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Learning from the experts: Exploring playground experience and activities using a write and draw technique

Running head: Exploring playground experience

Original research

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1 **Abstract**

2 Background: Qualitative research into the effect of school recess on children’s physical
3 activity is currently limited. This study used a write and draw technique to explore children’s
4 perceptions of physical activity opportunities during recess. Methods: 299 children aged 7-11
5 years from 3 primary schools were enlisted. Children were grouped into Years 3 & 4 and 5 &
6 6 and completed a write and draw task focussing on likes and dislikes. Pen profiles were used
7 to analyse the data. Results: Results indicated ‘likes’ focused on play, positive social
8 interaction and games across both age groups but showed an increasing dominance of games
9 with an appreciation for being outdoors with age. ‘Dislikes’ focused on dysfunctional
10 interactions linked with bullying, membership, equipment and conflict for playground space.
11 Football was a dominant feature across both age groups and ‘likes/dislikes’ that caused
12 conflict and dominated the physically active games undertaken. Discussion: Recess was
13 important for the development of conflict management and social skills and contributed to
14 physical activity engagement. The findings contradict suggestions that time spent in recess
15 should be reduced because of behavioural issues.

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21 **Introduction**

22 The behaviours and activities that children engage in during childhood are broadly defined as
23 ‘play’. ^{1, 2} Play is multidimensional, consisting of behavioural, motivational, and contextual
24 components. ^{3, 4} Further, play is fun, enjoyable, flexible and spontaneous, encompasses a

25 wide range of self-chosen activities stimulated by own ideas and interests, and is minimally
26 constrained by adult demands.^{1, 3,}

27 .Play makes a unique contribution to children's social, creative, physical and
28 emotional development.^{5,6,7} and is positively linked to self perceptions,⁸ self esteem,⁹
29 resilience¹⁰and conflict management skills.⁶During school time play occurs during recess or,
30 as known in the UK, playtime.. Recess provides a break from classroom time and promotes
31 learning behaviours, problem-solving skills, and learning readiness^{5, 11, 12} Recess also offers
32 children the opportunity to engage in physical activity on a daily basis.¹³

33 In the United Kingdom, recess is mandatory and can account for up to 25% of the
34 school day.¹⁴. At a policy/curriculum level there has been a recent trend to reduce the
35 duration and frequency of recess, which is largely attributed to curricular pressures and
36 perceived behavioural problems.¹⁵ Conversely given the positive impact of play reductions in
37 recess time may inadvertently hinder development which requires children to be free to
38 explore and manipulate the physical and social world that they live in.^{16, 17}

39 No scientific data exist to show that reducing recess,and increasing classroom time,
40 increases attainment.¹⁸ While recess is arguably a victim of a societal drive for safety¹⁹, a
41 recess intervention that encouraged free-play did not increase the number of injuries
42 observed.²⁰ However, teachers at the intervention school still perceived an increased risk and
43 encountered dilemmas regarding to duty of care. Schools have also developed policies and
44 practices (either written or 'ad hoc') that have created geographically and/or behaviourally
45 restricted environments (e.g. no ball games, no physical contact games). This in turn can limit
46 the essential components and benefits of play.²¹ Restricted children are 'not allowed' to play
47 on their own terms creating increased potential for boredom, frustration and the types of
48 behaviours that the restrictions are trying to suppress.²²

49 However, qualitative research with children, and in particular those in the first few
50 years of compulsory education, can be problematic and practically challenging. More
51 specifically, children can be inconsistent in their thinking, beliefs and reasoning abilities and
52 be restricted by language and communication difficulties in conversation based
53 methodologies. Therefore, to explore younger children's perceptions of recess may require a
54 more developmentally appropriate and creative methodology.

55 Participatory methods such as story games, concept mapping, photography drawing
56 and writing are thought to be developmentally appropriate techniques for children's to
57 convey their perceptions to adults in a meaningful way, and for adults to gain an insight into
58 matters or experiences which affect children's lives. Write and draw is one participatory
59 method that has been used as a stand-alone task or as part of a wider set of research methods
60 in child development, sociology, psychology, anthropology, health promotion and education
61 based research. Write and draw has also been used to investigate children's perceptions of
62 exercise and sport,²³ sport education,²⁴ and learning physical education skills.²⁵ Write and
63 draw (and its variations) enables children to demonstrate thinking at their own levels of
64 cognitive development,²⁶ to express opinions and views as well as providing an insight into
65 their belief systems. Practically, this can be achieved by listening to children as they draw
66 and paying attention to their narratives. This process 'records the journey of the construction
67 of meaning and provide the insight into the children's understandings and perspectives'
68 (p.219).²⁷ Researchers using the draw and write technique have offered substantial critique on
69 its ethical issues, methodological and analytical limitations.^{27, 28, 29} Backett-Milburn and
70 McKie²⁸ note that a technique like draw and write has:

