-of-society harms that we are collectively responsible

for addressing.[39,81] Specific strategies for communicating about racism in child and family advocacy work are described in detail by the FrameWorks Institute here and here.

When communicating about poverty, research from the FrameWorks Institute suggests to use alternative mental models, such as a **Systems Mental Model,**[32] which explains how societal systems create and maintain poverty. This mental model helps to counter the idea that individuals are to blame for poverty and garner support for systemic solutions. It also helps to counter fatalism by drawing attention to ways of redesigning complex systems. Alternatively, the **Common Humanity Mental Model** can be used to convey the idea that poverty can affect people from all walks of life. This mental model aims to reduce stigma towards those living in poverty by emphasising that poverty can happen to anyone. It should be noted, however that Australians already show a strong degree of support for the proposition that people living in poverty are "just like me". Among a nationally representative sample, 58% of respondents agreed that people living in poverty were fundamentally the same as them, while only 17% disagreed with this statement.[27]

In line with recommendations about framing strategies for communicating about racism, FrameWorks Institute research underscores the need to highlight systemic inequality (rather than individuals) as the problem,[82] and appeal to values of fairness by emphasising that all people have a right to dignity.[83] Specific strategies for communicating about poverty can be found here, here, and here.

Figure 18 Promising practices for changing mental models about racism

Strategy	Description	Summary of Evidence
School-based anti-racism initiatives	Programs to increase students' and teachers' understanding of racism and capacity to take action against racism and racial discrimination are an emerging strategy as part of a whole-of-community approach to addressing problematic mental models about race and racism.	Evidence is drawn from a quasi-experimental study with 645 students across 6 Australian schools.[19] This study provides initial evidence that school-based interventions can change student and teacher attitudes and behaviours regarding race and racism. An opportunity for future work is to extrapolate such interventions to ECEC settings.
Multi-level, multi-strategy organisational approaches	Multi-level, multi-strategy approaches to racism. These approaches recognise that changing racist mental models and behaviours within organisations and communities require comprehensive and coordinated efforts.	Useful examples of multi-level, multi-strategy approaches are provided by the Hunter New England Closing the Gap initiative, and the recommendations made in the National Anti-Racism Framework Scoping Report. However, the implementation of these initiatives has not been evaluated.
Framing strategies	FrameWorks Institute have developed several framing strategy recommendations for communicating about racism that highlight the need to emphasise racism as a structural issue and to draw attention to its harms for children.	Framing recommendations regarding racism were generated based on data from the US and are yet to be trialled in Australia. Specific framing strategies for Australia may also need to actively address common methods of denying racism that have been found to operate in Australia.[37]

Figure 19 Strategies for changing unhelpful mental models about poverty and its impact on child development

Strategy	Description	Summary of Evidence
Home visiting interventions	Home visiting interventions provide parenting support in the home for families who are exposed to various risk factors (e.g., poverty). There is some evidence that they can serve to shift parent beliefs about child development, with positive impacts for ECD outcomes.	A US study involving two RCTs with socioeconomically disadvantaged families found that both brief parenting interventions and more intensive home-visiting interventions led to change parental beliefs about child development, but only home visiting was associated with more sustained changes in beliefs and changes in parent behaviour and child outcomes.[79] from the US. While RCTs of Home Visiting interventions have been conducted in Australia,[79] there is currently no Australian evidence demonstrating whether such interventions change parental beliefs about child development.
Framing strategies	FrameWorks Institute[32,84] and Anglicare Australia[27] have made several recommendations regarding alternative mental models about poverty and how they might be communicated in practice. These include using systems mental models and common humanity mental models to shift away from individualistic mental models that blame people living in poverty for their circumstances.	While the *Core Story for Child Development* developed by FrameWorks Institute and CoLab[15] contains evidence-based framing recommendations for motivating Australians toward more equitable ECD outcomes, the impact of these framing strategies on mental models about poverty in Australia has not been directly tested.
Economic interventions	Economic interventions, such as unconditional cash transfers, to promote child development represent a	Evidence relevant to the Australian context is largely drawn from a US-based 3-year RCT, which compared the impact of a high and low monthly cash gift for families living in poverty

	shift away from programs that frame poverty and its impact on child development as an individual problem with an individual solution. These programs show mixed benefits for families living in poverty in high-income countries.	on child development and a range of associated outcomes.[85] In this RCT, unconditional cash transfers improved toddler's healthy food intake but not health, sleep, or healthcare utilization,[86] nor were any differences found in maternal substance use or expenditure.[87] Further follow-up is required to determine if such programs confer benefits over the longer term. Furthermore, while such strategies represent a way of addressing the impacts of poverty on child development that moves beyond problematic individualistic mental models, they do not directly address these mental models.

