

# ‘It’s just their mind taking a break when it needs to’: How parents in Ireland view and manage mind-wandering in young children

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**Abstract:** Mind-wandering occurs when thoughts become unrelated to the task at hand, a phenomenon commonly experienced by adults and children. Recent research has revealed that mind-wandering can negatively impact children's learning. However, no studies have explored parents' perspectives of their children's mind-wandering, despite the crucial role parents play in supporting children's learning. This study investigated how parents of children in the first years of formal education perceive and manage mind-wandering during school tasks. Three online focus groups were conducted with parents (N=7) from the island of Ireland. Reflexive thematic analysis resulted in the development of five themes: 1) Mind-wandering is a typical, positive element of learning in children, 2) Mind-wandering is more likely to occur in certain circumstances, 3) Children tend to share the content of their mind-wandering, providing parents with valuable insights, 4) Parents adopt a trial-and-error approach to the management of mind-wandering, 5) Parents' frustration with mind-wandering arises from time constraints. Although parents generally feel confident in the management of mind-wandering during learning activities, they expressed concerns about future challenges as homework becomes more demanding. These findings can inform further research by acknowledging parents' expressed needs, so that children can be adequately supported before mind-wandering impacts their learning.

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## Introduction

Mind-wandering is a common phenomenon among both adults and children (Cherry et al., 2022; Killingsworth & Gilbert, 2010; Moffett & Morrison, 2020). Although definitions of mind-wandering vary across the literature (Seli et al., 2018), for the purpose of this study, it is defined as engaging in thoughts unrelated to the task at hand (Schooler et al., 2014). This definition highlights the core aspect of mind-wandering, emphasising its association with internally generated thoughts and a temporary dissociation from the external environment. While mind-wandering is a form of inattention, it is distinct from other types of inattention, such as distraction. Unlike distraction, which is triggered by external stimuli, mind-wandering often arises spontaneously and involves trains of thoughts unrelated to the task at hand, such as reminiscing about past events or contemplating the future (Seli et al., 2018). The underlying mechanisms of mind-wandering have been widely investigated, with research pointing to neural and cognitive processes rooted in the brain's default network. This network is composed of interrelated brain regions that are more active during passive tasks than during those requiring external focus (Buckner, 2013; Ciaramelli & Treves, 2019).

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## Mind-Wandering in Children

Although there is a considerable amount of research on mind-wandering in adults (Blondé et al., 2022; Chu et al., 2023; Kam et al., 2022), mind-wandering in children is under-studied (Frick et al., 2020; Hasan et al., 2024; Keulers & Jonkman, 2019). A limited number of studies have explored mind-wandering in typically developing children using the probe-caught method (Cao et al., 2022; Cherry et al., 2022, 2024; Hasan et al., 2024; Keulers & Jonkman, 2019; McCormack et al., 2019; Ye et al., 2014; Zhang et al., 2015). Some research has also explored mind-wandering in children diagnosed with various developmental conditions such as attention deficit hyperactivity disorder (ADHD), dyslexia and sluggish cognitive tempo (Becker et al., 2022; Bonifacci et al., 2022; Frick et al., 2020; Merrill et al., 2022; Van den Driessche et al., 2017). Although the presence of a developmental disorder such as ADHD is associated with increased mind-wandering and off-task behaviour in children (Frick et al., 2020; Junod et al., 2006; Merrill et al., 2022), typically developing children also frequently engage in mind-wandering (Cherry et al., 2022; Moffett & Morrison, 2020). Typically developing children are not currently well-represented in the mind-wandering literature. For instance, although research indicates that mind-wandering is associated with poor performance in cognitively challenging tasks, little research has investigated this in typically developing children (Keulers & Jonkman, 2019). This lack of understanding of mind-wandering in typically developing children makes it difficult to determine whether mind-wandering is as damaging to cognitive performance and learning as suggested by research with participants diagnosed with ADHD (Bozhilova et al., 2018). Furthermore, given that children with and without diagnoses such as ADHD experience difficulties in learning related to cognition, including issues with sustained attention (Slattery et al., 2022), it may be most beneficial to include all children in research on mind-wandering, not just those with developmental disorder diagnoses. This inclusive approach allows for findings to be of relevance to all children (Holmes et al., 2019).

Mind-wandering may vary based on a child's developmental stage, as connections between brain areas undergo extensive changes that influence attention and behavioural control (Posner et al., 2014). For instance, sustained attention develops throughout childhood, with younger children aged between five and six years old requiring more breaks while learning (Betts et al., 2006). Furthermore, mind-wandering naturally occurs during pretend play in children, with play acting as an outlet for creativity and imagination experienced through mind-wandering (Russ, 2020). Likewise, spontaneous association is an integral part of both mind-wandering and pretend play, which is beneficial for creativity and problem solving (Olson et al., 2021; Russ, 2020). Although it is possible that developmental stage may impact mind-wandering behaviour, empirical studies such as Cherry et al. (2022) report that age did not impact mind-wandering levels in 6- to 11-year-olds. More research is needed to better understand the developmental aspects of mind-wandering.

### Impact of Mind-Wandering on Learning

As a form of inattention, mind-wandering is likely to impact learning. Most educationally relevant research in adults and adolescents suggests that higher rates of mind-wandering are associated with poorer comprehension and less learning. In adults, research using intermittent thought-probes during lectures and learning activities (e.g., discussions, problem-solving) consistently shows that mind-wandering occurs 30-40% of the time and is linked to reduced recall of lecture content (Bunce et al., 2010; Risko et al., 2012; Szpunar et al., 2013). Similar patterns are observed in adolescents, with studies showing that task-unrelated thoughts during reading negatively impact comprehension in middle and high school students (Mrazek et al., 2013; Soemer et al., 2019). Greater interest in a topic is associated with less mind-wandering, highlighting the importance of maintaining student engagement to improve learning outcomes.

Cherry et al. (2022, 2024) are the only studies to specifically examine the link between off-task thinking and learning in children. In their 2022 study, 6- to 11-year-olds listened to a story while intermittently reporting their focus. Key findings included that more off-task episodes were associated with poorer immediate recall, children reported being off-task about 25% of the time regardless of age, and situational interest indirectly affected memory through off-task thoughts. Cherry et al. (2024) refined their

measure to capture 'pure' mind-wandering, defined as task-unrelated thoughts without external triggers. In this study, 8- to 9-year-olds reported off-task thoughts 24% of the time, but pure mind-wandering was observed less frequently (9%). Despite this, pure mind-wandering was strongly linked to poorer memory recall, both immediately and after a one-week delay.

A study with kindergarten students (mean age of 5.76 years), demonstrated that different types of off-task behaviour can have different effects on young learners (Moffett & Morrison, 2020). Specifically, higher levels of mind-wandering were related to poorer executive functions. However, engaging with peers during off-task behaviour was positively associated with executive functions and achievement outcomes. Furthermore, Moffett and Morrison (2020) reported that lower working memory and attentional control predicted a larger amount of time spent mind-wandering. Moffett and Morrison (2020) also reported that children who engaged in more mind-wandering made fewer advances in reading comprehension a year later. This illustrates how it is important for teachers and parents to recognise the nature of off-task behaviour, and the importance of creating strategies that target specific types of inattention.

Research has also indicated potential benefits of mind-wandering in learning contexts. For instance, mind-wandering is associated with greater proficiency in skills such as problem-solving, future planning and creativity among young adults (Baird et al., 2011; Mooneyham & Schooler, 2013; Pachai et al., 2016). It has also been suggested that engaging in simple tasks that promote mind-wandering can foster creative problem-solving and enrich learning (Baird et al., 2012; Hines et al., 2019). However, further research is needed to explore these benefits in children, as there are currently no empirical studies examining the relationship between mind-wandering (as measured by thought probes) and creativity in this age group.

