Cyberbullying and Primary-School Aged Children: The Psychological Literature and the Challenge for Sociology

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Abstract: Cyberbullying is an international issue for schools, young people and their families. Whilst many research domains have explored this phenomenon, and bullying more generally, the majority of reported studies appear in the psychological and educational literatures, where bullying, and more recently, cyberbullying has been examined primarily at the individual level: amongst adolescents and young people, with a focus on the definition, its prevalence, behaviours, and impact. There also is growing evidence that younger children are increasingly accessing technology and engaging with social media, yet there is limited research dedicated to this younger age group. The purpose of this paper is to report on a systematic literature review from the psychological and educational research domains related to this younger age group, to inform future research across the disciplines. Younger children require different methods of engagement. This review highlights the methodological challenges associated with this age group present in the psychological literature, and argues for a greater use of sociological, child-centred approaches to data collection. This review examined studies published in English, between 2009 and 2014, and conducted with children aged 5–12 years, about their experiences with cyberbullying. Searches were conducted on seven key databases using keywords associated with cyberbullying and age of children. A Google Scholar search also examined published and unpublished reports. A total of 966 articles and reports were retrieved. A random peer review process was employed to establish inter-rater reliability and veracity of the review. Findings revealed 38 studies reported specifically on children aged 5–12 years. The dominant focus of these articles was on prevalence of cyberbullying, established through survey methodology. Few studies noted
impacts, understanding and behaviours or engaged children’s independent voice. This review highlights current gaps in our knowledge about younger children’s experiences with this form of bullying, and the importance of employing cross-disciplinary and developmentally appropriate methodologies to inform future research.

**Keywords:** cyberbullying; young children; primary-school; systematic; review; research methods

### 1. Introduction

Since the advent of readily available, technology-enhanced communications and the ubiquitous diffusion of technology throughout mainstream society, young people have readily embraced a range of devices, platforms and online programs. Research reporting on children’s annual online experiences across Europe, between 2007 and 2010, has found that up to 94 per cent of children aged 6–17 years old access the internet [1] and that six per cent of children aged 8–11 years engaged with social networking. Social networking potentially exposes young people to online harassment and cyberbullying which is “arguably the most prevalent online risk faced by children” [1] (p. 29). It is also evident that younger children’s ownership and access to these technologies is increasing, and as such, they are exposed to the benefits and risks associated with their use: which until recently, had been reserved for older users [2–4]. Whilst benefits can include broader avenues of communication and new opportunities for learning, one potential risk for children is that of exposure to, and experience of, cyberbullying. The OECD research [1] found that in Europe, up to 31 per cent of children aged 6–14 years had encountered cyberbullying as measured across various time periods, which was dependent on the scale incorporated in the studies. Such research demonstrates a need to investigate cyberbullying issues with young children.

Cyberbullying, like traditional bullying, has been defined in many ways, yet most agree on the substantive elements which need to be present for it to be considered bullying, as distinct from aggression: *viz.*: an imbalance of power, deliberate intent to hurt or harm and repetition in relation to the misuse and abuse of technology [5]. A couple of issues arise here. Bullying as a concept itself, has its own social history, in that it arose as a field of enquiry from studies into mobbing and aggression, which were situated in the psychological domain [6]. Bauman *et al.* [7] raise the issue that cyberbullying behaviours may in fact be more closely associated with cyber-aggression, than bullying *per se*, but this discussion (bullying *vs.* aggression) falls outside the parameters of this paper. Certainly the literature is inconsistent in how these traditional criteria are applied [8–13], with repetition being the criterion most often challenged: as the online nature of the setting means that something which is uploaded only once, can be seen and re-posted by many [5,11]. Imbalance of power is also more difficult to ascertain in an online setting, as numbers of protagonists cannot be seen necessarily, nor the ways in which strength/power might be present. Intent is also questionable, when there are no non-verbal cues to ascertain meaning behind the text that might have been sent. Bansel, Davis, Laws and Linnell [14] noted that the largely individualistic approach evident in the psychological literature, is problematic from a sociological standpoint, especially in relation to the definition and how it might actually be identified in actual school settings. Indeed they highlighted that teachers and others would need to: “establish in
relation to one incident, whether or not the act was repeated, whether it intended to hurt and whether it was an acceptable use of power” (p. 60). They argued that a new approach was needed: one where the everyday power relations in children’s lives were examined, through analysis of the discourses related to the normalised practices of power relations in schools, and indeed wider society: those of not only power, but race, gender, class and poverty (pp. 60–68). Schott and Søndergard [15] and Spears and Kofoed, [16] also argued for a more diverse approach to examining bullying and cyberbullying, with Spears and Kofoed calling for a shift from privileging quantitative studies in this area, towards encouraging young people to act as knowledge brokers, co-researchers and experts in this domain. They further highlighted that education and sociology are both founded upon the view that people are active agents in their social worlds, constructing meaning, supporting the notion that there are many “truths” and multiple realities, as distinct from psychology: which favours theory testing and emphasises positivism, and objective reality, with directly observable and measurable behaviours.