71 “...the potential to tap into emotions sometimes more powerfully than the spoken
72 word.....it is vital to reflect on whether participant methods such as drawing in fact
73 cause children to reveal more than they might otherwise choose” (p.395)

74 Administration issues, or the process by which the children are instructed when and how to
75 complete the task, have been raised within the literature. Specifically, questions relate to
76 whether the children would draw what they found easy to depict, whether recent lessons or
77 experiences (such as recess in the case of the present research) would affect the process. In
78 addition the influence of proximity to friends when undertaking the task, the length of time
79 taken to complete the activity, or a desire in their efforts to please their
80 teacher/parent/researcher based on the premise of asymmetrical relationships can also affect
81 the process. Broadly speaking within write and draw analysis researchers have noted the
82 tendency to under or over analyse the data produced. For example, the use of the drawing
83 alone (and thus simply the end product of the drawing and a representation of physical
84 elements) is in contrast to the more comprehensive analysis of narrative elicited from
85 producing the drawing. Other considerations include using labelling or unguided writing
86 (perhaps through a scribe in younger age groups) as a source of data and the quantification of
87 the picture content. The use of the picture-associated words of children verbatim is seen by
88 some researchers as essential together with practices such as member checking to ensure no
89 interpretation from an adult. Typically, pictures and words ²⁷ or segments of verbatim
90 transcript ³⁰ have been presented however other researchers have subjected data to thematic
91 analysis systematically and objectively coding qualitative data into categorical data,
92 extracting patterns/themes and organising observations.^{31, 32}

93 **Rationale**

94 Therefore, the aim of this study was to use write and draw techniques to examine children's
95 views, experiences and perceptions of school recess time. Such contextual information will
96 first, enable researchers to understand recess from a child's perspective, and second inform
97 the development of recess strategies aimed at increasing physical activity levels.

98

99 **Methods**

100 **Participants**

101 Three hundred and twenty three children (179 boys, 144 girls) aged 7-11 years from 3
102 primary schools located in areas of high social and economic deprivation in one major city in
103 the North West of England returned informed written parental consent and child assent to
104 participate in the project. All schools were participating in the Liverpool Sporting
105 Playgrounds Project (LSPP), which investigated the impact of a playground markings and
106 physical structures intervention (Zoneparc) on the physical activity levels and behaviours of
107 primary school children during school recess .¹⁴ All participating schools had a playground
108 that consisted of a tarmac surface area Two schools had grassed areas, though children were
109 not allowed to play in these areas. The playgrounds varied in size and layout however all
110 schools provided small pieces of portable equipment (e.g. soccer balls, bats, jump ropes) for
111 use. Teachers supervised the morning and afternoon recess times, whilst lunch time recess
112 was supervised by midday assistants.

113 For the purposes of the research children were grouped into school years 3 & 4 (8-9
114 years) and 5 & 6 (10 – 11 years). When years 3 & 4 were at lunch, years 5 & 6 played on the
115 tarmac area (and vice versa). Once children had consumed lunch, they returned to the
116 playground until the conclusion of lunch time recess. All children had access to the
117 playground during morning and afternoon recess time. Data were collected from the LSPP
118 control schools at baseline (between 2003 and 2004).

119 **Measures and Procedures**

120 All children completed the write and draw task during the morning registration period or as
121 soon as practically possible afterwards with no teachers reporting any difficulties in
122 completing the task during the allocated time. The questionnaire was completed before
123 morning recess in an attempt to reduce the influence of recent experiences on their thoughts

