

# Do digital health interventions improve mental health literacy or help-seeking among parents of children aged 2-12 years? A scoping review.

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# Outline

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Behavioural and emotional problems in children  
Mental health literacy and help-seeking in parents  
The role of digital health interventions  
Scoping review: methods and results  
Discussion

# Behavioural and Emotional problems in children

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Are conditions like anxiety, disruptive behaviour and mood dysregulation.

Affect 30% of Australian children

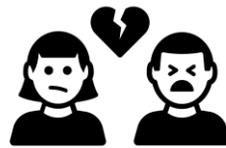
Short and long term adverse sequelae



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Child mental health problems are the strongest predictor of adult mental health disorders

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(Lawrence et al., 2015), (Stevenson & Goodman, 2001), (Knapp, McDaid, Parsonage, 2011)

# Key modifiable risk factors

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## Parenting

- Reducing harsh and abusive parenting
- Reducing overinvolved/protective parenting
- Increasing warm and consistent parenting

Parent mental health (eg anxiety, depression) can impact parenting practices.

# Evidence-based treatments are available

## Parenting programs

eg *Tuning in to Kids*



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## Face to face

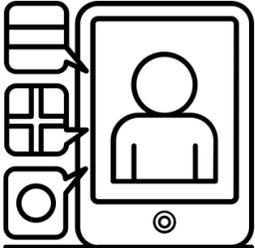
eg *Psychologists*



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## Online interventions

eg *BRAVE online*



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# 53% of children with a mental health disorder don't get professional help

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- Affordability
- Stigma
- Mental health literacy
  - Don't know where to get help
  - Don't know if they need help
  - Hoping things will get better

# Mental health literacy

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“Knowledge and beliefs about mental disorders which aid their recognition, management or prevention”

5 components:

1. Knowledge about prevention
2. Recognition of a disorder
3. Knowledge about treatments
4. Knowledge about effective self-help
5. First aid skills to support others

# Help-seeking

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## No unifying theory

Combination of:

- Knowledge: awareness of services
- Attitudes: including beliefs and willingness toward help-seeking
- Intentions: future
- Behaviours: past

Can be informal or formal

Theoretical basis could include:

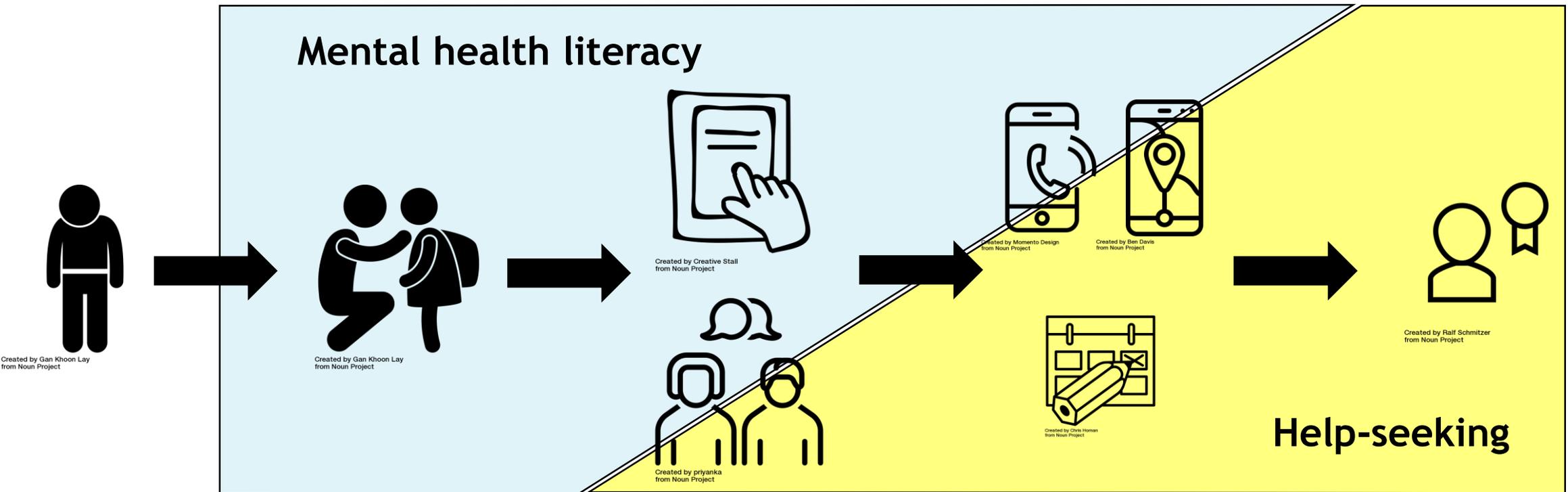
- Azjen's theory of planned behaviour
- Andersen's behavioural model and access to medical care
- Health belief model
- Cycle of avoidance (in young adults)
- Rickwood's process model