### **Managing Mind-Wandering in Children**

Considering both the positive and negative aspects of mind-wandering in learning contexts, effectively managing mind-wandering in children could help them harness its benefits while mitigating its drawbacks (Gericke et al., 2022). Although some research suggests the potential of mind-wandering interventions (Feruglio et al., 2021; Frank et al., 2021; Mrazek et al., 2013), further studies are needed to assess their effectiveness in young children. Fredrick et al. (2025) outline helpful strategies for children who are diagnosed with Cognitive Disengagement Syndrome (CDS), a condition that involves persistent mind-wandering that could also be applied more broadly for young children where mind-wandering becomes problematic. The authors report that practicing mindfulness, being active, prioritising sleep and employing effective school accommodations such as attention prompts and breaks, transitional prompts and active learning strategies may help children with this condition. However, Fredrick et al. (2025) highlight that research on how to best support children with this condition is limited. Despite the lack of evidence-based supports to assist parents with managing mind-wandering, Becker et al. (2022) report that parents of children diagnosed with sluggish cognitive tempo have attempted to manage mind-wandering by employing strategies such as keeping routines and using verbal reminders or prompts to bring their child's focus back to task. In terms of supporting general attention skills, the Irish Department of Children, Disability and Equality (2021) make suggestions for ways that pre-school children with disabilities can be supported to develop attention and listening skills through the Access and Inclusion Model. Suggestions include reducing background noise, using children's names, supporting children with transitions, using short and simple instructions, gestures and visuals and talking to children at their level. The Irish Department of Children, Disability and Equality (2021) also suggest playing specific games to support the development of attention skills. Although this booklet is targeted towards pre-school children diagnosed with a disability, it is possible that these strategies could be helpful to children of all abilities at early stages of education.

Furthermore, environmental and personal factors can mediate mind-wandering. For example, inadequate sleep has been shown to contribute to inattention in typically developing children aged six to eighteen years old (Spruyt et al., 2019) and in children aged nine to sixteen years old diagnosed with sluggish cognitive tempo (Becker et al., 2022). Additionally, Cherry et al. (2022) reported that the more

interested a child was in a topic, the less they experienced mind-wandering which led to greater recall of facts from a story. In a recent study, children who experienced more mind-wandering were more likely to experience interference from noise (Massonnié et al., 2022). These findings highlight that there are malleable factors that mediate mind-wandering, however, no research to date has investigated parents' perceptions of how mind-wandering can be managed.

### **Importance of Parents' Role in Children's Learning and Development**

Parents play a crucial role in their children's development and learning (Davis-Kean et al., 2021; Liu et al., 2020; Usmanovna, 2021). Parental scaffolding is particularly important during the early stages of development (Mermelshtine, 2017; Wood et al., 1976). Additionally, parents play a key part in the development of their child's executive functions (Hughes & Devine, 2019; Koskulu-Sancar et al., 2023) such as cognitive flexibility, executive control, sustained attention and working memory – all of which are suggested to influence mind-wandering (Mooneyham & Schooler, 2013; Keulers & Jonkman, 2019; Wilson et al., 2022). Considering that parents have a major role in their children's development and learning, investigating their perspective on their children's mind-wandering could provide a valuable insight into how children experience mind-wandering, and also provide insight into how parents perceive mind-wandering.

Despite the important role that parents play in their children's development, there is very limited research on parents' perspectives of mind-wandering. Studies that have gathered data from parents on their children's mind-wandering include Hasan et al. (2024) who investigated the relation between mind-wandering and executive functions in typically developing 8- to 12-year-olds. Hasan et al. (2024) used a mind-wandering questionnaire to gather data from parents about their children's mind-wandering to corroborate self-reports in children. Hasan et al. (2024) report that mind-wandering was less frequent when working memory capacity was greater. Gozpinar et al. (2023) gathered data from parents of children diagnosed with sluggish cognitive tempo to evaluate a self-report scale. Parents were asked to complete a form which included a subsection on their children's 'daydreaming'. Only one study conducted by Becker et al. (2022) gathered qualitative data from parents related to mind-wandering. This study involved parents of children aged 9- to 16-years-old and investigated their views on the phenomenology, daily impact and treatment of sluggish cognitive tempo - a condition involving excessive mind-wandering. It is evident that there is a large gap in the literature on parents' perspectives of mind-wandering. Gathering data from parents can provide researchers with detailed insights encompassing a wide range of children's behaviour (Hasan et al., 2024; Wilson et al., 2022). Specifically examining how parents of young children view and manage mind-wandering in relation to school tasks can aid in the understanding of mind-wandering in the context of learning. Gaining insight into how parents manage mind-wandering can initiate a dialogue on how parents are already handling mind-wandering and highlight any areas in which they may need more support. Involving parents in research on mind-wandering would help to make supports and policies aimed at promoting attention in young children more relevant and ecologically valid.

### **The Current Study**

The current study aimed to gather qualitative data from parents of children in the first two years of school (aged four to six) through focus groups to understand their perspectives of mind-wandering. The research addressed the following questions: 1) How do parents of children in the first two years of formal education *view* their child's mind-wandering in relation to school tasks? and 2) How do these parents *manage* their child's mind-wandering in relation to school tasks? The present study aimed to engage with parents directly so that the development of supports and policies can incorporate research on parents' perspectives and their expressed needs (Hickey & Lecky, 2021). Additionally, the present study incorporated a co-creative, collaborative approach with key stakeholders in the area to ensure relevant and applicable research (Schuiling & Kiewiet, 2016).

## Method

### Participants

Focus groups were conducted with parents/guardians of children in their first two years of formal education (Junior Infants/Year 1, Senior Infants/Year 2) who had completed at least six months of schooling by March 2024. Parents were required to be living in the Republic of Ireland or Northern Ireland. An all-island approach was implemented to ensure that findings were relevant across the whole island of Ireland (Roulston et al., 2023).

Participants were recruited through advertising on social media, online parent forums, physical posters and direct contact with relevant organisations and schools. Potential participants completed a participant screening questionnaire. The aim was to recruit a diverse participant sample in terms of gender, socio-economic status, and geographic location. Measures were taken to reach this goal, such as contacting organisations based across Northern Ireland and the Republic of Ireland, including organisations aimed at male parents, as fathers are reportedly difficult to recruit (Ulferts, 2020). Both public and private schools were contacted, as well as organisations for children who are socio-economically disadvantaged. One hundred organisations and schools were contacted directly, over forty of which were based in Northern Ireland.

Despite targeted efforts to recruit male participants, all seven participants were female. Participants were aged between thirty-nine and forty-six years old. There were four participants from Dublin, two from Cork and one from Antrim in Northern Ireland. Participants' children were aged 4 to 6 years old, consisting of four boys and four girls who all attended public schools. Five children were in Junior Infants/Year 1 and three children were in Senior Infants. None of the participants' children attended schools for children at risk of educational disadvantage.

### Procedures

This study aligned with an interpretivist research paradigm and employed a phenomenological approach. Focus groups were deemed an appropriate method of data collection as this method is suitable for generating insights and ideas through discussion and shared understanding (Krueger, 2014). Focus groups are an effective and popular method of collecting data from parents (Adler et al., 2019). In order to ensure a collaborative approach with key stakeholders in the area, representatives from the Irish National Teachers' Organisation, Teaching Council of Ireland, Education Authority of Northern Ireland, directors of the Doctorates in Educational Psychology in University College Dublin and Queen's University Belfast, as well as a parent representative/expert were involved in the co-creative process of this study. These stakeholders provided feedback at all stages of the study, including the formation of the focus group questions (Table 1). This study was pre-registered on the Open Science Framework in February 2024. The pre-registration stated that there would be up to thirteen questions asked in the focus group, however, an additional four questions were added based on feedback from stakeholders.

Focus groups were two hours long and took place online via Zoom to improve accessibility and to facilitate a diverse geographical sample. Two focus groups were conducted; focus group one had three participants and focus group two had four participants. Small groups of three to five participants are considered most effective for online focus groups (Lobe, 2017). Participants were emailed the focus group questions and the focus group etiquette in advance (Lobe et al., 2020). Participants were provided with the definition of mind-wandering before the focus group, "Mind-wandering is a common everyday experience in which attention becomes disengaged from the immediate external environment and focused on internal trains of thought" (Schooler et al., 2014, p.1). Participants were given a short presentation before the focus group, reminding them of the mind-wandering definition and focus group etiquette. The difference between mind-wandering and distraction was emphasised and explained through examples, such as how a child's attention interrupted by someone walking into the room is an example of distraction, not mind-wandering. Afterwards, participants were emailed a debrief and gifted a 15 euro/pound voucher.

The focus groups were automatically transcribed through Zoom. The transcripts were reviewed to

ensure accuracy, the data was de-identified and identifiable information was deleted. Once the first two focus groups were completed, the procedure to assess whether saturation had been reached was followed in accordance with the pre-registration. The data was reviewed and it was evident that saturation had been reached after two focus groups; there were no new relevant codes evident in the data and information began to be repeated to the point where any new information did not contribute to the understanding of the research questions (Hennink & Kaiser, 2022). Therefore, no additional focus groups were required.