124 and perceptions. For the teacher this period represented a time when the children would
125 usually be engaged in seated classroom activity and the timing was of minimal disruption.
126 The write and draw was administered during morning registration. The write and draw
127 questionnaire was single sided and contained three sections. Two statements ‘what I like
128 about playtime is...?’ and ‘what I dislike about playtime is...?’ were answered on lines below
129 the statements to indicate to the children to write here. The term ‘playtime’ was used on the
130 instrument as opposed to recess. A large box titled ‘what playtime means to me’ offered the
131 child an opportunity to draw, write or present a combination of these in order to answer the
132 question. Verbal instructions were given to the children by their class teacher and one of the
133 co-authors. No written instructions were provided to minimise distraction from the task. The
134 children were informed that the research team were interested in their overall experiences of
135 recess , the task would be independent (not completed in conjunction with peers), anonymous
136 (to encourage them to express their thoughts and views), and that they only had to indicate
137 their sex and year group age at the top of the sheet. The task sheets were submitted in a
138 confidential envelope for collection by the researcher. The completion of the task took on
139 average between 30-45 minutes and teachers noted that the majority of children enjoyed the
140 task although some children wanted to provide more detail or take more time colouring in the
141 pictures than was permitted.

142

143 **Data analysis**

144 A form of content analysis was used to explore the ‘likes’ and ‘dislikes’ data and involved the
145 production of pen profiles. This approach has been previously used in qualitative work
146 involving young children as the participants.³³ Pen profiles provide an efficient representation
147 of key themes from data analysis demonstrating *examples* of verbatim data and frequency
148 data as opposed to all raw data themes recorded using more traditional content analysis

149 procedures³⁴. Quotations and pictures were subsequently used to expand the pen profiles and
150 highlight emerging themes.

151 Triangulation of the analysis occurred through presentation of the profiles together
152 with associated verbatim/illustrative material by the third author to two members of the
153 research team. These authors then critically questioned the analysis and interrogated the data
154 independently tracking the process in reverse from the pen profiles (or outcome) to the write
155 and draw data sheets (data source). This process continued until an acceptable consensus had
156 been reached by the group. Methodological rigour, credibility and transferability was
157 achieved via verbatim transcription of data and triangular consensus procedures.
158 Dependability was demonstrated through the comparison of pen profiles with
159 verbatim/illustration data and triangular consensus processes.

160 **Results**

161 Two hundred and ninety-nine children (years 3 & 4; n =134; years 5 & 6;n = 165) completed
162 the task met inclusion criteria. Blank returns were due to children being absent from school
163 on that day. The following quality measures were used in the analyses of the data. Drawings
164 needed to be a legible representation of people, events and/or places labelling (using words)
165 was defined identifying factors (names, place, activity etc) and/or a denoted interaction or
166 association. Table 1 summarises the completion of this questionnaire task by picture and
167 labelling.

168

169 INSERT TABLE 1 HERE

170

171 The following procedure and terminology were adopted to analyse the questions ‘what I like
172 about playtime is...?’ and ‘what I dislike about playtime is...?’. Responses to these
173 statements were classified as a written ‘report’. When children reported more than one like or

174 dislike, the reports were categorised to 'marks' in relation to a specific theme (i.e., play,
175 games, environment). A 'mark' refers to where participant 'reports' were identifiable with a
176 'theme'. In most cases one report identified more than one theme and subsequently more than
177 one mark. For example the report: "*I have lots of fun with my friends*", would require marks
178 for more than one theme (both interaction and fun).

179

180 **Year 3 & 4**

181 One hundred and thirty participants completed the 'what I like about playtime is...?' section
182 (boys n= 70 girls n = 60), and 245 reports were extracted with 1 indefinable entry and 329
183 marks on specific themes within the data analysis. Figure 1 illustrates the composite pen
184 profile with play (n=93) and social interaction (n=91) as the highest frequency themes.

185

186 **INSERT FIGURE 1 HERE**

187

188 One hundred and nineteen participants completed the 'what I dislike about playtime is...?'
189 section (boys n=55 girls n=64), and 174 reports were extracted with 3 indefinable entries.
190 There were 262 marks from reports on specific themes. Figure 2 illustrates the composite pen
191 profile with social interaction (n=113) and bullying (n=68) the most frequently referenced
192 themes.

193

194 **INSERT FIGURE 2 HERE**

195

196 **Year 5 and 6**

197 One hundred and forty-seven participants completed the 'what I like about playtime is...?'
198 section (boys n=76 girls n = 68), and 297 reports were extracted with 0 indefinable entries.

199 There were 364 marks from reports on specific themes. Figure 3 illustrates the composite pen
200 profile with games as the most frequently cited theme (n=130) before play (n=93).