5.3.4 Focus Area 4: Strategies for changing mental models about integrated early years systems

In general, we found a dearth of evidence regarding strategies for addressing problematic mental models about the nature of systems, however we note that change in this area is likely contingent on addressing some of the mental models discussed in Focus Areas 1 and 2. Accordingly, strategies in those areas represent an important starting point for achieving transformative change across Focus Area 3. An additional strategy for change that may hold some promise for addressing mental models that exist at the interface of service systems and the families they are designed to serve is the use of social prescribing hubs, described below.

5.3.4.1 Changing service experiences through social prescribing hubs

One potential way of addressing problematic mental models about the nature of systems is to provide families with integrated care that addresses their health and social care needs in a holistic way. Such models of care are referred to in the literature as *social prescribing hubs*. Social prescribing is based on the premise that many health issues co-occur with, and are influenced by, social and lifestyle factors. By linking families with community resources and support networks, social prescribing aims to address the social determinants of health, while also responding to immediate health needs.[88]

A recent review of international evidence explored how the incorporation of efficient integration between health and social care within Hub-based models of care could enhance mental health outcomes for children facing disparity.[88] The review found that, if done effectively, Hubs could improve mental health outcomes for children facing adversity. In Australia, there is an emerging evidence base for effectiveness of integrated hubs.[89] An opportunity for research is to determine whether such interventions are effective.

6 Design thinking to strategy

Building on the findings from the deep dives and desktop review, we held a series of design thinking workshops to investigate ideas about: (i) how the early years field would prioritise mental models to target with change initiatives; and (ii) considerations for implementation efforts to shift mental models holding current conditions in place and activate mental models that would move Australia toward the desired future state outlined by Orange Compass[1].

The aim of these workshops was to inform the EYC's development of a strategy that is best placed to result in changes at the 'transformative level'. Design thinking workshops were initially planned to be held over a full day to enable in depth discussions and development of key elements of a national strategy. Due to the limited availability of key stakeholders in the EYC network, workshops needed to be scaled back to be conducted in brief 1.5 to 2 hour sessions. This limited our ability to delve into strategy design. Instead, workshops focused on identifying principles for prioritising mental models and enabling conditions for change initiatives.

6.1 Design thinking workshops and structure

6.1.1 Who took part

Design thinking workshop participants were identified from: the Australian research field, those working with children and families, policy makers and media, and community. We invited 58 people from the EYC network and our own networks to take part in the workshops. There were four workshops held, with a total of 28 people participating across these (three held online and one held in-person in Adelaide, South Australia).

We felt it necessary to explore the Aboriginal and Torres Strait Islander experience and perceptions of mental models and the actions that could be taken. We wanted to highlight the Aboriginal and Torres Strait Islander lens, given the unique position of these peoples in Australian society today, in its own right. For the design thinking workshop, a Nyoongar (South West, Western Australia) woman on our team spoke with four Aboriginal and Torres Strait Islander peoples who were involved in the prior deep dive component of this project. This was by no means representative of the unique and diverse experience of all Aboriginal and Torres Strait Islander individuals, however, gave us a small insight into how some of the lived and professional experiences of Aboriginal and Torres Strait Islander peoples inform their recommendations for change.

Those involved in our design thinking phase are Gurindji (Victoria River, Northern Territory) and Wuthuti (Cape York Penisula, Queensland), Wadjuk and Wardandi Nyoongar (South West,

Western Australia), Gija (East Kimberly, Western Australia), as well as Wadjuk Nyoongar (South West, Western Australia) and Yamatji (Mid West, Western Australia). These members have an immense amount of lived experience in early years systems, being kinship and foster parents/caregivers themselves, parents to children with disabilities and neurodevelopmental challenges, having successfully completed early childcare qualifications and professional childcare work, being researchers, and working with government departments and organisations in early childhood development and health promotion activities.

6.1.2 What we asked

In the sessions planned, it was not feasible to ask design thinking participants to consider the large number of mental models identified in phase one of the work. Instead, we narrowed the design thinking workshops to explore two areas: '*Focus Area 1: Child Development and Parenting*' and '*Focus Area 3: Breaking the Cycle of Inequity and Disadvantage'*. These two focus areas were selected after robust consideration within the project team and with the EYC. Considerations impacting their selection included:

- Focus areas were considered pertinent to issues presently impacting equity in ECD and thus could provide a unifying focus for time restricted design thinking discussions.
- Without addressing inequities in the ECD sector, change initiatives are likely to compound unbalanced outcomes for families, if the initiatives are only serving those who have access to its associated benefits, perpetuating the status quo. Thus, strengthening families' access services and support, and address their needs is a priority, without which other change efforts may be undermined.
- Both focus areas chosen for discussion were relevant to strengthening families, with one focused specifically on equity and the second taking a focus on families and the conditions that foster child development.