**Table 1**  
*Focus Group Questions*

Question Category	Questions
How parents view their children's mind-wandering in relation to school tasks.	<ul style="list-style-type: none"> <li>● How would you describe a young child's mind-wandering? Do you want to share some examples?</li> <li>● Does your child experience mind-wandering while engaging in school related tasks (e.g. homework)?</li> <li>● What is the impact of your child's mind-wandering?</li> <li>● What causes or contributes to your child's mind-wandering?</li> <li>● In what context, if any, do you discuss mind-wandering with your child's teacher(s)?</li> <li>● What are positive aspects of mind-wandering?</li> <li>● What are the negative aspects of mind-wandering?</li> <li>● In what context, if any, has your child ever talked about their mind-wandering or inattention with you?</li> </ul>
How parents manage their children's mind-wandering in relation to school tasks.	<ul style="list-style-type: none"> <li>● What strategies do you use when you notice mind-wandering in your child?</li> <li>● What factors, if any, influence what strategy/approach you use?</li> <li>● Have you found any ways to manage your child's mind-wandering during school tasks?</li> <li>● In your experience, what have you found helpful and what have you found unhelpful?</li> </ul>
Parents' skills and parental support	<ul style="list-style-type: none"> <li>● Do you feel equipped to manage your child's mind-wandering in relation to school tasks?</li> <li>● How do you feel about managing your child's mind-wandering in relation to school tasks?</li> <li>● How would you describe any support you have received to help manage your child's mind-wandering in relation to school tasks?</li> <li>● How could you be further supported in managing your child's mind-wandering?</li> </ul>
Parents' ideas	<ul style="list-style-type: none"> <li>● Can you share any other insights or ideas in this area?</li> </ul>

## Data Analysis

The focus group transcripts were analysed using inductive reflexive thematic analysis (Braun & Clarke, 2006). Researcher OW familiarised herself with the focus group data by reading and re-reading the transcripts. OW then generated codes in the transcripts based on the research questions, and then combined codes to create rich, multifaceted, engaging semantic and latent themes. The themes were reviewed, refined and given detailed, descriptive names. Researchers OW and MF engaged in a dialogue and consensus process by reviewing and discussing the themes and codes to ensure agreement between the researchers and to encourage reflexivity and authenticity (Cofie et al., 2022). The participants were not previously known to OW which positively contributed to the reflexive process, furthermore, researcher OW had previous experiences of conducting qualitative analysis which was an advantage. The results were reported in line with the Standards for Reporting Qualitative Research guidelines (O'Brien et al., 2014).

## Ethics

Ethical approval was obtained from the Taught Masters Research Ethics Committee, School of Psychology at University College Dublin in December 2023. Participants received an information sheet and provided informed written consent through an online form.

## Findings

Five themes were generated: 1) Mind-wandering is an expected and positive element of learning in

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children, 2) Mind-wandering is more likely to occur in certain circumstances, 3) Children tend to share the content of their mind-wandering, providing parents with valuable insights, 4) Parents adopt a trial-and-error approach to the management of mind-wandering, 5) Parents' frustration with mind-wandering arises from time pressure. Subthemes were also developed from these main themes. The themes and subthemes are described below and illustrated with quotes from participants. Additional quotes are displayed in Table 2 below.

### **Mind-Wandering is an Expected and Positive Element of Learning in Children**

Parents expressed the view that mind-wandering is a common occurrence in young children that is "developmentally appropriate for their age" (Participant 4). They described instances of their children experiencing mind-wandering during "any task you want them to focus on" (Participant 2) including homework, play and getting dressed. Although parents were not familiar with the term mind-wandering, they were still able to identify it in their children. They recognised mind-wandering when their child would go quiet, appear not to be listening, stop a task, ask "random" questions, or start talking off-topic.

Several benefits associated with mind-wandering were mentioned such as how it can foster imagination and creative thinking, how it promotes a sense of curiosity and how it inspires children to ask questions that promote learning,

I would kind of go back to what. (Participant 3)

said.

I think it can be a positive thing, and you know a sign of sort of creativity...It's sort of like a curiosity. (Participant 2).

Mind-wandering was also said to help children to process past events and develop deeper thinking, reflection and insights.

Due to parents' belief that mind-wandering is a valuable process in learning, they are inclined to refrain from redirecting their child back to a task unless there is time pressure to complete the task. There was a general feeling that because homework is short at this age (approximately ten minutes), mind-wandering is not a big issue when it occurs even though it results in homework taking longer,

...a lot of the time I think it's fine and homework is so short like it's not, it's not usually really a problem (Participant 4).

However, one parent mentioned that mind-wandering can disrupt the flow of work, impacting its quality,

If her mind is wandering and she's distracted, her work mightn't be as good as it could be (Participant 3).

Another participant mentioned how her child's mind-wandering made it difficult for her to complete homework, which negatively impacted her confidence in reading in school. However, this was quickly resolved when they started completing homework in the morning which greatly improved her concentration.

### **Mind-Wandering is More Likely to Occur in Certain Circumstances**

Participants described how mind-wandering is more likely to occur under specific conditions influenced by environmental and personal factors. Specifically, parents reported that children are particularly prone to mind-wandering when their needs are not met, when they are in distracting environments, or when they have less agency over a task.

#### ***Mind-Wandering is More Likely to Occur When a Child's Needs Are Not Met***

Parents explained how mind-wandering is more likely to occur if their child's needs are not met. For instance, children experience more mind-wandering when they are trying to complete a task when hungry or tired,

If she's tired, yes, she would find it hard to stay on task. I think that would definitely contribute to her mind-wandering (Participant 1).

Parents also commented on how a child's mind wanders more when they are upset or emotionally dysregulated. Many participants commented that attempting to complete homework straight after school resulted in more mind-wandering,

...heading into homework when they're dysregulated is not going to sustain them to concentrate and complete it (Participant 1).

### ***Environmental Factors Impact Mind-Wandering***

Parents noted that their children are easily distracted by their environment, which can lead to mind-wandering. Aspects of children's environments can trigger memories, leading to mind-wandering,

...something in our work has reminded her of something that happened in school and then she will go on a tangent (Participant 3).

Likewise, children create links to their interests, taking them off task:

He's very interested in cows, so I'll be saying, "Do you know which letters have the "a" sound?" or "Which words have the "a" sound?" and there'll be a pause, and he'll say, "Mum, do you know, four of my cows had calves today?" So it's completely not relevant at all to what we've been doing (Participant 5).

Furthermore, quiet times such as bed time, and quiet play when a child is alone was associated with more mind-wandering,

If you're putting them to bed and it's quiet, then they might say, "...what happens when somebody dies?"...that's when the mind does wander, when they're actually still or being asked to be still and quiet (Participant 2).

### ***Mind-Wandering is More Likely to Occur When A Child Has Less Agency Over A Task***

Participants highlighted that their children were more likely to mind-wander when engaging in tasks that they found boring or repetitive. However, when children are given more agency over a task, such as choosing a task themselves or choosing when to complete homework, they are less likely to mind-wander,

We could do spelling or educational games at home and she would be quite focused on that because she wants to play it and it's her choice (Participant 2).

If we have the afternoon more or less free, she can choose when she's ready to sit down and do (homework) and that definitely helps with mind-wandering, when she chooses to do it herself she tends to be ready (Participant 1).

I agree with (Participant 1) and (Participant 3). I think if children feel they have a bit more agency, it works better (Participant 2).

### ***Children Tend to Share the Content of Their Mind-Wandering, Providing Parents with Valuable Insights***

There was a prominent theme of how children tend to share the content of their mind-wandering. Parents described how mind-wandering,

..would be very much like her train of thought, it would be rambling about whatever she wants to talk about, rather than staying on the task (Participant 3).

...and how mind-wandering without speaking was uncommon, "she doesn't do much daydreaming where she's not talking to me (Participant 1).

Parents also mentioned that their children are open to discussing their thoughts when asked,

I encourage my children when I see them mind-wandering, I ask them, "A penny for your thoughts?", and they'll tell me what they're thinking (Participant 7).

Children's tendency to talk about what is on their mind provides parents with valuable insights into their children's lives and thought processes,

It'll give you a better insight into their personality and their thought processes (Participant 6).

It might help to figure out what's on her mind, what's worrying her (Participant 1).

This also helps to build the relationship between parent and child. Parents were mindful that they wanted their children to know that they value their ideas and insights.

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### **Parents Adopt A Trial-And-Error Approach to The Management of Mind-Wandering**

Parents received limited formal support for their children's mind-wandering which has led parents to approach mind-wandering with a trial-and-error mentality. One common approach is to only "interfere" with their child's mind-wandering if they are limited by time, or if it negatively impacts their learning,

If I thought it was positive or their mind just taking a break where it needs to, I think I would just overlook it (Participant 2).