Behaviours consistently identified as cyberbullying include: threatening or nasty emails, mobile texts or Internet postings; social exclusion from the online community; impersonating another person or forwarding on the cyber victim’s private information; posting derogatory or embarrassing pictures or videos; creating websites designed to hurt, intimidate or degrade victims; trolling or stalking; and harassing others in virtual environments or online games [2,10,17–19].

Whilst academic publications about cyberbullying have increased considerably since the earliest papers emerged during first few years of the 21st Century, most of the research to date has focused on adolescents, its prevalence and impact, with much less known about younger children’s experiences or understandings [10,20]. This is particularly relevant as younger children are now accessing more devices, earlier and more frequently [2,4,21].

The purpose of this systematic literature review is to therefore examine published psychological research conducted with primary school aged children (5–12 years) concerning children’s understanding of cyberbullying: its prevalence, behaviours and impacts, as this comprises the major evidence base available for this age group. The specific aims of this review are to inform future sociological studies by: (a) identifying gaps in current knowledge about this age group and cyberbullying; (b) examining research methods employed to investigate cyberbullying with this age group; (c) provide direction for further research; and (d) propose research methods that best align with the developmental needs of young children aged 5–12 years, for all disciplines.

2. Materials and Methods

2.1. Literature Search and Coding Scheme: Inclusion and Exclusion Criteria

The literature search examined peer reviewed, empirical studies on cyberbullying, published in English in the previous six years (2009–2014), with a specific focus on younger children aged 5–12 years. The decision to apply this timeframe was informed by (a) rapid advances in technology, with younger children increasingly accessing and engaging with technologies, including social media [2,4,22–25]; and (b) a shift in the type of the questions asked of children in Internet related studies: from a more generalised examination of children’s Internet practices, to more specific investigations into the nature of children’s engagement online, including questions about social media. For example,
the Australian Bureau of Statistics’ “Children’s participation in cultural and leisure activities” study of 2003 did not seek data on children’s social networking engagement, but the updated study in 2009 [26] requested such data. To address national and international differences in the way schooling is structured and to facilitate the reporting of findings, children’s age as opposed to year or schooling level was considered in the coding scheme.

As the definition of cyberbullying remains contested in the literature, consideration of cyberbullying definitions did not form part of the coding scheme employed. For the purpose of this paper, studies were considered for review if they reported findings from children aged 5–12 years and investigated one or more of the following areas.

- Children’s understanding, knowledge and/or perceptions of cyberbullying.
- Cyberbullying behaviours, as identified by children in the studies.
- The prevalence of cyberbullying ascertained through children’s reporting of:
  - cyberbullying experiences as a cybervictim, cyberbully, cybervictim/cyberbully, bystander or no cyberbullying experiences; or
  - the perceived prevalence of cyberbullying.
- Cyberbullying impacts as perceived effects and actual effects of cyberbullying on self and others.

Literature about cyberbullying education, such as education strategies and evaluations of cyberbullying programs, was not included in this review, as it was not deemed relevant to this particular review’s aims. Three book chapters were retrieved in the initial search, but ultimately were excluded, as the studies had been published as journal articles and were therefore represented and counted in the pool of articles retrieved.

2.2. Literature Search Method

Seven key data-bases were identified through a scoping exercise, which included consultations with an academic librarian to ascertain the domains where studies on cyberbullying were most commonly published: viz., psychology and education: Education Research Complete; psycINFO; ERIC; Scopus; Psychology Behavioural Science Collection; Sage Premier; and A+ Education. The following key search terms were subsequently identified: Cyberbull*, children, youth, adolescence* and electronic bullying. A supplementary search was also conducted in Google Scholar to locate any additional grey literature such as reports relating to cyberbullying that may not have been captured in the above-mentioned scholarly databases. The coding scheme and search method employed provided an effective and efficient method of obtaining the maximum number of relevant articles across disciplines that most commonly cite research in the area of cyberbullying and children.

2.3. Selection of Relevant Publications

Nine hundred and sixty six (966) articles were identified in the initial search results and subsequently were reviewed by the lead author. The abstract and the results section of each article were individually examined to establish if inclusion criteria had been met. Of these, 928 were subsequently excluded from further consideration. Many of the excluded studies focused on older age groups, or results were not
specific to the age ranges identified in the inclusion criteria. Consequently, 38 articles were closely examined in the next stage of the review process.

2.4. Inter-Rater Reliability: Inclusion Criteria

Following identification of the 38 articles by the lead author, the second and third authors independently reviewed a random selection of these studies in order to ensure the inclusion/exclusion criteria had been met. Using a random number generator, 11 articles were subsequently identified for inter-rater review [27]. The number of articles ($n = 11$, 28.9%) considered for the inter-rater reliability process were consistent with the number of articles subjected to rating processes reported in similar studies in the field [28–30].