Participants were presented with a pre-workshop reading pack that summarised findings from our deep dives for these focus areas. An overview of the design thinking workshops is presented in Figure 3.

6.1.2.1 Workshop 1

Our design thinking workshop involving four Aboriginal members with immense experience was guided by the following prompts:

1. How might we change the expectations of Aboriginal and Torres Strait Islander children?
2. How might we change the representation of Aboriginal and Torres Strait Islander people in the media and elsewhere?

3. How might we promote a shift in society where tackling racism is seen as the right thing to do?

4. How might we promote Aboriginal and Torres Strait Islander knowledge and ways of being as sophisticated and valid?

The workshop was formatted as a yarning circle, as guided by the members themselves, being a safe and familiar space for all members to relate to each other's experiences. The discussions within the group provided the opportunity for the members to draw on each other's recommendations in a respectful manner. Further, throughout the recommendations the members were encouraged to explore who should be involved, in what capacity, where in the initiative, and what tools and resources are needed. The members were invited to attend the following workshops in addition to this.

6.1.2.2 Workshops 2 and 3

The second and third workshops drew on the perspectives of people in research, policy and organisational, and community implementation roles. The workshops were guided by the following structure:

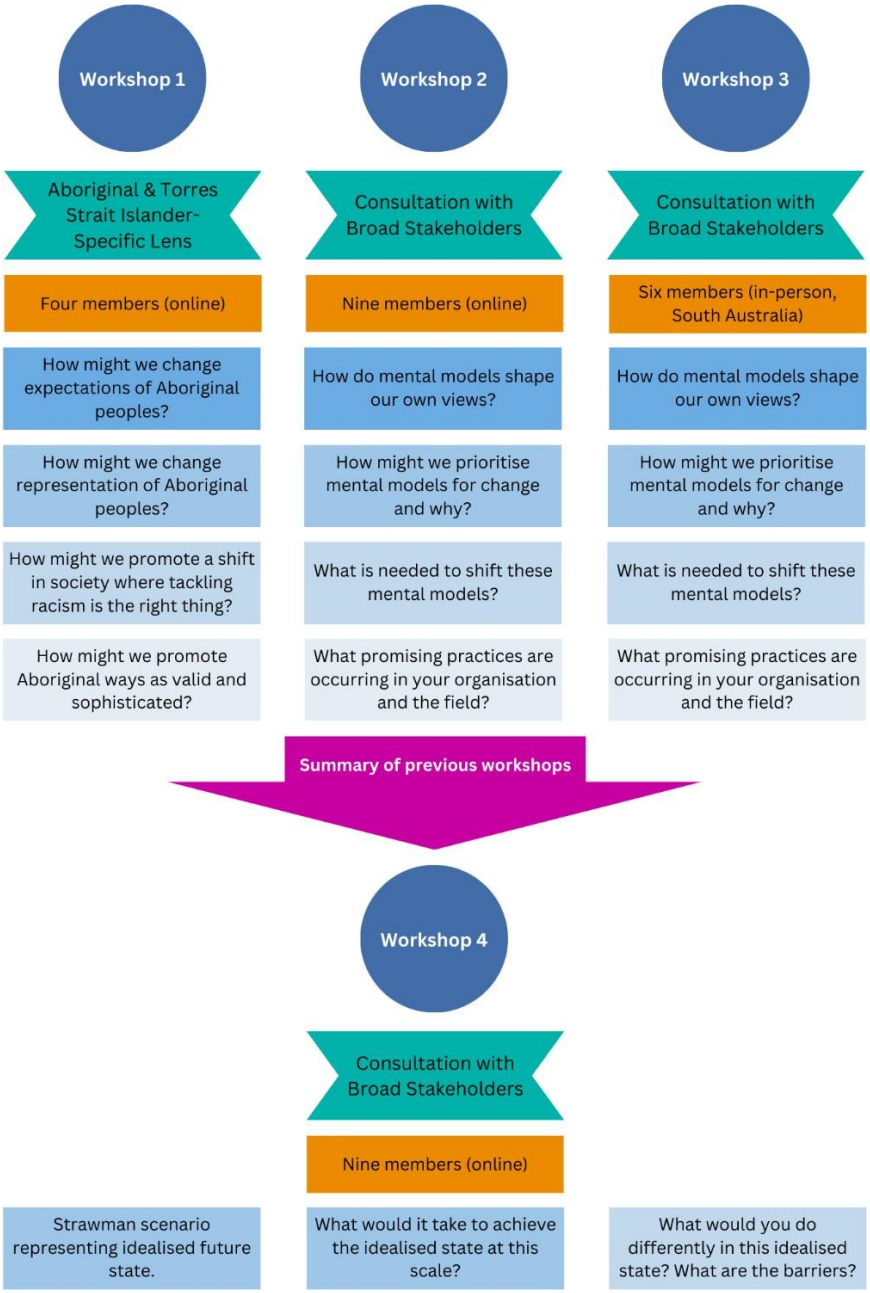
1. First, participants were asked to privately (without discussion) consider their own lived experiences of the mental models and how closely they had been impacted by these in their lives and communities, and how this might shape their views of effective strategies for change. Designing solutions for changing mental models is impacted by the mental models we bring with us to the design process. Our own experiences shape our views of what is needed and what will be acceptable to others, and what is likely to achieve our goal. With this in mind, each workshop started with a personal reflection followed by a discussion of initial reactions to/perceptions of the mental models in focus.
2. Participants were then divided into smaller groups and asked to consider which mental model or group of mental models they would prioritise for change and why. Group deliberations were shared and discussed before a second breakout in which groups explored implementation of change initiatives relative to their area of focus. In these discussions, groups were asked: 'What is needed to shift these mental models?' and 'If we had to prioritise ideas based on probability of success, how would we rank them and why?'