However, this participant went on to highlight,

If you notice that it's interfering with them getting something done and that it's having a negative effect, it's worth implementing a strategy to get around it, I think, and helping them to keep it in its place (Participant 2).

### ***The Effectiveness of Simple Strategies***

Parents use simple strategies developed through trial-and-error to keep their child on task. These include redirection, using their child's name to bring their focus back to the task, staying close to their child while they complete a task and doing homework in a quiet environment free from distractions at a time that suits their child. If their child had started talking off-topic due to mind-wandering, parents reassure their child that they can talk later once the task is finished. Some parents motivate their children to finish a task,

We only have another wee bit to do, we can do this bit together and then we'll go and get to do something fun (Participant 5).

Parents highlighted the importance of taking a break from homework if their child is too tired or hungry or if continuing a task would lead to conflict. These simple strategies have been effective so far, one participant said that there has been,

A massive positive impact from such small changes (Participant 2).

The negative impact of "giving out" about mind-wandering was mentioned,

Giving out about it...it's just not helpful in any way (Participant 4).

### ***Parents Have Received Limited Formal Support in This Area***

Participants pointed out that they received limited formal support in the area of mind-wandering, with only two participants discussing issues around mind-wandering with their child's teacher. Nevertheless, parents reported that at present they felt confident in their ability to help their child stay on task. Schools shared general advice on how to support children to focus during school tasks, such as information on appropriate homework etiquette. When communicating with parents, teachers did not explicitly use the term "mind-wandering" and used phrases such as "daydreaming" and "being distractible". Participants observed that there is a lack of awareness of mind-wandering,

I kind of reflect in thinking that it's perhaps not on a lot of people's radars, even schoolteachers, because I think it is probably grouped together with being distracted and that's probably more of a focus (Participant 5).

Another participant highlighted how it would help parents to be

...supported in the view that mind-wandering is okay (Participant 3).

by teachers. Parents noted that it is important for parents to be made aware of different forms of inattention,

I thought of attention, but never really distinguished too much between the mind-wandering aspect and external attention" (Participant 1).

because

...different strategies will be helpful for different types of inattention (Participant 1).

Participants shared that other parents were,

...one of the biggest sources of support in general (Participant 4).

and that they learn strategies from others who have or had children of a similar age. One participant noted that talking to other parents helps her to decide

what is normal or what we might need to be a bit concerned about (Participant 5).

Parents receive information and support online from parenting forums and child education experts.

### ***Parents are Concerned About the Effectiveness of These Strategies in the Future***

Although parents are currently confident in supporting their children to stay focused and complete tasks, they voiced concerns over whether these strategies would be effective in the future. Participants worried that these strategies may not be effective when children have more challenging homework or a larger amount of it. One parent described:

I feel fine about it now, but I am worried about the future. At the moment most of the time I just physically am there, as I said, and subsequently I'm afraid that in the future that will turn into literally helicopter parenting, where you're literally hovering over the child to watch and make sure that the task gets done (Participant 6).

Parents voiced that they may need more support in this area in the future, and that they would like to have more information about mind-wandering, especially on negative consequences of mind-wandering,

It's probably having that knowledge you know, is it something that we should try to be supporting more or distracting away from? Will it impact the future? (Participant 5).

Another parent expressed her concern that her child would not receive adequate support unless they are diagnosed with ADHD in the future.

### **Parents' Frustration with Mind-Wandering Arises from Time Pressure**

Although parents' reaction to mind-wandering is generally positive, there is one instance when this is not the case. Parents often feel stressed or frustrated when their child's mind-wandering delays them when they are under time pressure,

It's just harder whenever you're under time pressure, that example that everyone's giving about trying to get out the door (Participant 5),

It takes longer, but I don't always have all the time in the world, so it can, make me sometimes a bit frustrated (Participant 3).

Parents' frustration in this area brought attention to how busy parents are because they have multiple scheduled activities,

We have to kind of have more expectations of them to...move along with the programme and move along with the schedule when all they want to do is go into imagination and go into play (Participant 6).

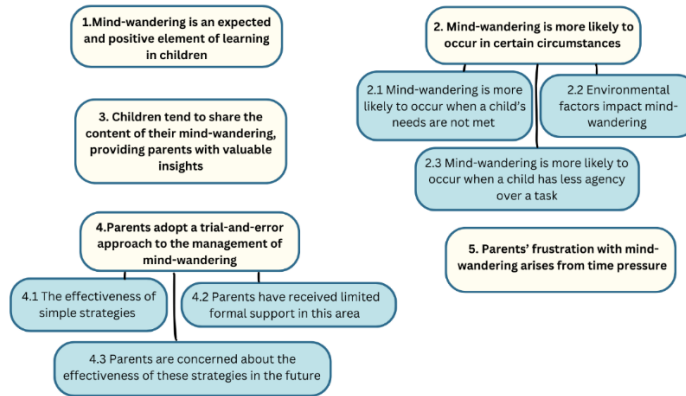
Parents alluded to additional pressures that they feel which were not present in previous generations,

..the pressure or the you know, the research that people have now... we put so much value on our children's development now and different stages of development and making sure that they're well rounded (Participant 3).

Parents described how it was difficult to achieve a balance in today's tightly scheduled culture, as they wish to avoid "nagging" their children to get tasks done. One parent described how they attempt to approach this,

So just to be flexible...you're not like the "task master" enforcing things to get done in the inner timeframe...the kids are the boss and they'll do it when they're well and ready to do it, hopefully anyway (Participant 6).

**Figure 1**  
Thematic Map



**Table 2**  
Additional Quotes

Theme	Representative Quotes
Mind-wandering is an expected and positive element of learning in children	<p>'I'm hoping that my belief that it is not a bad thing for him to be doing is probably the key' (Participant 5)</p> <p>'I think it's just a natural thing' (Participant 4)</p> <p>'It develops imagination and creativity and they're learning by mind wandering and asking further questions on something that may be slightly related or unrelated' (Participant 6)</p>
Mind-wandering is more likely to occur in certain circumstances	<p>'When he's tired that's when he'll mind wander or when he's hungry' (Participant 6)</p> <p>'I don't know if it's a little bit of boredom because when they choose the task, and it's something that they're interested in and it's educational, if it's chosen by them then they're less likely to mind-wander.' (Participant 3)</p> <p>Yeah, the same as was said there, when he's doing homework or playing and I suppose maybe the stimulus of something he sees some colour or some shape or some character that he sees will trigger him to make comments and start thinking about something maybe possibly related, but not directly on task and then just off an tangent on that. (Participant 6)</p>
Children tend to share the content of their mind-wandering, providing parents with valuable insights	<p>'Whatever it is that has popped into her head, she'll just start talking about it' (Participant 1)</p> <p>'When something triggers her memory, she will tell a big story about lot of things that have happened, and you know of get an insight into her little world' (Participant 3)</p> <p>'Listening to all their waffly little mundane kind of chats now will, you know, build up your relationship and give them the trust to want to speak to you about more, well what you view are more important issues in the future' (Participant 3).</p>
Parents adopt a trial-and-error approach to the management of mind-wandering	<p>'I think probably that's the thing that I would probably want as a parent to know. Is it something that would be detrimental if he does it more often, you know?' (Participant 5).</p> <p>'If I notice that she was particularly tired, or upset, then I might just say "let's just leave that for now and take a break and come back to it", If I just thought she was just distracted, just chatting, then I might just try keep her on task.' (Participant 3)</p> <p>'If I have the time to give it to her, that will really influence what strategy I use' (Participant 1).</p>
Parents' frustration with mind-wandering arises from time pressure	<p>'There's so many afterschool things to do and activities and even play dates and get-togethers and all of that, they're sort of constantly in the car ferried around, you know, in a way that we weren't at all' (Participant 2)</p> <p>'So instead of getting dressed, he's been thinking...so that's fine, except for when we're under pressure to get out the door' (Participant 4)</p>

### Conclusion and Discussion

The present study explores how parents of children in the first two years of formal education in Ireland view and manage their children's mind-wandering in relation to school tasks. To the best of the authors' knowledge, this is the first study to explore parents' perspectives of mind-wandering in typically developing children under the age of seven years old. Focus groups with parents revealed that they view mind-wandering as a typical and positive element of learning in children, and they have developed simple,

effective strategies through trial-and-error to manage their children's mind-wandering. Parents employ these strategies when they are under time pressure to complete a task, or when they perceive mind-wandering as having a negative impact on their children's learning. The results indicate that although parents of young children are presently confident in managing mind-wandering, the strategies they currently use may not continue to work effectively as their children progress through school. The results of the present study also displayed several intrinsic and extrinsic factors that influence mind-wandering in young learners and highlighted what parents view as advantageous and disadvantageous outcomes of mind-wandering. These key findings are discussed below, and the educational policy implications of these results are considered.