Table 1 demonstrates the decisions made by each of the coders, establishing an acceptable level of consistency. In three instances, there was some uncertainty regarding whether or not the articles adequately addressed all the required inclusion criteria. Each was discussed further and consensus was reached to include the articles in question.

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<tr>
<th>Article</th>
<th>Coder 1</th>
<th>Coder 2</th>
<th>Coder 3</th>
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<tr>
<td>Article 1</td>
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<td>Article 2</td>
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<td>Article 3</td>
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<td>Article 5</td>
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<td>Article 11</td>
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1 = Accepted; 2 = Not accepted; 3 = Unsure.

3. Results

3.1. Overview of Methods

Of the 38 empirical studies reviewed, 36 employed survey methodologies and two studies used an open-ended discussion method. Of those that employed survey methodologies, only seven allocated one or more spaces for participants to provide written/qualitative responses. Two were also delivered in a one-on-one/face-to-face interview style, but employed multiple choice response options. Only three studies adapted their language or length of time to accommodate younger children (See Table 2).
Table 2. Overview of recent research on cyberbullying prevalence, understandings, behaviours and impacts with children aged 5–12 years.

<table>
<thead>
<tr>
<th>Author</th>
<th>Year Published</th>
<th>Focus</th>
<th>Sample Age in Years</th>
<th>Sample Number</th>
<th>Methodology</th>
<th>Country/Countries</th>
<th>Year of Research</th>
<th>Setting</th>
</tr>
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<tbody>
<tr>
<td>[31]</td>
<td>2009</td>
<td>Prevalence of cyberbullying, characteristics of victims and how it effects them</td>
<td>9–15</td>
<td>1330</td>
<td>Self-report survey-multiple choice and Likert scales</td>
<td>Australia</td>
<td>2002–2005</td>
<td>in school except 1 cohort which was mailed</td>
</tr>
<tr>
<td>[34]</td>
<td>2010</td>
<td>Prevalence of cyberbullying, demographic or characteristic influences on cyberbullying</td>
<td>10–14</td>
<td>221</td>
<td>Self-report survey-multiple choice and Likert scales</td>
<td>US</td>
<td>2009</td>
<td>in school</td>
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### Table 2. Cont.

<table>
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<tr>
<th>Author</th>
<th>Year Published</th>
<th>Focus</th>
<th>Sample Age in Years</th>
<th>Sample Number</th>
<th>Methodology</th>
<th>Country/Countries</th>
<th>Year of Research</th>
<th>Setting</th>
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<tr>
<td>[37]</td>
<td>2011</td>
<td>Impacts of cyberbullying</td>
<td>10–11</td>
<td>90</td>
<td>Pen and paper booklets-4 scenarios with Likert scales and self-report paper questionnaire with multiple choice and Likert scales</td>
<td>UK unidentified</td>
<td>in school</td>
<td></td>
</tr>
<tr>
<td>[38]</td>
<td>2011</td>
<td>Prevalence of cyberbullying</td>
<td>12–17</td>
<td>1149</td>
<td>Self-report survey-multiple choice and Likert scales</td>
<td>US</td>
<td>2009 online</td>
<td></td>
</tr>
<tr>
<td>[38]</td>
<td>2011</td>
<td>Prevalence of cyberbullying and impact on feelings</td>
<td>11–14</td>
<td>247</td>
<td>Self-report questionnaires-multiple choice and one space for open answer</td>
<td>US unidentified</td>
<td>in school</td>
<td></td>
</tr>
<tr>
<td>*2 [39]</td>
<td>2011</td>
<td>Online habits, including perspectives about cyberbullying</td>
<td>13–17</td>
<td>NA</td>
<td>Six (gender specific) group discussions</td>
<td>Australia</td>
<td>2011 dedicated research venues in children’s homes</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>8–12</td>
<td>NA</td>
<td>Six interviews-friendship pairs</td>
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<td></td>
<td></td>
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<td>12–15</td>
<td>NA</td>
<td>Six ethnographic immersions-friendship pairs</td>
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<th>Author</th>
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<th>Methodology</th>
<th>Country/ies</th>
<th>Year of Research</th>
<th>Setting</th>
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<tr>
<td>[5]</td>
<td>2012</td>
<td>Understanding of cyberbullying</td>
<td>11–17</td>
<td>2257</td>
<td>Scenario questionnaires-yes or no responses and ** dimension</td>
<td>6 European</td>
<td>2010</td>
<td>in school</td>
</tr>
<tr>
<td>[43]</td>
<td>2012</td>
<td>Prevalence of and role in cyberbullying</td>
<td>12–18</td>
<td>5516</td>
<td>Self-report questionnaires-multiple choice</td>
<td>Finland</td>
<td>2009</td>
<td>online or mailed</td>
</tr>
<tr>
<td>[20]</td>
<td>2012</td>
<td>Understanding of cyberbullying and safety strategies</td>
<td>11</td>
<td>5</td>
<td>Self-report questionnaires-multiple choice and one open question</td>
<td>Australia</td>
<td>unidentified</td>
<td>in school</td>
</tr>
<tr>
<td>[49]</td>
<td>2013</td>
<td>Impacts and responses to cyberbullying</td>
<td>11–12</td>
<td>325</td>
<td>Self-report paper and pen survey-multiple choice and Likert scales</td>
<td>UK</td>
<td>unidentified</td>
<td>in school</td>
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<tr>
<td>Author</td>
<td>Year Published</td>
<td>Focus</td>
<td>Sample Age in Years</td>
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<td>Methodology</td>
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<tr>
<td>[56]</td>
<td>2013</td>
<td>Understanding, prevalence, behaviours and impacts</td>
<td>11–12</td>
<td>28</td>
<td>face-to-face discussion groups</td>
<td>unidentified</td>
<td>unidentified</td>
<td>in school</td>
</tr>
<tr>
<td>[58]</td>
<td>2014</td>
<td>Prevalence of cyberbullying, understanding and concern</td>
<td>8–17</td>
<td>7644</td>
<td>Self-report online survey (18 countries); Face-to-Face self-report survey (7 countries)-multiple choice</td>
<td>25 Countries</td>
<td>2012</td>
<td>online or face-to-face</td>
</tr>
<tr>
<td>[59]</td>
<td>2014</td>
<td>Prevalence of cyberbullying</td>
<td>10–16</td>
<td>529</td>
<td>Pen and paper self-report questionnaires-multiple choice and Likert scales</td>
<td>Italy</td>
<td>unidentified</td>
<td>in school</td>
</tr>
</tbody>
</table>