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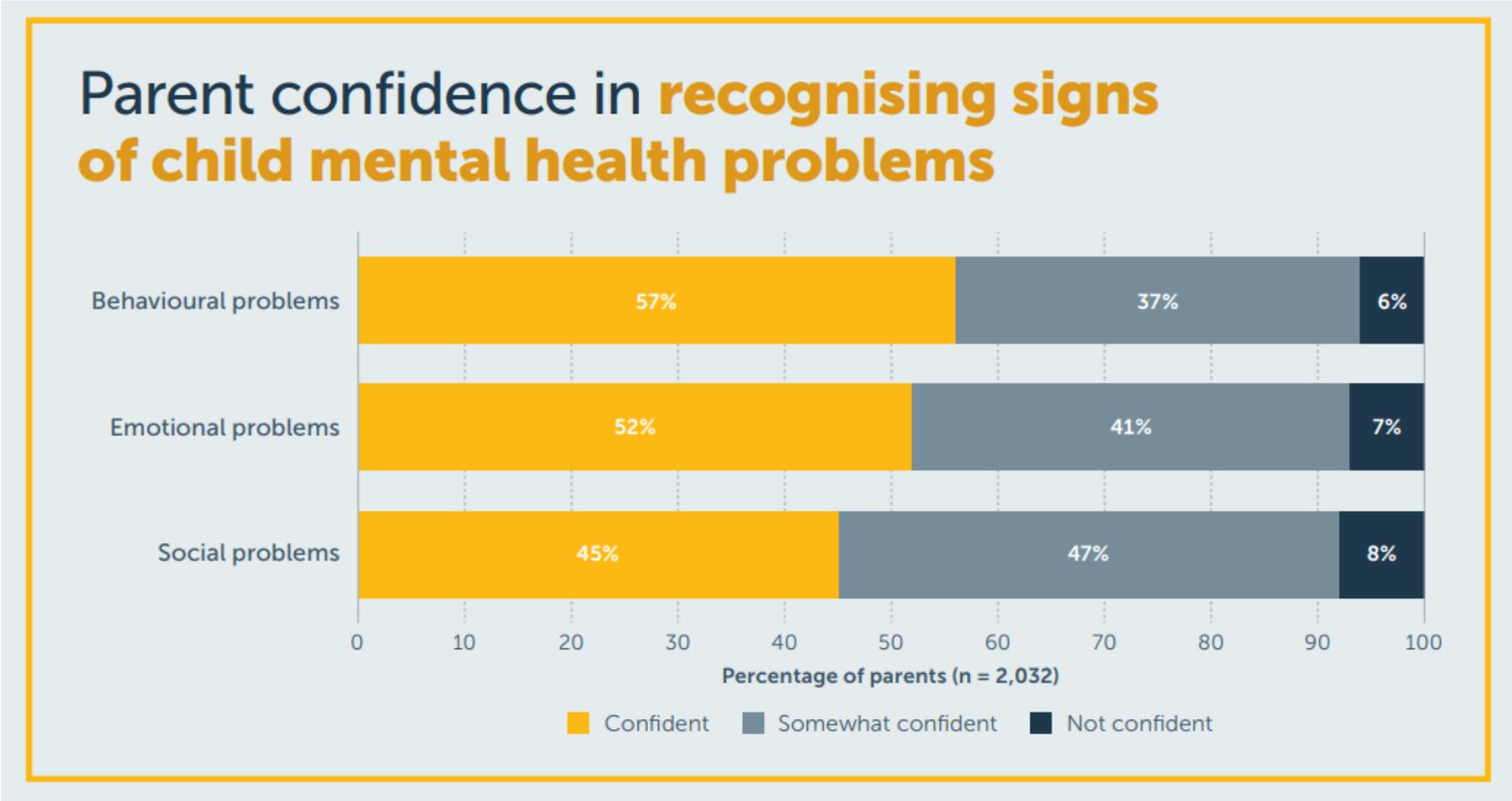
(Gulliver et al, 2012; Ajzen, 1991; Wei et al, 2017; Andersen, 1995; Biddle et al, 2007; Henshaw et al, 2009)