### **How Parents View Mind-Wandering**

Although parents had no previous knowledge of mind-wandering before taking part in this study, their view that mind-wandering is a typical and developmentally appropriate experience for children aligns with researchers' perspectives in this area (Cherry et al., 2022; Moffett & Morrison, 2020). The overarching opinion was that mind-wandering during school tasks, such as homework, is not presently a cause for concern for parents. In fact, parents highlighted several benefits of mind-wandering, such as how it is an opportunity for their children's minds to take a break. Previous research with adults has indicated that mind-wandering may serve as a restorative period for the brain between tasks (Godwin et al., 2017). A recent study found that alpha brain waves, that are associated with relaxing, were observed while participants engaged in mind-wandering (Kam et al., 2021). Another benefit of mind-wandering mentioned by parents was its perceived role in creativity; a finding noted in previous research with adult participants (Gericke et al., 2022; Pachai et al., 2016). Parents also described how mind-wandering promotes curiosity in their children and how it can lead to asking questions. Although these questions might be unrelated to the task, parents believe that their children are still learning. Previous research has demonstrated that learning still takes place when attention has shifted from the task at hand, with information acquired while off task often proving valuable for the completion of future tasks (Decker et al., 2023). Additionally, many parents noted that their children often link content in a task to their own experiences or interests, causing their minds to wander. Prior research has shown that associations often occur during mind-wandering, and the ability to associate information is valuable for creativity and problem solving (Olson et al., 2021; Russ, 2020). Another benefit of mind-wandering noted by parents was how mind-wandering allows their children to reflect and process past experiences. This process is called 'mental time-travel' and has been noted to occur during mind-wandering in eight- to fourteen-year-olds (Ye et al., 2014). The present study indicates that mental time-travel can also occur in younger children while mind-wandering. The findings in the present study indicate that although mind-wandering causes attention to shift from the task at hand, it may be the case that young learners can still learn and develop skills while mind-wandering.

A prominent observation by parents was that their children tend to share the content of their mind-wandering, giving parents unique insights into their children's experiences, worries and thought-processes. Parents value this aspect of mind-wandering and view it as an asset in supporting their children's mental health, while also viewing it as an opportunity to build their relationship with their child. This finding shows that parents' response to their children's mind-wandering could be an opportunity to build a trusting and supportive relationship with their child, helping their child to feel comfortable in sharing their experiences with them again in the future (Ulferts, 2020). Furthermore, parents explained how their children often talk about their interests or experiences in a rambling manner when they have deviated from a task. This is an interesting insight into how young children experience mind-wandering, and it may have developmental significance. From a Vygotskian perspective, children engage in egocentric self-talk - the direct, verbal expression of egocentric thought - between the ages of three and seven years old. After seven years old, egocentric self-talk declines and becomes internalised speech (Vygotsky, 1962). It is possible that participants' children engage in egocentric self-talk while mind-wandering, as they have not yet developed the ability to internalise speech. However, a recent study found that university students engage in both internalised speech and verbal self-talk while mind-wandering (Racy & Morin, 2024). Therefore, more research is needed to further explore the developmental factors that influence verbal self-

talk during mind-wandering, and whether the level of verbal self-talk during mind-wandering varies depending on developmental stage.

Although parents primarily had a positive view of their children's mind-wandering, they explained that they find it challenging and frustrating when they are under time pressure due to the busyness of modern life. It is interesting to note that recent research shows that it is becoming more common for parents to engage their children in structured activities, which can increase pressure on parents (Hickey & Lecky, 2021; Ulferts, 2020). Furthermore, parents of today struggle with competing priorities in their work and family lives, and feel increased pressure to be 'perfect' parents which causes additional stress (Hickey & Lecky, 2021; Nelson et al., 2014). Parents in the present study noted that they are more likely to discourage mind-wandering and redirect their child back to task when they are under time pressure. These findings illustrate how the busyness of modern life can influence parents' response to their children's mind-wandering, and it also highlights the pressures parents are currently experiencing. It is important to consider these pressures when developing supports for parents so that they can be delivered in the most constructive and accessible way, while avoiding additional pressure on parents.

It is worth noting that negative educational outcomes of mind-wandering outlined in previous research such as its negative impact on memory retention (Cherry et al., 2022), working memory, reading performance (Mooneyham & Schooler, 2013) and reading comprehension (Moffett & Morrison, 2020) did not arise in the focus group discussions. The majority of parents only reported what they saw as minor negative consequences of mind-wandering, such as homework taking longer to complete and slightly poorer quality homework. One participant commented on how mind-wandering negatively impacted her daughter's confidence in reading in school; however, this was quickly resolved with a change in homework routine. It is possible that negative aspects of mind-wandering reported in previous studies are not yet an issue for young children who are in their first two years of school. However, an alternative explanation could be that these negative educational outcomes may not yet be apparent to parents. Parents mostly commented on their children's mind-wandering in relation to homework which only amounted to approximately ten minutes per day, and they highlighted that they have limited insight into their children's mind-wandering behaviour at school. In addition, parents in the current study conveyed that building a relationship with their child and ensuring that their child is happy in school is more important than their child's academic performance at this time. This attitude suggests that the educational consequences of mind-wandering may not currently be a priority for parents. Nevertheless, it is important for parents to be aware of the potential negative consequences of mind-wandering, so that they can recognise if their child needs further support.

### **Factors that Impact Mind-Wandering in Children**

Participants reported several personal and environmental factors that contribute to higher levels of mind-wandering in their children. Hunger, tiredness and engaging in repetitive or monotonous tasks were reportedly associated with increased levels of mind-wandering. Previous research reported similar findings that associated tiredness with higher levels of mind-wandering in both typically developing children (Spruyt et al., 2019) and children diagnosed with sluggish cognitive tempo (Becker et al., 2022). Schools and policy makers can take steps to lessen the impact of these personal factors. For instance, some recent policy changes may indirectly reduce children's mind-wandering related to school tasks, such as the expansion of the Hot School Meals Programme in the Republic of Ireland and the Free School Meals Grants in Northern Ireland. Policies directed at reducing hunger and tiredness in young school children could lead to more engagement amongst students and make them less prone to mind-wandering during school tasks.

Participants noticed their children's minds wandered less when they engaged in tasks that aligned with their interests. This observation aligns with previous research which found that children with a greater interest in ancient Egypt scored higher on a memory test assessing their recall for contents of a story about Egypt (Cherry et al., 2022). Additionally, parents mentioned how their children experienced less mind-wandering when the children chose the time to do their homework. These findings indicate that children experience less mind-wandering when they have more agency over a task. Encouraging and

providing children with the space to explore their interests and approach school tasks in a way which suits them could promote children's engagement in school tasks. The incorporation of more child-centred frameworks that promote children's agency in their learning such as Aistear: The Early Childhood Curriculum Framework could be useful in fostering engagement with school content, while at the same time allowing for beneficial mind-wandering that extends learning through creativity and problem solving (Hines et al., 2019; Russ, 2020).

In addition to personal factors, participants identified environmental factors that contribute to mind-wandering. They noted that distracting or noisy environments increases mind-wandering during homework, as their children start thinking about these distractions and linking them to their own experiences. This aligns with a recent study, which found that children who experienced more mind-wandering were more likely to be affected by interference from noise (Massonnié et al., 2022). To address this issue, parents encourage their children to complete homework in quiet environments. This finding highlights that although distraction is a different form of inattention than mind-wandering, reducing distractions can help decrease mind-wandering during homework. Future research should consider whether socio-economic factors impact mind-wandering; this was beyond the scope of the current study, as no schools considered at an educational disadvantage were represented in the study.

Interestingly, technology and screen time were not mentioned during the focus groups. This is surprising, as changing family environments contain more technology and are likely to influence young children's development (Ulferts, 2020). The absence of technology in the environmental theme could indicate that participants' children may not be significantly impacted by screen time or technology. Nevertheless, these findings may not accurately represent the experience of all children of this age. Therefore, more research is needed to explore how screen time and technology in the home environment may impact levels of mind-wandering in children.