*1 Questions adapted for younger age groups; *2 This study is included because the age categories are reported.
3.2. Overview of the Focus of the Studies

Whilst most studies explored more than once aspect of cyberbullying (See Table 2), the greatest research focus, addressed in over 30 studies, concerned prevalence. The impact of cyberbullying was the second highest research focus (11 studies), followed by children’s understanding and perspectives of cyberbullying (six studies) and bullying behaviours (six studies). Other themes present in the 38 studies included predictors and influencing factors of cyberbullying, such as characteristics that make children more vulnerable to cyberbullying (10 studies), children’s identified responses to cyberbullying (three studies), children’s responses to cyberbullying (two studies), reporting behaviours (one study) and children’s concerns about cyberbullying (one study). It is also worth noting that the majority of these studies represented older children with only nine studies researching with children under nine years of age.

3.3. Contextual Background of the Studies

The majority of the research on younger children and cyberbullying was conducted in North America and Europe. Ten studies were conducted in the United States of America (US) and two in Canada. In Europe: three studies were conducted in the United Kingdom (UK); two in Spain; three which compared two or more European countries; and one each in Germany, Italy and Turkey. Seven studies were conducted in Australia and five studies in Scandinavian countries: three in Finland and two in Sweden. There was one study conducted in Korea; one international study, across 25 countries; and one study did not identify the country (See Table 2).

3.4. Overview of Data Collection Procedures

The majority of the studies (30) collected their data in a school environment. Of these, 27 were conducted using school computers and three used pen and paper. Six studies collected their data using an online survey method in a non-specified environment, with one of these also mailing their surveys to participant’s homes, for pen and pencil completion. Two studies were conducted in the children’s homes with one of these also using a specific location in the area, as a dedicated research centre, which children and their parents would attend. The majority of surveys conducted in schools were administered by researchers (18), nine were administered by teachers and two studies had researchers and teachers present. Two studies did not identify who administered the surveys (See Table 2).

3.5. Overview of Methodologies Employed

Survey methodologies were employed in 36 of these studies, reflecting the wider bullying and cyberbullying research approaches and their associated advantages and limitations. As such, they represent the most common research methods employed for adolescent research in this field, but this approach may not be the most appropriate for use with younger children, and may pose significant validation concerns when used with younger participants.

Thirty-four of the studies had either small samples, were cross-sectional; omitted vulnerable, marginal or other groups, highlighting some of the limitations associated with survey methodologies [60,61]. Twenty-nine of the studies consisted only of multiple choice and/or Likert scales questions. This method can result in acquiescence bias, where participants are more likely to agree with statements, or indicate
positively, and it also limits respondents to choose from the posed responses rather than inviting general statements of opinion or replies [46]. Given the age of the children involved in these studies, the role of using open-ended questions or open dialogue/interviews to determine their knowledge and experiences needs greater consideration, as studies into bullying have revealed that young children often confuse terms and understandings [62].