6.1.2.3 Workshop 4

In the final workshop, we set out to build on what we had heard in the first three workshops and delve deeper into what is needed for change efforts to be successful. In this workshop, we presented participants with a summary of what we had heard in previous workshops and asked

people to respond to a “strawman scenario” representing an idealised future state where alternative mental models could be seen shaping practices, policies, environments, funding, and decision making, and the evidence base. In these discussion participants were asked to consider this proposed future, what they would do differently, what it would take to achieve at scale, and what would get in the way.

Figure 3. Overview of design thinking workshops



6.2 Insights and observations from workshops

6.2.1 When asked to prioritise mental models for change efforts, people told us:

Workshop participants overwhelmingly felt that mental models were interconnected, and their desire was, therefore, to address these in a connected way. Participants expressed that choosing a point of focus, for them also depended on the audience and the level of the system being targeted. Workshop participants felt that targeting a core subset of these mental models needed to be the focus of any strategy, and other connected mental models could be impacted by these efforts. Participants felt that targeting mental models that were at the core of an issues, could effect change on connected mental models. For example, in targeting the mental model 'parenting is simple' shifts in beliefs about the complexity and challenges facing parents could flow through to people's views of the need for collective responsibility in society and the importance of parents being appropriately supported during children's early years.

Figure 20 presents a potential stratification of mental models, but we note that we did not explicitly test this hierarchy and include it here only to illustrate a potential hierarchy as expressed in design thinking workshops. It depicts mental models prioritised by workshop participants as core beliefs impacting all focus areas.

Key workshop finding: Mental models related to power, equity, race, and racism appear to have a pervasive influence on beliefs and behaviours in the current ECD system and should be prioritised in change efforts. Efforts targeting core mental models are likely to impact connected mental models.

6.2.1.1 Focus area 1: 'Strengthening families and communities':

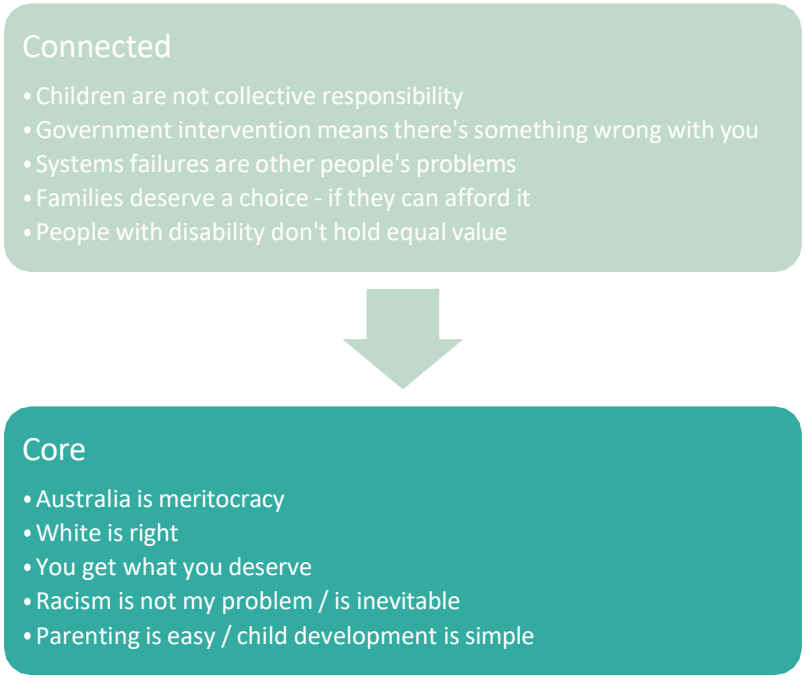
- In this focus area, participants tended to prioritise shifting mental models about the view that parenting was easy.
- Participants told us that all families intrinsically want the best for their children – however it is not an even playing field, and not all families have the same resources (self, others, society) to provide this.
- Participants reported that there should be a focus on progressive universalism, meaning that all families get the level of support they need rather than all families get the same.