### **How Parents Manage Mind-Wandering**

Although parents in the present study give their children space to mind-wander where possible, they also recognise that it is sometimes necessary to redirect their child's mind from wandering. Parents approach their child's mind-wandering differently depending on the context, recognising that increased mind-wandering when their child is hungry or tired signifies that they need a break. Even though parents receive limited formal support in managing their children's mind-wandering, all parents had simple and effective strategies to regain their child's attention which they developed through trial-and-error. Strategies include re-direction and using their child's name to bring their focus back to task. These strategies were also used by parents of children diagnosed with sluggish cognitive tempo when their children's minds wandered (Becker et al., 2022). The strategies employed by parents in the current study largely rely on parents being present while their child completes homework. Although this is currently possible, it is unlikely that parents will remain physically present while their child completes homework as they progress through school. Furthermore, parents' constant presence during homework could prove to be problematic in the future and could lead to parents being overly involved (Ulferts, 2020). This highlights the importance of developing and providing parents with effective, evidence-based supports to help their child develop attentional skills. This can help to reduce the potential negative impact of mind-wandering in the future.

### **Strengths and Limitations**

A significant strength of this research was the involvement of key stakeholders across the island of Ireland at each stage of the study. This collaborative, co-creative approach meant the study could be developed with input from a parent representative, policy makers and researchers in both psychology and education. This optimised the relevance of the study, as well as the applicability of the findings (Schuiling & Kiewiet, 2016). Furthermore, the direct involvement of parents in this study meant that their perspectives and concerns could be represented in research, as they have not been well represented in the literature in this area until now. This makes it possible for supports to be developed with parents' stated needs at the forefront (Department of Children, Equality, Disability, Integration and Youth, 2022; Hickey & Lecky, 2021). Furthermore, the qualitative methodology and use of online focus groups allowed for rich insights

into parents' perspectives across a broad geographical range (Krueger, 2014).

However, the present study has a number of limitations. First, despite targeted efforts to recruit male participants, the sample consisted entirely of females. This was unfortunate, however somewhat unsurprising as fathers are typically difficult to recruit (Hickey & Lecky, 2021). Second, a more socio-economically diverse sample could have increased the generalisability of the findings. Furthermore, it is worth highlighting that the participants in the present study were all parents who had the time and resources that allowed them to take part in a two-hour focus group. Not all parents are in this position, indicating that the results may not represent all parents' opinions or perspectives. Although online focus groups allowed for participants across the island of Ireland to take part, one participant in the second focus group experienced connectivity issues that limited her ability to take part in the second half of the focus group. Lastly, despite targeted efforts to recruit participants from Northern Ireland, just one parent from Northern Ireland took part.

### **Future Directions and Conclusions**

Despite the aforementioned limitations, this study positively contributes to research on mind-wandering in young children by investigating parents' perspectives that have not been explored previously. This study focused on young children at an early stage of education (under 6-years-old) that was not previously represented in the literature. The findings give insight into how children of this age experience mind-wandering during school tasks, while also providing a foundation for future research in this specific age group. Although parents have been resourceful in developing strategies to manage their children's mind-wandering, parents could still benefit from more support in this area. In order to ensure that supports are accessible to all parents, it is most beneficial to build on support systems that are already established, such as in schools (Hickey & Lecky, 2021; Ulferts, 2020). However, in order for the school environment to be an effective information point for parents, teachers must be provided with up-to-date, evidence informed information on mind-wandering. In particular, the present study highlights that it is important for parents and teachers to be aware of the potential benefits of mind-wandering while also recognising when a child may need further support with their attentional skills, and how to best support them. Providing both parents and teachers with this information could help to cultivate an environment where all children are supported in their attentional skills, regardless of the presence of a developmental disorder diagnosis (Holmes et al., 2019).

Further research that identifies strategies to help manage young children's mind-wandering can help inform policies that focus on children's wellbeing in education, such as the Irish Wellbeing in Schools Policy Statement and Framework for Practice (Department of Education and Skills, 2018) - a policy for schools, children, parents/carers and other key stakeholders. This policy highlights that opportunities for children to develop their attention skills serves as a wellbeing protective factor in educational settings. Incorporating a balanced perspective of mind-wandering into early childhood education policies may help to cultivate a positive, supportive and accepting approach towards fostering children's attention skills at school and at home. However, to achieve this, more research is needed to investigate how young children can be best supported by their parents throughout their education, so that they can experience benefits of mind-wandering and mitigate the negative educational outcomes of mind-wandering. Furthermore, future research could aim to explore a more diverse sample of parents that include fathers. It would also be interesting to investigate how parents' perspectives of mind-wandering change as their child progresses through primary school, so that parents' and children's needs at all stages can be represented in research. To conclude, the present study provides a valuable contribution to research on how parents view and manage mind-wandering in young, typically developing children and opens avenues for further research as well as practical implications in the area of educational policy.

### **Declarations**

#### *Authors' Declarations*

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## **References**

- Adler, K., Salanterä, S., & Zumstein-Shaha, M. (2019). Focus group interviews in child, youth, and parent research: an integrative literature review. *International Journal of Qualitative Methods*, 18, 1-15. <https://doi.org/10.1177/1609406919887274>
- Baird, B., Smallwood, J., & Schooler, J. W. (2011). Back to the future: Autobiographical planning and the functionality of mind-wandering. *Consciousness and Cognition*, 20(4), 1604–1611. <https://doi.org/10.1016/j.concog.2011.08.007>
- Baird, B., Smallwood, J., Mrazek, M. D., Kam, J. W., Franklin, M. S., & Schooler, J. W. (2012). Inspired by distraction: mind wandering facilitates creative incubation. *Psychological science*, 23(10), 1117–1122. <https://doi.org/10.1177/0956797612446024>
- Becker, S. P., Fredrick, J. W., Foster, J. A., Yeaman, K. M., Epstein, J. N., Froehlich, T. E., & Mitchell, J. T. (2022). "My mom calls it Annaland": A qualitative study of phenomenology, daily life impacts, and treatment considerations of sluggish cognitive tempo. *Journal of Attention Disorders*, 26(6), 915–931. <https://doi.org/10.1177/10870547211050946>
- Betts, J., McKay, J., Maruff, P., & Anderson, V. (2006). The development of sustained attention in children: The effect of age and task load. *Child Neuropsychology*, 12(3), 205–221. <https://doi.org/10.1080/09297040500488522>
- Blondé, P., Girardeau, J. C., Sperduti, M., & Piolino, P. (2022). A wandering mind is a forgetful mind: A systematic review on the influence of mind wandering on episodic memory encoding. *Neuroscience and Biobehavioral Reviews*, 132, 774–792. <https://doi.org/10.1016/j.neubiorev.2021.11.015>
- Bonifacci, P., Colombini, E., Marzocchi, M., Tobia, V., & Desideri, L. (2022). Text-to-speech applications to reduce mind wandering in students with dyslexia. *Journal of Computer Assisted Learning*, 38(2), 440-454. <https://doi.org/10.1111/jcal.12624>
- Bozhilova, N. S., Michelini, G., Kuntsi, J., & Asherson, P. (2018). Mind wandering perspective on attention-deficit/hyperactivity disorder. *Neuroscience and Biobehavioral Reviews*, 92, 464–476. <https://doi.org/10.1016/j.neubiorev.2018.07.010>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Buckner, R. L. (2013). The brain's default network: origins and implications for the study of psychosis. *Dialogues in Clinical Neuroscience*, 15(3), 351–358. <https://doi.org/10.31887/DCNS.2013.15.3/rbuckner>
- Bunce, D. M., Flens, E A., & Neiles, K. Y. (2010). How long can students pay attention in class? A study of student attention decline using clickers. *Journal of Chemical Education*, 87, 1438- 1443. <https://doi.org/10.1021/ed100409p>
- Cao, Z., Huang, Y., Song, X., & Ye, Q. (2022). Development and validation of children's mind wandering scales. *Frontiers in Public Health*, 10, 1054023. <https://doi.org/10.3389/fpubh.2022.1054023>
- Cherry, J., McCormack, T., & Graham, A. J. (2022). The link between mind wandering and learning in children. *Journal of Experimental Child Psychology*, 217, 105367. <https://doi.org/10.1016/j.jecp.2021.105367>
- Cherry, J., McCormack, T., & Graham, A. J. (2024). Listen up, kids! How mind wandering affects immediate and delayed memory in children. *Memory & Cognition*, 52(4), 909-925. <https://doi.org/10.3758/s13421-023-01509-0>
- Chu, M. T., Marks, E., Smith, C. L., & Chadwick, P. (2023). Self-caught methodologies for measuring mind wandering with meta-awareness: A systematic review. *Consciousness and Cognition*, 108, 103463. <https://doi.org/10.1016/j.concog.2022.103463>