4. Discussion

4.1. Cyberbullying Research with Primary School Aged Children

Most of the research about cyberbullying and younger children located for this review has focused on the prevalence of this phenomenon and has been driven by the field of psychology, largely as a progression from work done on bullying over the past four decades, and arising from previous studies into aggression. This focus on prevalence is not surprising, given that early efforts to ascertain knowledge about any new phenomenon is largely concerned with how much of it is actually occurring. To do this, prevalence studies require representative survey methodologies. There is limited research evident, however, on younger children’s understanding and perspectives of cyberbullying; its impacts; and actual behaviours employed with this age group. This review will act as a foundation to position future work from multiple disciplines, including sociology, concerning this phenomenon and younger children.

Notably, all but one of the studies located for this review were conducted in Western countries, highlighting a need for greater cross-cultural research with younger children, and for greater efforts to widely disseminate findings, so as to inform the research and wider community.

Consistent with survey methodologies employed in studies undertaken with older age-groups (see [63]), many of the studies reviewed provided explanations of cyberbullying to the participants and offered response options relevant to accepted timeframes and frequency cut-offs. Australian Communications and Media Authority [2] was the only study reviewed that provided children with the opportunity to express their perceptions about cyberbullying qualitatively.

Exploring younger children’s understanding of cyberbullying without adult input may be critical to obtain an accurate perspective of their understanding, experiences and behaviours. Spears and Kofoed [16] argued for greater use of qualitative methodologies in cyberbullying research, as the construct is unique to the digital age: meaning that adults/researchers would never have experienced this form of bullying in their own childhood. Children’s and young people’s voice and perspectives are therefore paramount in order to extend and deepen understandings and develop successful interventions that will resonate with young people. They further suggested that a “shared lens across the new sociology of childhood” (p. 217), involving multi-disciplinary methodologies, would enable greater understanding of cyberbullying to emerge through the insights which youth voice can bring. Enabling youth as co-researchers, to co-construct meaning alongside adults, is therefore essential. Younger children’s views and understandings then, are clearly needed, especially given they are being exposed to technologies and devices at increasingly earlier ages. Accessing those views, however, almost solely through survey methodologies, may not be the most effective or appropriate approach. By way of support, Spears et al. [64] conducted a qualitative exploration of early adolescents’ knowledge, understanding and experiences of two forms of bullying: covert and cyberbullying, through use of
alternative methodologies such as storytelling and use of Y-Charts. These methods enabled young people to recount examples they knew of, or had experienced, and clarify their own understanding by articulating what cyberbullying “looks, sounds and feels like” to them (p. 191), as distinct from only responding to an adult-provided definition.

This review also identified some studies of younger children that examined the impact of cyberbullying on the following: school connectedness; feelings of loneliness and other emotional responses; conduct and peer issues; school absenteeism; and links to anxiety, depression and suicidal thoughts. In contrast, there were, however, no studies with children aged 12 years or younger located, which explored other cyberbullying impacts, for example, on: self-esteem; sleeping patterns; fears; school attainment; eating disorders; or family relations. Considering that only studies published in English were accessed for this review, other studies in other languages may, however, exist, highlighting again the need for greater cross-cultural dissemination. Given also what is known concerning risk and protective factors in relation to cyberbullying and adolescents, and the need for early intervention [63] these gaps in knowledge about how cyberbullying can potentially impact on younger children’s holistic development, highlight opportunities for further research. Conducting longitudinal research from an early age to examine not yet identified and long-term impacts of cyberbullying is needed, particularly as younger children are accessing more technology, earlier, and more frequently than ever before.

In acknowledging the need for further research in this field, it is important to note that researching sensitive topics with children, such as bullying and cyberbullying, is often subjected to close scrutiny from ethics committees, as they balance the need to ensure children have a voice and an opportunity to participate in research, whilst ensuring they are protected from harm [65]. Excluding younger children from research on the basis of suppositional risk may limit adults’ understanding of children’s experiences and vulnerability, thus our ability to educate and protect them [65]. Furthermore, excluding them on the presumption that cyberbullying is an adolescent problem, fails to recognise the ever-changing role that technology plays in younger children’s lives. Concomitant with research that indicates younger children are increasingly engaging with social media, there is an imperative that this age group receives greater attention in this field. It is equally important that such research is constructed to allow researchers to identify age patterns and age appropriate interventions. Given that the majority of the studies reviewed have employed survey methodologies, there is a need to consider: (a) some of the broader implications of relying predominately on this approach for collecting data on cyberbullying with younger children; and (b) opportunities for employing alternative and innovative research methods to engage younger children in this field of research.

4.2. Conceptual Issues for Primary School-Aged Children from a Developmental Perspective

The value of applying and trialling alternative research methodologies with this target age group becomes apparent when some of the challenges in using survey methodologies with younger children are considered. These methods can be problematic with: (a) junior primary children aged 5–7 years, who are just learning to read and write; (b) middle primary children aged 8–10 years who are still developing metalinguistic awareness [66]; and (c) children who have low literacy levels [44]. Given these limitations, developmental theories can assist in determining the most appropriate methodological approaches to employ.
According to Piaget’s Cognitive Development theory, children aged 7–11 years are in the concrete-operational stage, and whilst they are likely to focus their attention on key descriptive words [67], they are unlikely to relate the questions to non-concrete descriptions. Because children may have not mastered higher-order abstraction and intangible thinking [67], their ability to conceptualise abstractly is limited. Face-to-face methodologies or those with visual prompts would therefore be more appropriate to this age group than traditional survey methods.