6.2.1.2 Focus area 3: Breaking the cycle of inequity and disadvantage:

Participants reported:

- It is difficult to pick just one mental model to focus on for change, they are all connected to a bigger concept – that being inequities – i.e., through no fault of their own, not all children have the same life chances.
- All children have the right to have their needs met *within* their families – and this has to be at the forefront of efforts to shift mental models about inequities.
- This focus area was seen by all as high priority area for change.

Figure 20 Workshop participants' priorities for change efforts

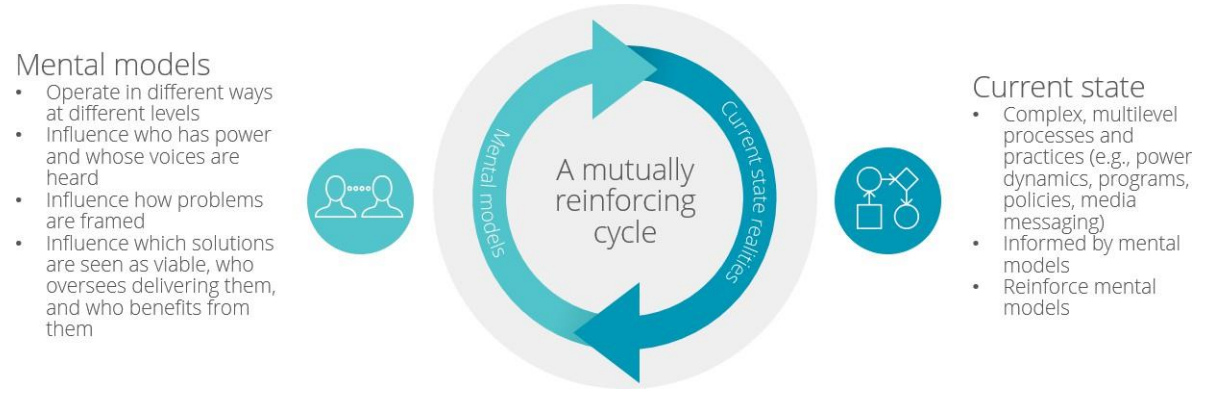


6.2.2 When asked to identify how to shift these mental models people told us:

- In our organisations we need to educate the people we work with in order to shift mental models. We can do this by growing our understanding of difference through truth telling – sharing people's lived experience.
- We know what is needed to shift mental models and we have several examples of where people have acted in ways that demonstrate the existence of alternative mental models and through this have shifted practices, policies, and environments to achieve better outcomes for children. However, participants felt more work was needed to understand how we can scale these innovations in the field to ensure every child and family in Australia benefits.

- Data and ‘measurement’ were said to direct focus on outcomes, rates, prevalence, and the inevitable gaps or disparities between groups. Whilst participants acknowledged that this information and perspective is important, they also noted it can contribute to sustaining negative mental models about groups in society. Thus, participants reported that more work is needed to explore how data can be used in a more meaningful and non-stigmatising way, such as through the use of stories alongside data.
- Mental models and the power dynamics, policies, programs, and media messaging that comprise the current state form a mutually reinforcing cycle, as shown in Figure 21. Mental models were seen to operate in different ways at multiple levels of society, influencing who does and does not hold power and influence, how problems are framed, which solutions are seen as viable and who is seen as responsible for enacting these solutions, as well as who benefits from proposed solutions, and how.

Figure 21 Connection between mental models and current state issues



Key workshop finding(s):

- The past decades have seen significant investment in the early years system (e.g., the national Early Years Learning Framework and National Quality Standards, investment of national measurement of child development, universal preschool for 4-year-olds, creation of the NDIS, integrated early years services, standards for the delivery of maternal and child health care, etc.). What remains to be addressed are underlying beliefs that prevent potential impacts from these investments being fully realised and translating to improved equity for all children.
- Mental models and current state realities, that is power dynamics, programs, and policies, are connected and form a mutually reinforcing cycle. Shifting mental models requires shifting beliefs and behaviours but we also need the authorising environments to enable change.

- Efforts to shift mental models must be informed by the lived experience of children and families currently experiencing inequitable outcomes. Shifting the power dynamic toward those most inequitably serviced by the current early years is critical to improving equitable outcomes for children.