- Ciaramelli, E., & Treves, A. (2019). A mind free to wander: Neural and computational constraints on spontaneous thought. *Frontiers in Psychology*, 10, 39. <https://doi.org/10.3389/fpsyg.2019.00039>
- Cofie, N., Braund, H., & Dalgarno, N. (2022). Eight ways to get a grip on intercoder reliability using qualitative-based measures. *Canadian Medical Education Journal*, 13(2), 73–76. <https://doi.org/10.36834/cmej.72504>
- Davis-Kean, P. E., Tighe, L. A., & Waters, N. E. (2021). The role of parent educational attainment in parenting and children's development. *Current Directions in Psychological Science*, 30(2), 186–192. <https://doi.org/10.1177/0963721421993116>
- Decker, A., Dubois, M., Duncan, K., & Finn, A. S. (2023). Pay attention and you might miss it: greater learning during attentional lapses. *Psychonomic Bulletin & Review*, 30, 1041–52. <https://doi.org/10.3758/s13423-022-02226-6>
- Department of Children, Equality, Disability, Integration and Youth (2022). *Supporting parents: A national model of parenting support services*. <https://assets.gov.ie/static/documents/supporting-parents-a-national-model-of-parenting-support-services.pdf>
- Department of Education and Skills (2018). *Wellbeing policy statement and framework 2018-2023*. Department of education and Skills. <https://www.gov.ie/en/department-of-education/campaigns/wellbeing-in-education/>
- Feruglio, S., Matiz, A., Pagnoni, G., Fabbro, F., & Crescentini, C. (2021). The impact of mindfulness meditation on the wandering mind: A systematic review. *Neuroscience and Biobehavioural Reviews*, 131, 131–330. <https://doi.org/10.1016/j.neubiorev.2021.09.032>
- Frank, J. L., Broderick, P. C., Oh, Y., Mitra, J., Kohler, K., Schussler, D. L., Geier, C., Roeser, R. W., Berrena, E., Mahfouz, J., Levitan, J., & Greenberg, M. T. (2021). The effectiveness of a teacher-delivered mindfulness-based curriculum on adolescent social-emotional and executive functioning. *Mindfulness*, 12(5), 1234–1251. <https://doi.org/10.1007/s12671-021-01594-9>
- Fredrick, J. W., Miller, M. C., Becker, S. P. (2025). Taming the wandering mind: Strategies for helping children and teens with cognitive disengagement syndrome. *Attention*, 12–15. [https://d393uh8gb46l22.cloudfront.net/wp-content/uploads/2025/02/ATTN\\_02\\_2025-Taming-the-Wandering-Mind.pdf](https://d393uh8gb46l22.cloudfront.net/wp-content/uploads/2025/02/ATTN_02_2025-Taming-the-Wandering-Mind.pdf)
- Frick, M. A., Asherson, P., & Brocki, K. C. (2020). Mind-wandering in children with and without ADHD. *The British Journal of Clinical Psychology*, 59(2), 208–223. <https://doi.org/10.1111/bjc.12241>
- Gericke, C., Soemer, A. & Schiefele, U. (2022). Benefits of mind wandering for learning in school through its positive effects on creativity. *Frontiers in Education* 7, 774731. <https://doi.org/10.3389/feeduc.2022.774731>
- Godwin, C. A., Hunter, M. A., Bezdek, M. A., Lieberman, G., Elkin-Frankston, S., Romero, V. L., Witkiewitz, K., Clark, V. P., & Schumacher, E. H. (2017). Functional connectivity within and between intrinsic brain networks correlates with trait mind wandering. *Neuropsychologia*, 103, 140–153. <https://doi.org/10.1016/j.neuropsychologia.2017.07.006>
- Gozpinar, N., Cakiroglu, S., & Gormez, V. (2023). Sluggish cognitive tempo self report scale (SCT-SR): Development and initial validation study. *Journal of Attention Disorders*, 27(5), 510–520. <https://doi.org/10.1177/10870547231153879>
- Hasan, F., Hart, C. M., Graham, S. A., & Kam, J. W. Y. (2024). Inside a child's mind: The relations between mind wandering and executive function across 8- to 12-year-old. *Journal of Experimental Child Psychology*, 240, 105832. <https://doi.org/10.1016/j.jecp.2023.105832>
- Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine*, 292, 114523. <https://doi.org/10.1016/j.socscimed.2021.114523>
- Hickey, G. & Lecky, Y. (2021). *Irish parents' experiences of support and parenting support services, report prepared for the Department of Children, Equality, Disability, Integration and Youth*. <https://www.gov.ie/en/organisation-information/eb017-developing-anational-model-of-parenting-support-services/#research-papers>
- Hines, M. E., Catalana, S. M., & Anderson, B. N. (2019). When learning sinks in: Using the incubation model of teaching to guide students through the creative thinking process. *Gifted Child Today*, 42(1), 36–45. <https://doi.org/10.1177/1076217518804858>
- Holmes, J., Bryant, A., CALM Team, & Gathercole, S. E. (2019). Protocol for a transdiagnostic study of children with problems of attention, learning and memory (CALM). *BMC Pediatrics*, 19(1), 10. <https://doi.org/10.1186/s12887-018-1385-3>
- Hughes, C. & Devine, R. T. (2019). For better or for worse? Positive and negative parental influences on young children's executive function. *Child Development*, 90, 593–609. <https://doi.org/10.1111/cdev.12915>
- Irish Department of Children, Disability and Equality (2021). *Access and inclusion model: Attention and listening ideas to support younger children*. <https://aim.gov.ie/app/uploads/2021/05/attention-and-listening-ideas-to-support-younger-children.pdf>
- Junod, R. V., Dupaul, G. J., Jitendra, A. K., Volpe, R. J., & Cleary, K. S. (2006). Classroom observations of students with and without ADHD: Differences across types of engagement. *Journal of School Psychology*, 44, 87–104. <http://dx.doi.org/10.1016/j.jsp.2005.12.004>
- Kam, J. W. Y., Rahnuma, T., Park, Y. E., & Hart, C. M. (2022). Electrophysiological markers of mind wandering: A systematic review. *NeuroImage*, 258, 119372. <https://doi.org/10.1016/j.neuroimage.2022.119372>
- Kam, J. W., Irving, Z. C., Mills, C., Patel, S., Gopnik, A., & Knight, R. T. (2021). Distinct electrophysiological signatures of task-