There is also greater likelihood that even younger children: aged 2–7 years, who are in Piaget’s pre-operational stage, may misinterpret descriptions of bullying and cyberbullying given their inability to conserve, seriate and classify, and think logically [67].

Monks and Smith [62] in their study of bullying applied such knowledge of child development to their research design. Using a face-to-face interview methodology, with supplementary cartoon visuals, they were able to elicit children’s, (aged 4–14 years) understanding of the term bullying. These visual prompts were beneficial in helping children to identify verbal, physical, indirect and relational bullying, as they were unable to recall them freely. Nevertheless, only after the age of eight years were children able to develop a definition of bullying which separated out the different types of bullying.

Monks and Smith [62] study provides valuable insights which have informed subsequent research. Although their research methodologies were age appropriate, younger children were rarely able to differentially conceptualise or identify: bullying and singular incidents, and bullying and aggressive behaviours such as rough and tumble play. These findings suggest that in the first instance, it may be more prudent to examine children’s understanding of cyber-aggression before exploring their understanding of cyberbullying.

In examining the 38 studies located, only three adapted their language to accommodate children’s developmental levels, and only four ensured a researcher was available to assist with comprehension and answer questions. When researching with younger children it is important to ensure they are supported in being able to comprehend the questions being asked, however, by providing a researcher to answer questions during a survey, children can try to seek “the right” answer. This is particularly so for younger children, who may perceive school administered surveys as a form of “test”.

Wachs, Wolf and Pan [44] suggest that some children may see questionnaire style methods as “schoolwork”, particularly if administered in a school setting, and may be more concerned about perceived correctness of their responses rather than providing insights into what they honestly think, feel and have experienced. This social desirability bias may be more evident for younger children, than adolescents, but would need to be examined through empirical research processes.

Although some of these issues can be addressed by carefully constructing age-appropriate surveys, with age-appropriate language, there is no guarantee that all children will be able to interpret the questions as intended. Junior and middle primary children and those with low literacy levels will likely need support in item comprehension and in following instructions to fill out questionnaires.

Additionally, culturally relevant and appropriate language and/or scenarios are also important considerations for younger children. According to Vygotsky’s Sociocultural theory, language and dialogues are culturally specific [66]. The inconsistency in definitions and language used to describe cyberbullying across cultures, not only have implications with cross-culture comparison research [5], but also have implications when researching with children. Young children from cultures that have no specific word for bullying would indeed have difficulty explaining or understanding cyberbullying, but
may find it easier to articulate aggression, or cyber-aggression. Monks and Smith [62] successfully argued that children’s cognitive and language development impacts on their comprehension of concepts, such as bullying. Complex or abstract words, words that have multiple meaning or no meaning at all within a child’s culture are likely to cause confusion. Microsoft Corporation [58], in their research with 8–17 year old children across 25 countries, recognised the implications of culturally specific language and variations in understanding of cyberbullying, at a cultural and individual level. Their research asked children whether they had been a victim or perpetrator of “mean or unfriendly treatment”; “made fun of or teased”; or “called mean names” online. Although these terms are likely to be translated across cultures quite effectively, they can be open to interpretation, and may not accurately reflect the notion of bullying and/or cyberbullying. For example, if a child had experienced another person sharing a derogatory image of them via a mobile phone, they may not categorise this behaviour as deliberately aggressive, repeated, or have any understanding of the power differential, as it was an image and younger children may not perceive mobile phones as necessarily “online”. Paying attention to language, complex constructs and cognitive development, are therefore critical to any exploration of cyberbullying experiences amongst younger children.

Understanding the child’s perspective is therefore paramount, and sociological approaches, where the child and his social environment are central, would add considerable value and provide a more holistic understanding of this phenomenon. Co-constructing meaning with young people, particularly the very young, requires a level of reflexivity on the part of the researcher, and sensitivity to their social worlds, which can be enhanced by sociological approaches.

Working collaboratively with younger children throughout all aspects of a study, including the formative stages, to shape the direction of the investigation and the development of the questions, has the potential to contribute to the accuracy and relevancy of findings into cyberbullying and younger children.

4.3. Settings and Administrators of Surveys

In examining appropriate settings for conducting research with younger children, Hill [68] found that children prefer school as a setting for research. However, she emphasised that ideally any data collection conducted in schools should be administered by external parties (field workers, researchers) who meet working with children safety/security requirements, as opposed to teachers or school personnel, in order to help minimise bias.