201

202 INSERT FIGURE 3 HERE

203

204 One hundred and four participants completed the 'what I dislike about playtime is...?'
205 section (boys n=56, girls n=48), and 190 reports were extracted with 5 indefinable entries.

206 There were 206 marks from reports on specific themes. Figure 4 illustrates the composite pen
207 profile with social interaction (n=54) and Physical Environment (n=41) as the most
208 frequently cited themes.

209

210 INSERT FIGURE 4 HERE

211

212 **Discussion**

213 The aim of this study was to use a write and draw technique to examine children's views,
214 experiences and perceptions of recess. Years 5 and 6 completed a higher percentage of
215 drawings associated with the task than those in years 3 and 4 who engaged in both labelling
216 and also offered statements 'in the box' more frequently than their older counterparts.
217 Drawings ranged from depicting single events to a range of activities and interactions with
218 associated 'labelling' (see figure 5).

219

220 INSERT FIGURE 5 HERE

221

222 The pen profile data revealed a shift in traditional forms of play in years 3 and 4 to more
223 structured games in years 5 and 6. Football was the dominant activity and proved both a

224 negative and positive influence in this theme. Children reported an appreciation of being
225 outdoors for recess and also an awareness of how the physical environment (playground
226 appearance and greenery) and provision/absence of equipment/activity influenced their recess
227 experience. Social interaction was the most frequently cited theme across both 'likes' and
228 'dislikes' of recess and dominated the perceptions of recess across both groups.

229 Recess provides children with a unique context to interact with their peers on a daily
230 basis.¹⁸ Gender differences have been reported, with boys citing playing with friends and girls
231 talking with friends as major reasons for enjoying recess.^{35, 36} Our data support these previous
232 findings to some extent, though social interactions were less cited, particularly by boys in the
233 older group where football related activities required fewer social interactions. Conversely, a
234 lack of social interactions was also reported as one of the reasons that children did not like
235 recess, particularly by girls, highlighting the importance of recess for promoting socialising
236 with others.³⁷ Overall, recess provided opportunities for children to develop friendships,
237 social skills and social networks,^{6, 7} which are essential for children's cognitive and social
238 development and adjustment to school.¹⁵ Our data suggest that these opportunities are valued
239 by the majority of children but that negative interactions linked with behaviours associated
240 with bullying can affect the recess experience. Recent suggestions to reduce recess time^{5, 15}
241 would provide fewer opportunities for children to interact and experience positive social
242 interactions and find strategies to overcome negative interactions. Practically, recess also
243 provides an opportunity to identify negative behaviours associated with bullying and allow
244 timely and direct intervention from adults to develop children's awareness and motivation to
245 overcome negative behaviour. The data highlighted examples of this and infers that the draw
246 and write methodology was sensitive in design and administration to allow the disclosure of
247 bullying.

248

249 INSERT FIGURE 6 HERE

250

251 In the present study, being able to engage in games was linked to children’s liking of recess
252 and this was more commonly cited by the older than younger age group. In contrast, play was
253 more commonly cited by the younger group. Pellegrini³⁸ noted that play is typically engaged
254 in by younger children with benefits related to novelty and creativity, while older children
255 engaged in games that are governed by agreed sets of rules (e.g. football). In our data years 5
256 and 6 girls cited examples of ‘making up games’ that were creative and spontaneous in nature
257 (see figure 7).

258

259 INSERT FIGURE 7 HERE

260

261 Of the more structured games played, football (soccer) was most commonly cited.
262 Data from boys and girls in years 3 and 4 suggested a positive perception towards football
263 games when asked about what they like about recess (see figure 8).

264

265 INSERT FIGURE 8 HERE

266

267 While football was often cited as a reason for enjoying recess by both boys and girls,
268 some year 4 children expressed negative perceptions regarding the dominance of football in
269 terms of playground space and resultant conflicts between children. Year 3 children did not
270 report football as a dislike, possibly due to the fact that the school provided a separate area
271 for them during play. This suggests that dedicated playground space based on year group may
272 be key to positively managing behavioural problems associated with football. Both years 5
273 and 6 children expressed a positive perception towards football although some children

274 (mainly girls) were more negative. This supports previous research concerning gender
275 segregation in playgrounds,³⁹⁻⁴¹ where boys often dominate football and thus the available
276 playground space for this game.^{42,43} Consequently, this often leads to the marginalisation of
277 (the majority of) girls to small groups situated on the periphery of the playground,⁴² resulting
278 in dissent and discontent (see Figure 9). The more equal division of playing space,
279 specifically in the older aged children (i.e., years 4, 5 and 6), may reduce behavioural issues
280 associated with this discontent. Further, as restricted space per child is associated with
281 sedentary time¹⁴, this strategy may also increase physical activity levels in children during
282 recess particularly in girls.