- unrelated and dynamic thoughts. *Proceedings of the National Academy of Sciences*, 118(4), e2011796118. <https://doi.org/10.1073/pnas.2011796118>
- Keulers, E. H. H., & Jonkman, L. M. (2019). Mind wandering in children: Examining task-unrelated thoughts in computerized tasks and a classroom lesson, and the association with different executive functions. *Journal of Experimental Child Psychology*, 179, 276–290. <https://doi.org/10.1016/j.jecp.2018.11.013>
- Killingsworth, M. A., & Gilbert, D. T. (2010). A wandering mind is an unhappy mind. *Science*, 330(6006), 932. <https://doi.org/10.1126/science.1192439>
- Koskulu-Sancar, S., Van de Weijer-Bergsma, E., Mulder, H., & Blom, E. (2023). Examining the role of parents and teachers in executive function development in early and middle childhood: A systematic review. *Developmental Review*, 67, 101063. <https://doi.org/10.1016/j.dr.2022.101063>
- Krueger, R. A. (2014). *Focus groups: A practical guide for applied research*. Sage.
- Liu, Y., Sulaimani, M. F., & Henning, J. E. (2020). The significance of parental involvement in the development in infancy. *Journal of Educational Research and Practice*, 10, 161–166. <https://doi.org/10.5590/JERAP.2020.10.1.11>
- Lobe, B. (2017). Best practices for synchronous online focus groups. In Barbour R. S., Morgan D. L. (Eds.), *A new era in focus group research: Challenges, innovation and practice* (pp. 227–250). Palgrave Macmillan. [https://doi.org/10.1057/978-1-137-58614-8\\_11](https://doi.org/10.1057/978-1-137-58614-8_11)
- Lobe, B., Morgan, D., & Hoffman, K. A. (2020). Qualitative data collection in an era of social distancing. *International Journal of Qualitative Methods*, 19, 1-8. <https://doi.org/10.1177/1609406920937875>
- Massonnié, J., Frassetto, P., Mareschal, D., & Kirkham, N. Z. (2022). Learning in noisy classrooms: Children’s reports of annoyance and distraction from noise are associated with individual differences in mind-wandering and switching skills. *Environment and Behavior*, 54(1), 58-88. <https://doi.org/10.1177/0013916520950277>
- McCormack, T., Burns, P., O’Connor, P., Jaroslawska, A., & Caruso, E. M. (2019). Do children and adolescents have a future-oriented bias? A developmental study of spontaneous and cued past and future thinking. *Psychological Research*, 83(4), 774–787. <https://doi.org/10.1007/s00426-018-1077-5>
- Mermelshstine, R. (2017). Parent–child learning interactions: A review of the literature on scaffolding. *British Journal of Educational Psychology*, 87(2), 241-254. <https://doi.org/10.1111/bjep.12147>
- Merrill, B. M., Raiker, J. S., Mattfeld, A. T., Macphee, F. L., Ramos, M. C., Zhao, X., Altszuler, A. R., Schooler, J. W., Coxe, S., Gnagy, E. M., Greiner, A. R., Coles, E. K., & Pelham, W. E., Jr (2022). Mind-wandering and childhood ADHD: Experimental manipulations across laboratory and naturalistic settings. *Research on Child and Adolescent Psychopathology*, 50(9), 1139–1149. <https://doi.org/10.1007/s10802-022-00912-6>
- Moffett, L., & Morrison, F. J. (2020). Off-task behavior in kindergarten: Relations to executive function and academic achievement. *Journal of Educational Psychology*, 112(5), 938–955. <https://doi.org/10.1037/edu0000397>
- Mooneyham, B. W., & Schooler, J. W. (2013). The costs and benefits of mind-wandering: a review. *Canadian Journal of Experimental Psychology = Revue Canadienne de Psychologie Experimentale*, 67(1), 11–18. <https://doi.org/10.1037/a0031569>
- Mrazek, M. D., Franklin, M. S., Phillips, D. T., Baird, B., & Schooler, J. W. (2013). Mindfulness training improves working memory capacity and GRE performance while reducing mind wandering. *Psychological Science*, 24(5), 776–781. <https://doi.org/10.1177/0956797612459659>
- Nelson, S. K., Kushlev, K., & Lyubomirsky, S. (2014). The pains and pleasures of parenting: When, why, and how is parenthood associated with more or less well-being? *Psychological Bulletin*, 140(3), 846-895. <https://doi.org/10.1037/a0035444>
- O’Brien, B. C., Harris, I. B., Beckman, T. J., Reed, D. A., & Cook, D. A. (2014). Standards for reporting qualitative research: a synthesis of recommendations. *Academic Medicine*, 89(9), 1245–1251. <https://doi.org/10.1097/ACM.0000000000000388>
- Olson, J. A., Nahas, J., Chmoulevitch, D., Cropper, S. J., & Webb, M. E. (2021). Naming unrelated words predicts creativity. *Proceedings of the National Academy of Sciences of the United States of America*, 118(25), e2022340118. <https://doi.org/10.1073/pnas.2022340118>
- Pachai, A., Acai, A., LoGiudice, A., & Kim, J. (2016). The mind that wanders: Challenges and potential benefits of mind wandering in education. *Scholarship of Teaching and Learning in Psychology*, 2(2), 134-146. <https://doi.org/10.1037/stl0000060>
- Posner, M. I., Rothbart, M. K., Sheese, B. E., & Voelker, P. (2014). Developing attention: Behavioral and brain mechanisms. *Advances in Neuroscience*, 2014, 405094. <https://doi.org/10.1155/2014/405094>
- Racy, F., & Morin, A. (2024). Relationships between self-talk, inner speech, mind wandering, mindfulness, self-concept clarity, and self-regulation in university students. *Behavioral Sciences*, 14(1), 55. <https://doi.org/10.3390/bs14010055>
- Risko, E. F., Anderson, N., Sarwal, A., Engelhardt, M., & Kingstone, A. (2012). Everyday attention: variation in mind wandering and memory in a lecture. *Applied Cognitive Psychology*, 26(2), 234–242.
- Roulston, S., Brown, M., Taggart, S., & Eivers, E. (2023). A century of growing apart and challenges of coming together: Education across the island of Ireland. *Irish Studies in International Affairs*, 34(2), 78-121. <https://doi.org/10.1353/isia.2023.a899832>

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- Russ, S. W. (2020). Mind wandering, fantasy, and pretend play: A natural combination. In Preiss, D. D., Cosmelli, D. & Kaufman, J. C. (Eds.), *Creativity and the wandering mind* (pp. 231–248). Academic Press. <https://doi.org/10.1016/B978-0-12-816400-6.00010-9>
- Schooler, J. W., Mrazek, M. D., Franklin, M. S., Baird, B., Mooneyham, B. W., Zedelius, C., & Broadway, J. M. (2014). The middle way: Finding the balance between mindfulness and mind-wandering. *Psychology of Learning and Motivation*, 60, 1-33. <https://doi.org/10.1016/B978-0-12-800090-8.00001-9>
- Schuling, G., & Kiewiet, D. J. (2016). Action Research: Intertwining three exploratory processes to meet the competing demands of rigour and relevance. *Electronic Journal of Business Research Methods*, 14(2), 111-124.
- Seli, P., Kane, M. J., Smallwood, J., Schacter, D. L., Maillet, D., Schooler, J. W., & Smilek, D. (2018). Mind-wandering as a natural kind: A family-resemblances view. *Trends in Cognitive Sciences*, 22(6), 479–490. <https://doi.org/10.1016/j.tics.2018.03.010>
- Slattery, E. J., O'Callaghan, E., Ryan, P., Fortune, D. G., & McAvinue, L. P. (2022). Popular interventions to enhance sustained attention in children and adolescents: A critical systematic review. *Neuroscience and Biobehavioral Reviews*, 137, 104633. <https://doi.org/10.1016/j.neubiorev.2022.104633>
- Soemer, A., Idsardi, H. M., Minnaert, A., & Schiefele, U. (2019). Mind wandering and reading comprehension in secondary school children. *Learning and Individual Differences*, 75, 101778. <https://doi.org/10.1016/j.lindif.2019.101778>
- Spruyt, K., Herbillon, V., Putois, B., Franco, P., & Lachaux, J. P. (2019). Mind-wandering, or the allocation of attentional resources, is sleep-driven across childhood. *Scientific Reports*, 9(1), 1269. <https://doi.org/10.1038/s41598-018-37434-5>
- Szpunar, K. K., Khan, N. Y., & Schacter, D. L. (2013). Interpolated memory tests reduce mind wandering and improve learning of online lectures. *Proceedings of the National Academy of Sciences*, 110(16), 6313-6317. <https://doi.org/10.1073/pnas.1221764110>
- Ulferts, H. (2020). Why parenting matters for children in the 21st century: *An evidence-based framework for understanding parenting and its impact on child development*. OECD Education Working Papers, No. 222, OECD Publishing, Paris. <https://doi.org/10.1787/129a1a59-en>
- Usmanovna, A. N. (2021). The role of parents in the upbringing of children. *ACADEMICIA: An International Multidisciplinary Research Journal*, 11(10), 1995-1999. <https://doi.org/10.5958/2249-7137.2021.01665.7>
- Van den Driessche, C., Bastian, M., Peyre, H., Stordeur, C., Acquaviva, É., Bahadori, S., Delorme, R., & Sackur, J. (2017). Attentional lapses in attention-deficit/hyperactivity disorder: Blank rather than wandering thoughts. *Psychological Science*, 28(10), 1375-1386. <https://doi.org/10.1177/0956797617708234>
- Vygotsky, L. (1962). *Thought and language*. MIT press. <https://doi.org/10.1037/11193-000>
- Wilson, M., Sosa-Hernandez, L., & Henderson, H. A. (2022). Mind wandering and executive dysfunction predict children's performance in the metronome response task. *Journal of Experimental Child Psychology*, 213, 105257. <https://doi.org/10.1016/j.jecp.2021.105257>
- Wood, D., Bruner, J., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Child Psychiatry*, 17, 89–100. <https://doi.org/10.1111/j.1469-7610.1976.tb00381.x>
- Ye, Q., Song, X., Zhang, Y., & Wang, Q. (2014). Children's mental time travel during mind wandering. *Frontiers in Psychology*, 5, 927. <https://doi.org/10.3389/fpsyg.2014.00927>
- Zhang, Y., Song, X., Ye, Q., & Wang, Q. (2015). Children with positive attitudes towards mind-wandering provide invalid subjective reports of mind-wandering during an experimental task. *Consciousness and Cognition*, 35, 136-142. <https://doi.org/10.1016/j.concog.2015.05.006>