This review did reveal that schools were the main environments where data were collected and that the majority of surveys conducted in schools were administered by researchers. Nevertheless, when designing research with younger children, bias as a result of adult presence, influence and constraint may be evident in instances where surveys are administered by teachers; mailed to children’s homes; or require online participation.

4.4. Using Dialogue to Research with Young Children

Currently, this field has been driven by quantitative methods and psychology and education disciplines, as is evident from our review of the databases: hence, prevalence has been the focus of many studies, but for younger children, sociological methods may be more appropriate. Valuing the rights of
the child and placing them at the centre of the research process reflects the new sociology of the child [69]: as an active participant in the creation of knowledge, and not simply a “subject” for research [16].

To obtain an accurate picture of young children’s understanding of cyberbullying, this review argues that research methods that align with their developmental levels are necessary. There is a wealth of literature that discusses optimal, developmentally relevant research methodologies for use with younger children; however, these seem to be largely ignored in the research on cyberbullying located for this review. Such methods include: play; use of concrete materials to facilitate comprehension; visual methods; and face-to-face interviews [62,70–72].

The cartoon method used by Monks and Smith [62] to determine children’s understanding of the term bullying is one such example of research design that is developmentally suitable for use with younger children. Additionally, qualitative research methods, such as semi-structured face-to-face interviews, or the use of Y charts, narrative and experiential methods which engage youth voice [16,64] may be particularly useful in addressing some of the conceptual challenges encountered when employing survey and questionnaire methods with young children.

Spears and Kofoed [16] articulated the importance of youth voice and qualitative techniques in cyberbullying research, so that young people’s experiences do more than simply supplement existing quantitative studies. Rather, youth act as knowledge brokers, and co-researchers, to help adults understand this phenomenon from the perspective of young people themselves. With younger children, this is equally important, as cyberbullying is an adult-conceived term, and it is their understandings that are needed, not adult imposed interpretations of them.

One useful methodology to consider when researching with younger children is that of dialogue, including face-to-face interviews. Using a dialogue method encourages children to discuss their reasoning behind their thinking or actions [65] which fosters children’s interpretation and ownership of their own data. In most cultures adults are seen by children as authority figures, thus hold a more powerful position [70,73,74]. Using a dialogue method can reduce power relations between adults and children during data collection and interpretation [75]. According to Graham and Fitzgerald [65] and Harcourt [76] using open-ended research techniques, such as semi-structured interviews, lessen power disparity because children have a certain amount of control over the direction of the discussion. Additionally, a discussion format provides an informality that optimises the likelihood of more equal relationships. The adult-child relationship and minimising any power disparity, which naturally occurs, are critical considerations when researching with younger children, [70,73,77,78].

Although group interviews capitalise on social interaction [79,80], which can be advantageous in prompting one another’s memory [60,79–81], the nature of cyberbullying may make children feel uncomfortable sharing their experiences in front of peers. Individual interviews are increasingly being accepted as an appropriate research method to obtain children’s perspectives [72,76,82]. Individual interviews allow the researcher to investigate children’s experiences confidentially, which is particularly beneficial when “researching sensitive or personal issues” [83], such as cyberbullying. Face-to-face interviews are, however, resource intensive [46], particularly for large studies, where additional staff may need to be employed and trained in interview protocols.

As noted previously, when researching with children, the methods need to be guided by children’s developmental levels [74]. For example, from age six, children are sufficiently articulate, have a reasonable vocabulary and a good knowledge of semantic and grammatical rules [66,84,85], which
suggests they are cognitively developed enough to participate in interviews. At age 10, however, children are far more advanced in their language, comprehension and social understanding. They are “similar to adults in their recall of historical events” [77] (p. 299) and are beginning to embark on abstract thinking and can appreciate more traditional research methods, such as surveys [66,67,84]. The qualifier to this, however, is that where there are developmental delays, language and cultural contexts, which differ significantly, survey methodologies may not be the most appropriate method for establishing understanding about the construct. Given the considerable difference in developmental levels, researchers need to be meticulous in designing all research with young children, but especially in aligning interview pro-formas to accommodate children’s development, and should avoid using traditional survey methods with children under the age of 10 years. Researchers should consider alternative survey structures that utilise visuals and culturally appropriate scenarios, consider survey length and appeal, and whether more than one data collection would be most suitable for their intended audience.

4.5. Using Technology when Researching Cross-Culturally and with Young Children

Technology can be employed to facilitate data collection with young children and in cultures where bullying and cyberbullying are less researched, and can be used to enhance traditional data collection methods, for example, by facilitating record keeping of data and improving efficiency in collection methods. Additionally, young children themselves, including those with poor fine motor skills, can use technology to support them in collecting and recording data. Technology also can provide innovative and alternative approaches to data collection that may positively resonate with young children who are increasingly using a range of technologies both in school and home settings, for example, through PhotoStory and PhotoVoice [86,87]. Yet this field is in its early stage and further investigations are required to establish the merits, if any, of using approaches that utilise technologies for data collection with young children, particularly when researching potentially sensitive topics.