283

284 INSERT FIGURE 9 HERE

285 Previous research has suggested that as children grow older, the size of their social
286 groups at recess increases.⁴⁴ On the other hand Blatchford et al ³⁵ found that girls were also
287 more likely than boys to dislike recess due to having no-one to play with or nothing to do.
288 Whilst our data support previous findings, we further suggest that these concerns were
289 common across boys and girls, and greater in older children. Since aggressive behaviours
290 displayed during recess have been linked to boredom and disputes,⁴⁵ we suggest that schools
291 could improve the quality of recess , by providing equipment, or organising separate areas for
292 dominant activities to allow children to enjoy recess . However, consideration needs to be
293 given to the space available, appropriate adult supervision and equipment provided to ensure
294 that girls and boys have similar opportunities to engage in positive play during recess time.

295 There are several limitations to this study that warrant attention. First, as data were
296 collected from low SES schools in one small area of the UK, the data may not be
297 generalisable to other schools and settings. Second, offering only a drawing or question
298 responses (i.e. one without the other) may not be ‘write and draw’ as is typically defined,

299 though arguably this approach invoked a sense of choice and thus allowed children to engage
300 using their preferred response that were generally legible. On occasions, children wrote
301 responses to questions in the draw box and as a result did not follow the instructions,
302 although such incidences were minimal.

303

304 **Conclusions**

305 This study used a write and draw technique to explore the perceptions of children recess
306 experiences. Both responses to the statements and drawings offered insightful data as regards
307 this experience and highlights the approach as an appropriate means for collection of such
308 data. The study results demonstrated a shift from traditionally defined play in Years 3 and 4
309 to more structured games in years 5 and 6. As a specific activity football was the dominant
310 activity and proved both a negative and positive influence on space, social interactions and
311 contributing to physical activity. Children reported an appreciation of playtime being
312 outdoors (and thus they felt detached from the classroom environment) and how the physical
313 environment and provision/absence of equipment/ activity influenced their recess experience.
314 Social interaction was the most frequently cited theme across both 'likes' and 'dislikes' and
315 dominated the perceptions of playtime across the cohort. The disclosure by some participants
316 about bullying was a particularly topical issue and such data could be used to inform
317 intervention or awareness strategies within schools. Further, the study findings offer
318 suggestions to educational establishments regarding the environment, supervision and
319 importance of the recess experience for children.

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479

480 Table 1. Write and draw task completion by section

	Likes	Dislikes	Picture in the box	Writing in the box
Year 3 & 4	97%	88%	56%	47%
Year 5 & 6	89%	76%	73%	31%

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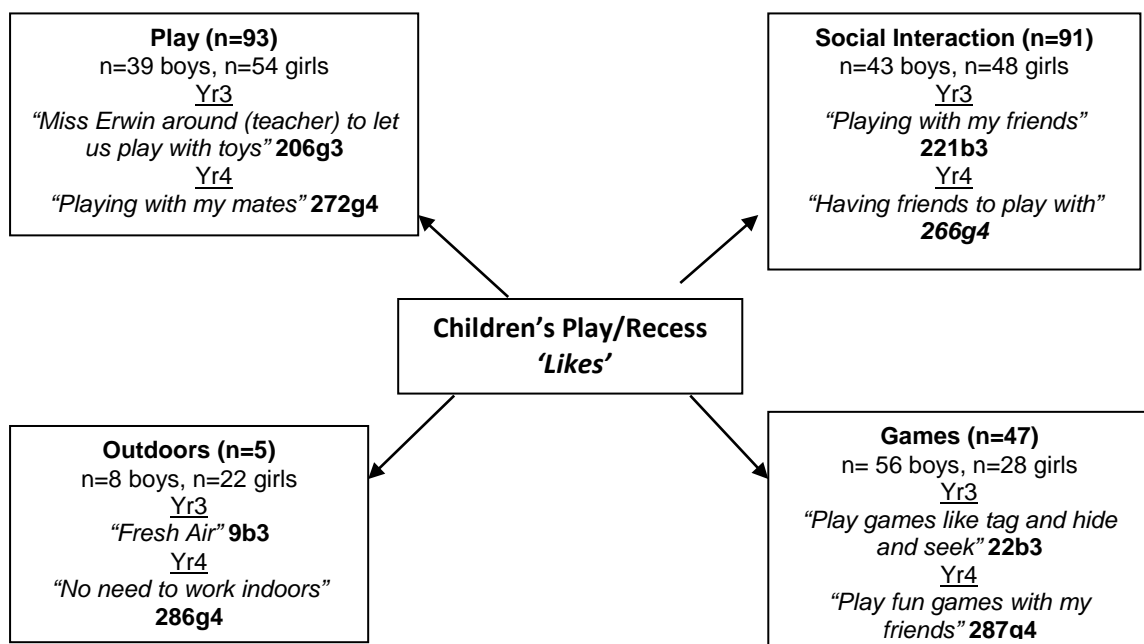
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491 **Figure 1.** Pen profile for year 3 and 4 ‘What I like about playtime is’