# Mental health literacy and help-seeking

Is help-seeking a component of, or impacted by, mental health literacy?



# The Royal Children's Hospital Child Health Poll: a measure of parental mental health literacy



(The Royal Children's Hospital National Child Health Poll, 2017)

# Improving mental health literacy can improve mental health outcomes

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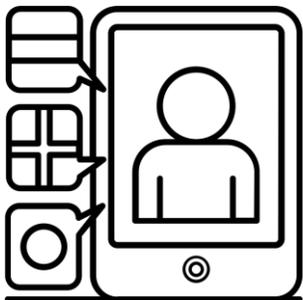
We know community based mental health literacy interventions have improved mental health outcomes.

# Can we use a digital health intervention to improve mental health literacy and help-seeking?

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## What is a digital health intervention?

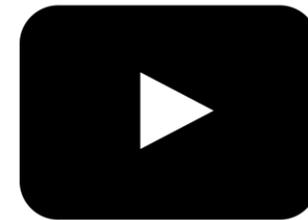
*“a discrete functionality of digital technology that is applied to achieve health objectives and is implemented within digital health applications and information communication technology systems, including communication channels such as text messages”*



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# In teenagers and adults, we know digital health interventions:

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- Improve **mental health literacy**
- Less clear on their effects on **help-seeking**

But what about for parents specifically?

# To facilitate the development of such a platform, we wanted to know...

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1. Can digital health interventions, targeting parents of children aged 2-12 years old with behavioural and emotional problems, improve parent mental health literacy
2. Are there any effects from these digital health interventions on help-seeking?

# Ovid MEDLINE search

PICO	Search terms related to...
Patient	Parents and caregivers Behavioural and emotional problems
Intervention	Digital health intervention
Comparison	Any or none
Outcome	Mental health literacy Help seeking behaviour

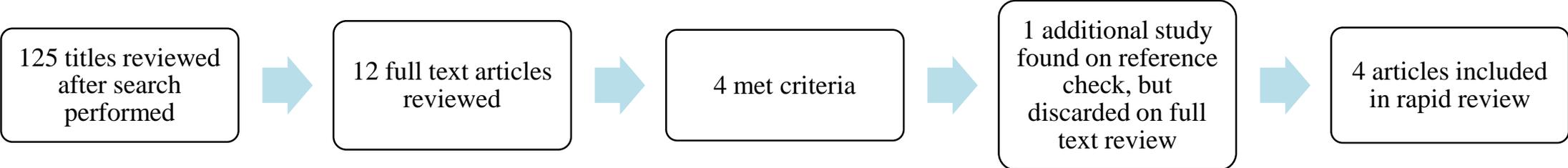
Inclusion criteria:

1. Digital health intervention to improve mental health literacy, help-seeking behaviour, or access to mental health services.
2. Involving parents or caregivers
3. Child age range 2-12 years.