4.6. Limitations of the Systematic Review

This paper has largely argued that children’s voice and unique perspective must provide the primary source of data. Whilst the psychological literature gathers data from children, there is an imperative to engage children as co-researchers, who are experts in their own experiences. This paper proposes, therefore, that the sociological contribution has a larger role to play in contributing to a holistic representation of cyberbullying, as understood by younger children.

In conducting this review there are some limitations that should be noted. Premised upon the historical development of research into bullying, which grew from the psychological studies of aggression, the academic search consisted of seven databases considered most likely to publish cyberbullying research: those from psychology and education. There would be further cyberbullying publications beyond these databases, in languages other than English, or in other publishing domains, specifically sociology, technology or medicine/public health and this review suggests that these searches be undertaken, so that a multidisciplinary overview of younger children’s experiences and knowledge of cyberbullying be established. The search terms were also culturally specific to Western countries, which may have limited the number of publications identified that reported on research conducted in non-Western countries. Additionally, the sample is non-representative of all the cyberbullying research conducted with children.
aged 12 years or under, as results of some studies did not separate age groups. Nevertheless, this review provides a snapshot of cyberbullying research conducted with children aged 12 years or younger, and provides insights into the research methodologies currently employed with this age group in these domains. In doing so, it highlights the opportunities and the need to conduct cyberbullying research with children in this age range across multiple disciplines.

5. Conclusions

The research field of cyberbullying is relatively young [56] yet there has been an exponential explosion in research published recently [88], with groups who heavily engage with social media receiving the greatest research attention: namely adolescents and young adults. This review has identified that there is limited research about primary school-aged children’s understanding and perceptions of cyberbullying, the impacts of cyberbullying and cyberbullying behaviours employed, in both Western and non-Western countries. Given the rise of younger children’s engagement with social media and research which shows that cyberbullying is often enacted via social media channels, there is an imperative for children of primary school age to be included as a general rule in cyberbullying research.

However, researching with younger children can pose challenges for researchers, particularly with regard to ensuring that data collected accurately represents their experiences with, and perceptions of, cyberbullying. There is as such a critical need to ensure that developmentally and culturally appropriate research methods are employed in addition to addressing any ethical considerations that may be unique to conducting research with younger age groups. The authors propose that these challenges should not be viewed as a deterrent for conducting research with younger children, but rather should provide the impetus for closely aligning children’s developmental needs and stages with research methodologies. The authors suggest there is unlikely to be a “one size fits all” when designing and conducting research with young children. Survey methodologies are less appropriate to use with younger children or those with low literacy levels or from different cultural backgrounds. Qualitative methods, such as, dialogic and visual methods are likely to provide greater validity. Additionally, with advances in technology, including innovative applications and devices, and younger children’s increasing engagement with technology, there is a need for further research to examine how these developments can be leveraged to facilitate data collection with younger children. Finally, this review calls for greater input and cross-disciplinary dialogue from all research domains, particularly the field of sociology, so as to holistically inform our understanding of cyberbullying from a child-centred perspective.

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Author Contributions

Lesley-Anne Ey designed the systematic literature review. Lesley-Anne Ey, Carmel Taddeo and Barbara Spears consulted the academic library team of UniSA to identify which databases to search. Given that the concept of bullying arose from the field of psychology and the study of aggression, and
the authors’ discipline is education, databases relating to these disciplines were researched. Lesley-Anne Ey conducted the literature search across the databases and Google Scholar, retrieving 966 articles. She refined these articles down to 38 articles. Lesley-Anne Ey, Carmel Taddeo and Barbara Spears engaged in the inter-rater reliability coding and analysis process. Lesley-Anne Ey wrote the first draft of the article. Carmel Taddeo refined the Materials and Methods Section and contributed to the discussion section. Barbara Spears refined the Introduction Section and contributed the latest research in the area. She also contributed to the Discussion Section. All three authors contributed to the editing during the refining process.

Conflicts of Interest

The authors declare no conflict of interest.

References

2. Australian Communications and Media Authority. Like, Post, Share: Young Australians’ Experiences of Social Media; Newspoll Market & Social Research: Melbourne, Australia, 2013.


22. Australian Communications and Media Authority. Click and Connect: Young Australians Use of Online Social Media; GfK Bluemoon: Melbourne, Australia, 2009; pp. 1–118.

23. Australian Communications and Media Authority. Trends in Media Use by Children and Young People: Insights from the Kaiser Family Foundation’s Generation m2 2009 (USA), and Results from the Acma’s Media and Communications in Australian Families 2007; Australian Communications and Media Authority: Melbourne, Australia, 2010.


58. Microsoft Corporation. Online Bullying among Youth 8–17 Years Old-Australia; Cross-Tab Marketing Services & Telecommunications Research Group: Redmond, WA, USA, 2014.
73. Punch, S. Research with children: The same or different from research with adults? *Childhood* 2002, 9, 321–341.


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