6.2.3 People grappled with questions about how to best achieve lasting change, including:

The questions participants grappled with when discussing how to shift mental models at scale in a sustained way included:

- How can power dynamics be shifted so that the children and families who are most impacted by the mental models currently holding conditions in place have the power to influence what happens?
- At what point of the system should we focus our efforts? The most direct impact on children is likely to be seen when we focus on shifting the mental models of those who have direct contact with children and families. To enable shifts in the mental models of frontline staff, services, communities, people need enabling conditions to work differently, and this requires shifting the mental models of those developing policies and practices and allocating funding.
- Which point of the system is likely to create the greatest shifts? If we focus on long term change, we would work on shifting society's views, if we want more immediate change we need to focus on those in power now (e.g., shift political will), but change might not be sustained or be supported by society (e.g., why are we wasting tax payers money vs. we are making good investments in children).
- Who is responsible for/best placed to implement this change? Is government the right entity to lead change efforts? To what extent does trust in government impact change efforts?
- Our current efforts are fragmented and not coordinated, how do we create a coordinated and cohesive approach to shifting mental models?

Key workshop finding(s):

- There is a lack of a clear definition and vision of the desired future state that we are working towards and without this it is difficult to identify in what ways mental models need to be shifted.
- Efforts to shift mental models must be applied and scaffolded across points of the system for change to be realised and sustained.

- There was no consensus on who should hold, coordinate, or spearhead a comprehensive, long-term change initiative. Leadership is needed across all points in the system for change efforts to be effective in producing and sustaining change.

6.3 Organising principles for shifting mental models

Workshop participants identified that the process of shifting mental models is complex, encompassing not only individual shifts, but a holistic transformation spanning multiple points of the system and tackling several interrelated but different mental models. Workshop participants outlined several principles that are important to guide change initiatives geared towards shifting entrenched mental models that hold current conditions in place and catalysing the envisioned future state.

Participants envisioned a multi-layered approach, recognising that mental models are both ingrained within and interwoven among various points of the system. They identified distinct "points" of change across diverse points of the system, encompassing individuals, families, organisational cultures, local governments, media, and federal policy decisions.

This is aligned with the principles of the Waters of Systems Change[8] model and insights from mental models and systems change literature[90,91]. It underscores that varying strategies may be necessary at different points of the system to effectuate shifts in mental models. Importantly, it emphasises that shifting mental models necessitates simultaneous changes to policies, practices, and environments to create the enabling conditions and authorising environments conducive to realising the desired future state. Participants acknowledged that there is a reciprocal relationship whereby both mental models and individual behaviour shape the system, and the system shapes individuals' mental models and behaviour [92,93]. As such, effective change efforts must embrace a bi-directional strategy that encompasses both 'upstream' and 'downstream' activities to materialise the desired future state.[94]

From consultations, three critical elements emerged for an approach for shifting mental models that are holding current conditions in place:

1. **Coordinated efforts** are required to enable actors at each point in the system to adopt and implement shifts in thinking - efforts on a single point in the system are stymied by barriers at other points in the system that have not shifted.
2. Efforts to shift mental models must be **informed** by those most impacted by current mental models holding inequities in place. This requires shifting power imbalances to drive decision making in a way that is responsive to the experiences, values, and priorities of those currently least served by the system.

3. **Resourced** adequately to ensure that change can be realised and sustained.

6.3.1 General Feedback

A coordinated effort needs to:

Target multiple points of the system to strive for widespread change. Target people and groups at all points in the system in change initiatives. Use specific strategies that are relevant to that group.

Mental models exert their influence across the layers impacting on children. Addressing mental models at a single layer is not sufficient. While the most immediate impact on children is likely to result from shifts in the mental models of those working most directly with children, changes are needed across the layers to create enabling conditions for people to work in ways that are responsive to their understanding of and empathy for the challenges facing families.

At each point in the system, promising practices were identified in the design thinking workshops. At the **individual/family** level, families were said to experience the most direct impact in their interactions with other community members, service providers and organisations. This requires interventions that shift mental models and behaviour through challenging existing perceptions and fostering heightened awareness. For example, targeted educational initiatives/campaigns and dissemination of evidence-based information. In South Australia, a recent pilot campaign, aimed at parents and delivered through media and community service providers, demonstrated shifts in both parental beliefs about the importance of the early years, and increases in utilisation of early years services (library programs and playgroups)[95].

Organisational structures play a critical role in shaping the beliefs and behaviours of staff and individuals. Thus, essential strategies at this point of the system were said to encompass, facilitating open dialogue, goal setting and action planning, reviewing policies and procedures, training and development, trialling and championing new initiatives. Together these actions contribute to creating supportive environments in which alternative mental models can be expressed and shape behaviours in ways that generate better outcomes for children and families. Importantly, it was noted that while organisations play a critical role in both amplifying and advocating for positive mental models and practices, they also require the authorising environments to implement and catalyse change.