We excluded any targeting PTSD or eating disorders.

# Ovid MEDLINE - 4 articles returned

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# Participants of included studies

	Country	Total Participants	Gender of parent	Age of parent (range or mean in years)	Child age (range or mean in years)
Deitz et al (2009)	USA	99	Female 45 Male 54	Mean 42	Range 5-21
Ossebaard et al (2010)	Netherlands	195	Female 145 Male 25 Other 16	Mean 38	Range 6-10
Ryan et al (2015)	UK	172	Female 130 Male 42	Mean 41	Mean 10
Montoya et al (2013)	Spain	35	Female 24 Male 11	28 (30-50yo) 7 (>50yo)	3-6yo (11), 7-12yo (13) >12yo (11)

# Deitz et al (2009)

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## “Youth Mental Health: A Parent’s Guide”

- 4 modules delivered via a web-based program
  1. Signs and symptoms of anxiety
  2. Signs and symptoms of depression
  3. Treatment options
  4. What parents can do to improve their parenting and lifestyles
- Interactive, narrated information.
- Based on social cognitive theory
- Included a mix of parents of children with and without parent-reported diagnosed mental health problem.
- 95% completed follow up
- 22% did not access the online program

# Ossebaard et al (2010)

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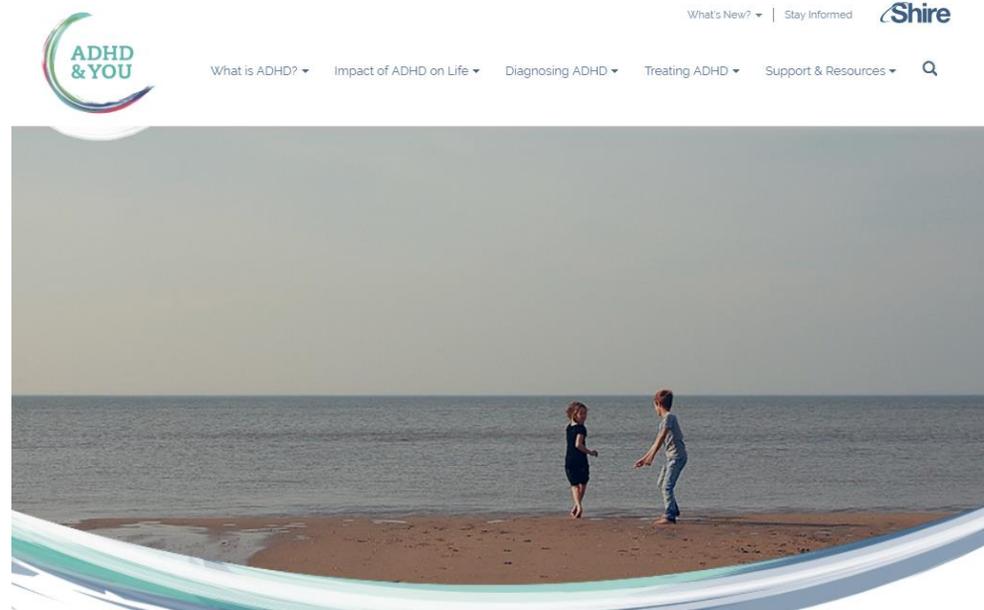
## “Make better choices”

- Decision aid via kiesBeter.nl
- Decision aids are “a means of helping people make informed choices about healthcare that take into account their personal values and preferences.”
- Assist patients and families in making informed choices about treatment of attention-deficit/hyperactivity disorder.
- 6% completed follow up

# Ryan et al (2015)

## “ADHD & You”

- Information website about ADHD
- Separate pages for families, patients, educators and clinicians
- The website was funded by a pharmaceutical company (Shire)
- 40% did not access the intervention



# Montoya et al (2013)

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## Reviewing popular Spanish websites for quality

- Parents reviewed popular websites for attention-deficit/hyperactivity disorder using the DISCERN tool (to help judge the quality of consumer health information).
- These included government, private and non-profit websites
- Participants invited by physicians or local advocacy groups to participate, which resulted in 70% of participants had at least 4 years of university education
- All 35 participants completed at least some assessments of quality.