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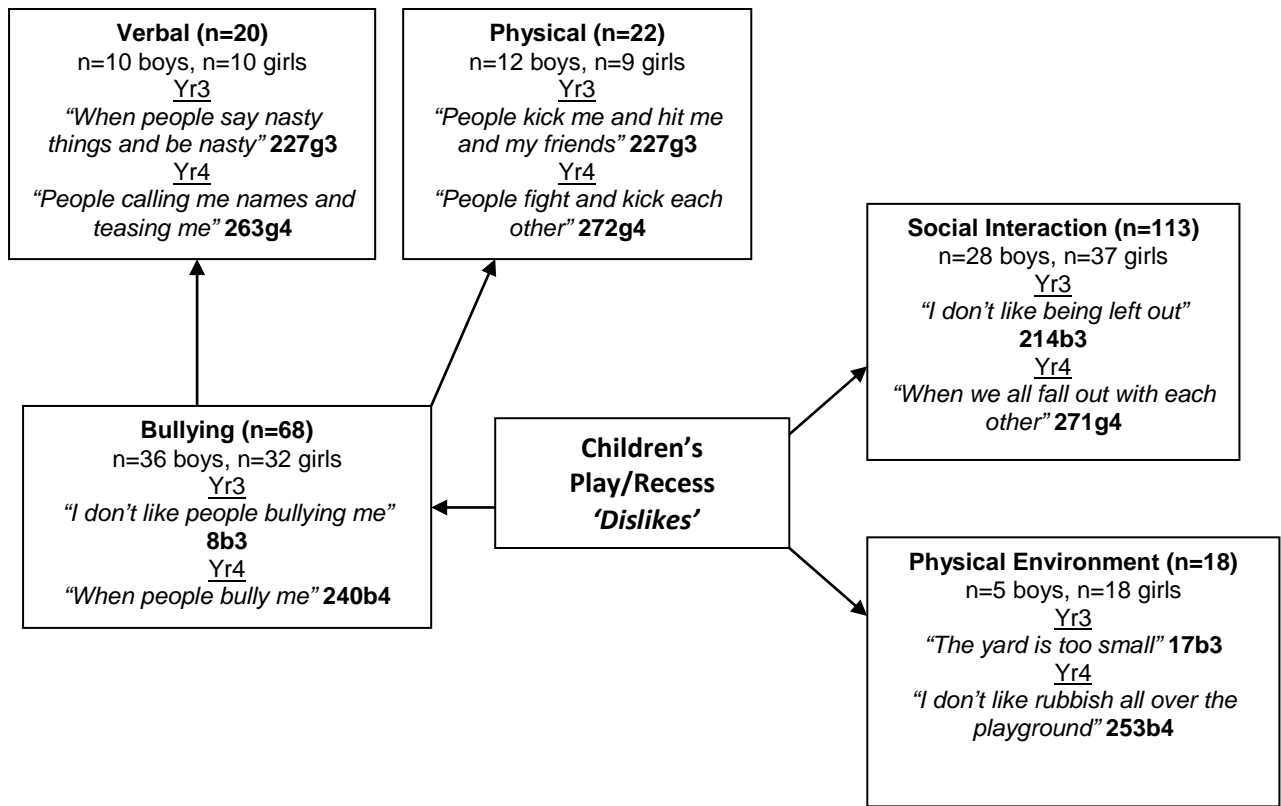
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503 **Figure 2.** Pen profile for year 3 and 4 ‘What I dislike about playtime is’