Extending beyond the organisational context, the framework recognises the influence of **government, policy and regulators** in shaping perceptions and practices. Participants reported that initiatives at this point of the system should foster alignment between community needs and policy directions. Policy level decisions have a cascading effect on mental models across all

levels of the system. Hence, initiatives that prioritise the voice of communities, service providers and families and integrating this into broader policy discussions is integral.

6.3.2 Informed

To reframe the way people think about families and the challenges they face in a direction that moves current conditions closer to the desired future state, families must be supported to have a say in how they are communicated to and about. Poorly constructed messaging can further isolate and disengage people from change efforts and may move mental models toward more unhelpful frames[96]. For example, in Australia, a significant body of work used codesign to develop effective ways of communicating the science of early child development to families[15].

Empower families. Emphasise the importance of strengths-based approaches.

Within our discussions it was raised that change efforts will be more effective, and people will be more receptive to them, if they are a means to lift people up rather than ‘scold’ them. Efforts to reframe mental models were seen to be an opportunity for two-way learning and building connections between peoples and systems for the greater good. Thus, reframing initiatives should be cautious not feed into deficit or us-vs-them narratives by placing an overbearing frame on groups as being ‘in need.’ This contrasts current practices where ‘needs’ and ‘deficits’ are used to attract funding and highlight the dire nature of problems demanding our attention. Applying what we know about the value of strengths-based approaches to framing means stepping away from deficit discourses toward discourses of recognising individual, family and community assets and building resources that support children’s health, wellbeing, and development.

Value truth-telling. Give voice to the experiences of families and don't 'gloss' negative experiences or challenges. Value genuine truth-telling and authenticity.

Truth-telling was emphasised as a key process for growing understanding across societies of people whose lives are different from our own. It was described as an important way in which empathy is developed for people who are ‘othered’ in society. Truth-telling has been used successfully in a range of settings to grow understanding and empathy. It sits at the heart of social reform efforts for shifting mental models that are holding inequities in place for children. The value of learning also grows understandings about the legitimacy of alternative perspectives and through this can open up new options and ways of being for everyone. This can improve both function and outcomes for individuals and organisations.

6.3.3 Resourced

Engage in genuine partnership. Ensure genuine relationships between early years systems and families.

Shifting mental models in society requires trust in change efforts. This is most readily achieved through genuine relationships between actors in the early years systems and families. Families need to feel valued and understood for change efforts to be trusted.

In these partnerships the self-identified needs of families, need to be supported and foregrounded. Effective efforts to reframe mental models are those that actively incorporate the views and priorities of families, in a way that works for them. This means that any reframing initiative is truly about improving the way families are considered, discussed, and understood by those who interact with them. In practice this means that reframing efforts would genuinely embed the views of families in how they want to be considered and understood, rather than adopting 'off the shelf' approaches to shifting the way people/communities/organisations communicate about families to improve the optics of what they do for or how they work with families.

Strengthen the influence of families and challenge power dynamics. Strengthen the power of those engaging with systems. Actively work to break down walls that power dynamics hold in place.

This means appropriately resourcing services working with families to engage in genuine co-design, but it also means resourcing families, especially those who have the greatest barriers to participation to be involved. Solutions in one place will not be the same as in another, just as the beliefs, preferences and values for some families may not work for another. Genuine co-design gives people the opportunity to share their experiences and the things that are impacting them. In this way it builds understandings of those working with families and supports them to grow empathy and design what they do with a deeper understanding of 'other'.

Champions play a pivotal role in catalysing change initiatives. Champions act as 'knowledge holders' who can actively translate and mobilise knowledge across various points in the system. Through trialling and spearheading new ways of working, they act as practical conduits of change, equipping others with the tools and mindsets needed to adopt new perspectives. In this way, champions are critical to building trust in change initiatives, as they exemplify the positive outcomes that can be achieved from embracing different perspectives. To shift mental models, champions across points in the system need to be resourced to apply learnings and implement change efforts. Champions who have existing trust at each point in the system are likely to be most effective in garnering support and buy in for change.

7 Summary and recommendations

This report presented a deep dive into ‘mental models’ that are influencing current early child development (ECD) outcomes in Australia. This process was designed to identify mental models that hold the current system in place and how these could be shifted to create positive change in ECD outcomes.

Through the deep dives in Phase 1, we identified 22 prevailing mental models influencing current ECD systems and outcomes in Australia, drawing from the desktop review, consultations, and sentiment analysis. In our consultations and design thinking workshops during Phase 2, mental models about inequity, disadvantage, race, and racism were identified as having a pervasive influence on the current state, impacting mental models across all four selected focus areas.