# Interventions of the included studies

Study	Primary problem	Intervention	Study design	Comparison
Deitz et al (2009)	Anxiety and depression	Web-based program “Youth Mental Health: A Parent’s Guide”	RCT with pretest–posttest comparison (2 weeks post intervention)	Waitlist control group
Ossebaard et al (2010)	ADHD treatment	Decision aid via kiesBeter.nl (Make better choices)	Pretest–posttest comparison	None
Ryan et al (2015)	ADHD	ADHD & You education, information based website.	Pretest–posttest comparison (1-month post initiation of intervention)	None
Montoya et al (2013)	ADHD	Reviewing the most popular Spanish websites for quality using the DISCERN tool [12]	Pretest–posttest comparison	None

(Deitz, Cook, Billings, & Hendrickson, 2009) (Ossebaard, van Gemert-Pijnen, Sorbi, & Seydel, 2010) (Ryan, Haroon, & Melvin, 2015) (Montoya et al., 2013)

# Standout findings

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3 focusing on attention-deficit/hyperactivity disorder

1 randomised control trial

Most participants were mothers

# Measures of mental health literacy

Study	Measure	Previously published?	Significant effect?
Deitz et al (2009)	Knowledge of Childhood Depression and Anxiety	No	Yes - compared to control group
Ossebaard et al (2010)	Stage of decisional process	No	None
	Decisional conflict	No	None
	Knowledge	No	None
Ryan et al (2015)	ADHD knowledge and willingness to pursue treatment	Yes, adapted ADHD Knowledge and Opinion Scale - (AKOS-R)[13]	Yes
Montoya et al (2013)	ADHD knowledge and motivation for treatment	Yes (ADHD-Knowledge and Motivation for Treatment (ADHD-KMT))[14]	Yes

# Measures of help-seeking

Study	Measure	Previously published?	Significant effect compared to control?
Deitz et al (2009)	Attitudes about seeking professional psychological help and attitudes about emotional and MH problems in youth	Yes, adapted (Fischer and Farina 1995)	None
	Treatment seeking self-efficacy and confidence in ability to address mental health issues in children	Not described	Yes

(Deitz, Cook, Billings, & Hendrickson, 2009) (Ossebaard, van Gemert-Pijnen, Sorbi, & Seydel, 2010) (Ryan, Haroon, & Melvin, 2015) (Montoya et al., 2013)

# Standout findings

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3 measuring *knowledge of ADHD* and they all used different measures

3 out of 4 studies used at least one measure that had been previously published

# Results

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None of the interventions were co-designed

Only one study commented on behaviour change theory

Parents and caregivers had above average education

# Can digital health interventions improve parental mental health literacy?

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Maybe

Low quality studies, only 1 randomised control trial, no consistent measures of mental health literacy

# Can digital health interventions improve help-seeking?

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No evidence to say they can

But only 1 study attempted to measure help-seeking. None measured actual uptake of mental health services

# Limitations

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- Single reviewer
- One database - Ovid MEDLINE
- No assessment for bias

## Future research

- We are currently undertaking a systematic review (which has been submitted to PROSPERO) searching more databases, with a broadened definition of help-seeking and uptake of mental health services.

# There is promise that digital health interventions can improve mental health literacy among parents.

But we need:

- **consistent measures** of mental health literacy and help-seeking
- **rigorously measure the effects** from digital health interventions in **improving** mental health literacy, help-seeking, and ultimately, attending evidence-based services and improving child **mental health outcomes**.

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# Thank you

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