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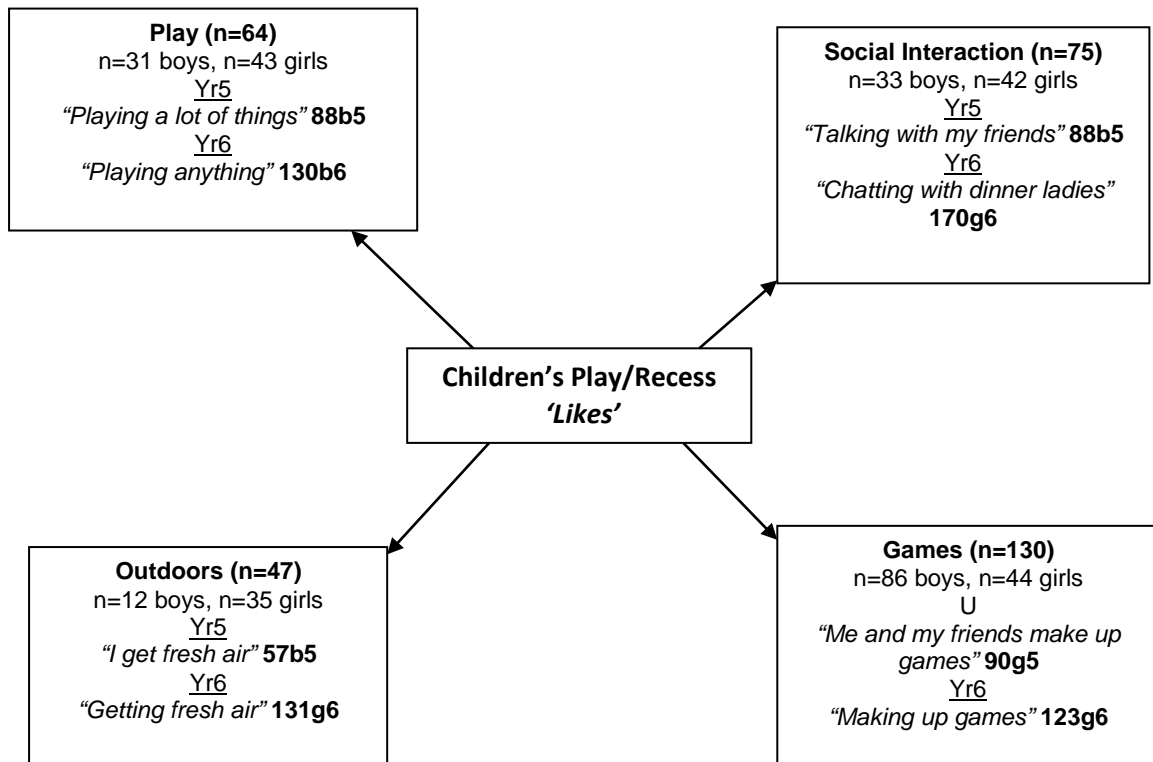
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516 **Figure 3.** Pen profile for year 5 and 6 'What I like about playtime is'