To identify promising practices for shifting mental models, we reviewed research in three main fields: (i) framing and communications science, (ii) behavioural and social change in public health, and (iii) organisational interventions and practices. This review showed that creating sustained transformations in mental models demands a multifaceted approach addressing attitudes (motivation), behaviour (capability to change), and organisational / environmental conditions (opportunity) across multiple points of the system. To assist the EYC and wider field in understanding interventions and approaches to shift mental models, in the body of this report, we presented a range of potential initiatives and case studies. These include, but are not limited to, training and awareness approaches, community development approaches, framing strategies, and culturally led models of care. These initiatives aim to either directly alter mental models or influence the conditions that uphold them. We also provided insights into the supporting evidence for these initiatives and identify areas where further research is needed.

Achieving shifts in mental models at scale is complex, encompassing not only individual shifts, but a holistic transformation spanning multiple points of the system and simultaneously tackling several interrelated but different mental models. Based on the deep dives and design workshops, we recommend several key actions that the EYC and wider field can take to catalyse sustained shifts in the mental models identified in this report. The recommendations reflect the three elements identified in this report as critical to generating shifts in mental models: motivation, capability, and opportunity. The recommendations highlight where there is evidence that can be implemented and where there are gaps in which further work is needed to develop a strategy to shift mental models.

For each recommendation, we identify key stakeholders and representatives who would play an important role in development and implementation of each activity. The recommendations have

been presented in this way to enable individuals or groups at any point in the system to galvanise efforts to shift mental models, whether it be the EYC, government, organisations, or community groups.

7.1.1.1 Strengthen motivation

Recommendation	Purpose	Who
Clearly and succinctly articulate the desired future state and the mental models that underpin it. This requires incorporating the views of a broad range of stakeholders and centering the voices and experience of those most impacted by disparities.	Develop a shared vision	National multi-stakeholder working group
Identify key stakeholders who hold mental models that are barriers to progress. Prioritise these stakeholders based on their influence and the significance of their mental models.	Education and awareness	Stakeholder analysis team
Tailor targeted communication strategies and narratives to engage and shift the mental models of priority stakeholders. Draw on learnings from other fields in developing communications for different audiences. Community must be at the heart of the development of the narrative. Utilise social media platforms to promote the alternative mental models, champions and thought leaders in the field.	Education and awareness Normative pressure	Researchers Communications experts Community representatives
Develop a robust monitoring and evaluation framework to measure the success of interventions over time. Planning should be flexible to adapt to findings from ongoing research and evaluation, ensuring the strategy remains effective and relevant. Given that mental models are difficult to accurately measure, behavioural indicators may be a more appropriate way of assessing meaningful change.	Evaluation, feedback, quick wins	Evaluation experts Program managers

7.1.1.2 Strengthen capability

Recommendation	Purpose	Who
Create a central repository of resources, research, and best practices for stakeholder access. This will ensure everyone is working from the same foundational understanding.	Efficacy Unified messaging Personal mastery experiences	Knowledge management team Organisational leaders
Encourage organisations and change agents to explore their implicit beliefs and assumptions.	Efficacy Social modelling	Organisational leaders Community leaders

Adopt and support a strengths-based orientation. While the mental models uncovered through our consultations were deficit-focused, strength-based approaches are critical to empowering families and shifting mental models. This requires narratives which foreground strengths of individuals, families, and communities, and challenge us vs them thinking.	Social modelling	Program designers Community leaders
Harness the capacity of organisations to develop and implement community programs and interventions aimed at changing behaviours which, in turn, can shift mental models.	Local capacity Social modelling	Organisational leaders Program developers
Prioritise genuine collaboration with, and leadership by, people from diverse and marginalised backgrounds, including those with lived experience of racism, disability, and poverty, throughout all stages of development and implementation. Partner with key target groups to co-design strategies and amplify lived experience.	Local knowledge Honour lived experience	Organisational leaders Project leaders Community leaders
Identify and strategically engage key leaders and influencers from prominent sectors including education, healthcare and community development to buy-in to the new mental models.	Connective leadership Leverage relationships	Partnership coordinators

7.1.1.3 Strengthen opportunity

Recommendation	Purpose	Who
Devise a multi-year funding plan setting out the quantum and sources of funding required to action strategies to shift mental models. The plan will likely comprise a combination of government funding, private sector involvement, and philanthropy. This is to enable mobilisation of resources and execution of initiatives.	Sustainable resource base	Funding development team
Develop a risk management strategy for the process of shifting mental models to minimise potential negative consequences.	Legitimacy Risk mitigation	Risk management experts Program managers
Ensure efforts to shift mental models are informed by those most impacted by current mental models. Promoting truth telling - openly sharing truths associated with conflict and injustice - is critical to giving voice to lived experience and addressing mental models.	Inclusive governance	Community leaders Storytellers Communications experts
Identify and resource leadership to drive change actions. At any point of the system in which a strategy to shift mental models is implemented, clear leadership and responsibility must be identified and resourced.	Leverage relationships	Governance / leadership Trusted leader

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