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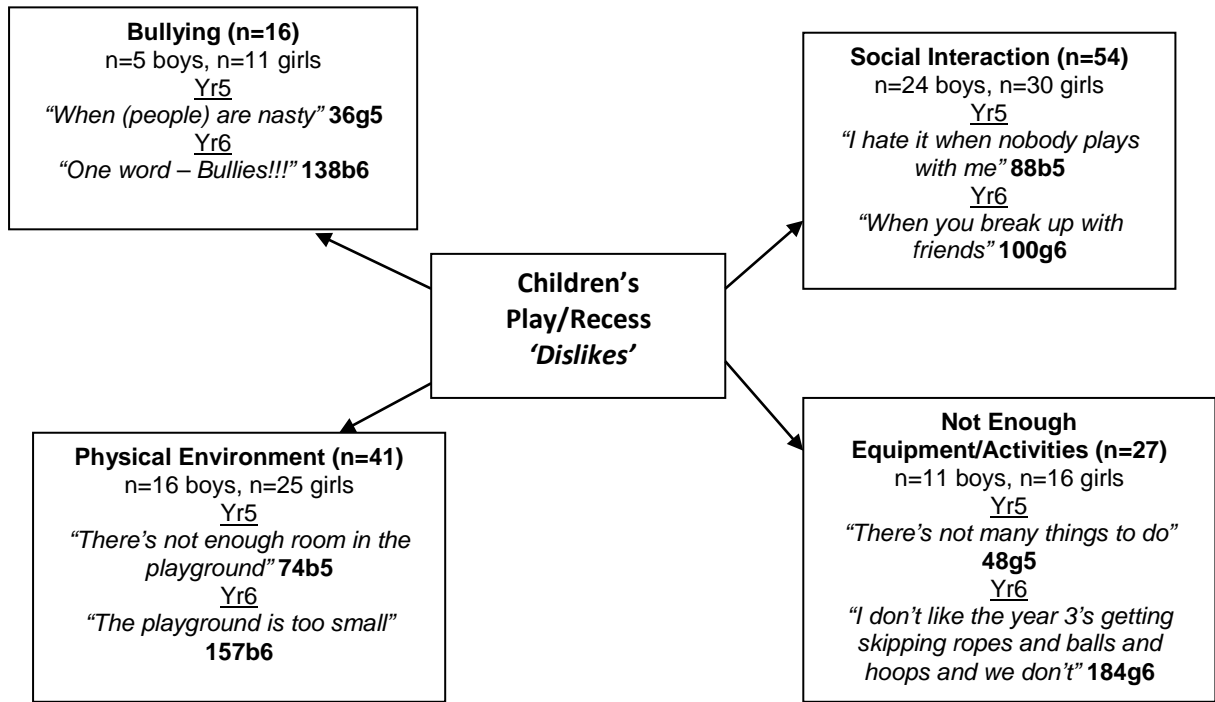
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530 **Figure 4.** Pen profile for year 5 and 6 'What I dislike about playtime is'

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534 **Figure 5.** Drawing from year 6 girl illustrating a range of playtime activities and labelling

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538 **Figure 6.** Drawing from a year 4 girl illustrating direct reference to exercise

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543 **Figure 7.** Drawing from Year 5 girl illustrating 'making up' games

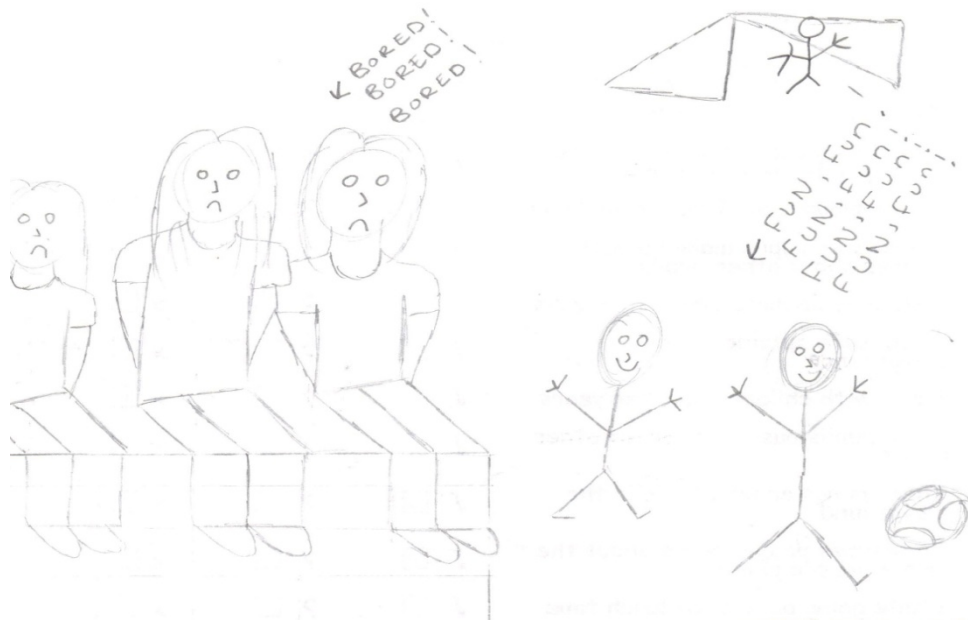
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546 **Figure 8.** Drawing from a year 3 boy illustrating football

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549 **Figure 9.** Drawing from Year 6 girl illustrating conflict of space and perceptions of activity

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