

CHILDREN'S CHOICES OF WHERE TO PLAY ON THE PLAYGROUND AS A FUNCTION OF EMOTIONAL STATE

Jane Ledingham, Jessica Kurta, Tiffany Pursoo, Leah Puddester, & Laurie Clark¹

ABSTRACT

Behavioral mapping procedures suggest that different children use their school playground differently: better adjusted children spread their play more widely over the playground, while aggressive and/or withdrawn children had more circumscribed areas of play. We asked children where they would choose to play and why when in different emotional states. Regardless of familiarity with the playground, for positive emotions children more often chose public areas and gave more social and activity reasons, while for negative emotions they more often chose private areas and gave more solitary and emotion regulation reasons. These results suggest that children's environmental choices can help them regulate their emotions.

KEY WORDS: Playgrounds, Spatial Choices, Emotion Regulation

RÉSUMÉ

Les procédures de cartographie comportementale suggèrent que des enfants différents utilisent leur terrain de jeu à l'école différemment: les enfants mieux ajustés utilisent plusieurs endroits, alors que les enfants agressifs et/ou retirés jouent dans les secteurs plus circonscrits. Nous avons demandé aux enfants où ils choisiraient de jouer et pourquoi selon leurs différents états émotifs. Indépendamment de leurs connaissances du terrain de jeu, les enfants choisissaient des endroits publics plus souvent pour les émotions positives, donnant plus de raisons sociales et d'activité, alors que pour des émotions négatives ils choisissaient plus souvent les endroits privés, donnant plus de raisons de solitude et de régulation émotionnelle. Ces résultats suggèrent que les choix environnementaux des enfants peuvent les aider à régler leurs émotions.

MOTS CLÉS: Terrains de jeux; choix spatiales; régulation émotionnelle

1. INTRODUCTION

1.1 School Playgrounds

Children spend a significant amount of time in school, and school is a universal institution that affects all children. During recess, children have numerous opportunities to play with friends, but they also are called upon to deal with others with whom they have conflictual relationships (Boulton, 1992), and through these interactions they learn not only how to interact positively but also how to problem solve and deal with negative interactions and emotions as well. Children deal with peers very differently than they deal with adults or children who are older or younger (Whiting & Whiting, 1975): the fact that these relations are more egalitarian and less hierarchical inevitably results in more conflict, and this can serve as an impetus for children to develop more control over their emotions and over their behavior.

There has been limited research on how children use school playgrounds. However, several studies have suggested that different types of children choose different areas to play in (Pellegrini, 1990). The notion that child characteristics influence environmental choices is referred to as niche-picking. Behavioral mapping research that we conducted indicated that children with different social profiles used the playground quite differently (Ledingham & Chappus, 1986). Socially skilled children spread their play across many different areas of the playground, while children who were less successful socially confined their play to quite circumscribed areas of the playground.

¹ Jane Ledingham, School of Psychology, University of Ottawa, Ottawa, ON, Canada, K1N 6N5, ledijane@uottawa.ca

Why should where children choose to play be important? One child spontaneously talked to us about the fact that she had chosen to go to a different area on the playground to calm down when she got too angry, and we began to think about the implications of where children play for how they regulate their emotions. Emotion regulation is one of the important tasks that children face, and the extent to which they are successful at this task may help to determine how appropriate their social behavior with peers is.

1.2 Emotion Regulation

Gross (2002) has presented a model of emotion regulation and has described several ways in which emotions can be regulated, including the selection of situations. More successful strategies occur earlier in the sequence before the emotion becomes so strong that it becomes difficult to regulate. In this context, changing situations may be a very effective means of regulating emotions. We can all identify situations that have a high probability of leading us to feel angry, or anxious, or sad, and learning to move to another situation may enable us to control and modulate our emotions more easily.

1.3 Environmental Choices and Emotion Regulation in Children

Several researchers have investigated the situations in which children choose to place themselves. Thurber & Malinowski (1999) found that boys at summer camp who had higher levels of negative emotion more often reported having favourite places where they could be alone, while happier children chose favourite places where they could socialize. Korpela and his colleagues (Korpela, Kytta, & Hartig, 2002) have explored the environmental choices that children make, and have reported that about 33% of children said that they went to their favourite places after emotionally or cognitively taxing events. They have also suggested that natural environments may be particularly important for restorative experiences and emotion regulation (Korpela, Hartig, Kaiser, & Fuhrer, 2001). These studies taken together suggest that the choices that children make about where to play may differ as a function of whether the emotion is negative or positive (emotional valence), and that these choices may have implications for emotion regulation. However, since playgrounds are environments over which children have very little control, research on favourite places may not generalize to environmental choices on playgrounds at school.

1.4 The Present Study

The purpose of the present study was to examine the choices that elementary children make about where to play on the school playground and explore their reasons for their choices as a function of emotional state.

2. METHOD

2.1 The Sample

We examined children's knowledge of where they would choose to play in certain areas of the playground and why as a function of different emotional states. A total of 115 children in grades 3 (21 girls and 10 boys), 4 (7 girls and 12 boys), and 5 (30 girls and 35 boys) participated. This is an age range in which emotion regulation abilities are developing rapidly.

2.2 The Task

We presented the children with representations of two playgrounds that were designed to differ fairly dramatically in terms of their components and physical features. Prior research that we have done compared children's choices of where to play on their own school playground with those for two other playgrounds on which they had had no experience playing (Ledingham, Parkinson, Beshir, & Clarke, 2002). This research indicated that children make very similar judgements about where to play regardless of their actual experience with that playground, and suggested that children may learn to generate overarching metacognitive rules about how different features of the environment will affect them.

Each of the playgrounds that we designed had areas that were in public view, with no visual barriers, as well as additional areas that were more secluded and private, and had features that interrupted sight lines such as bushes, stone walls, and sides of buildings. This first playground, for example, has public areas on the asphalt, grass, and play structure, as well as private areas beside the school, behind the trees, under the play structure, and between the stone walls. The second playground has similar public areas in plain view as well as private areas behind trees and between bushes, under the play structure, and in drainage ditch.

Children saw three different versions of each of these two different playgrounds. One contained no social information about where children might play (only the physical features of the playgrounds were presented). A second version had small representations of boys and girls portrayed on the playground in a typical pattern of social density, that is with the greatest number of children playing in the public and central areas. A third version had an atypical social density pattern, with the greatest number of representations of children distributed in more peripheral, private areas. The models with typical and atypical patterns of social density allowed us to sort out whether it was the social or physical features of the playground that were more important for children's choices of where to play: this was important because social and physical features are typically confounded on real playgrounds.

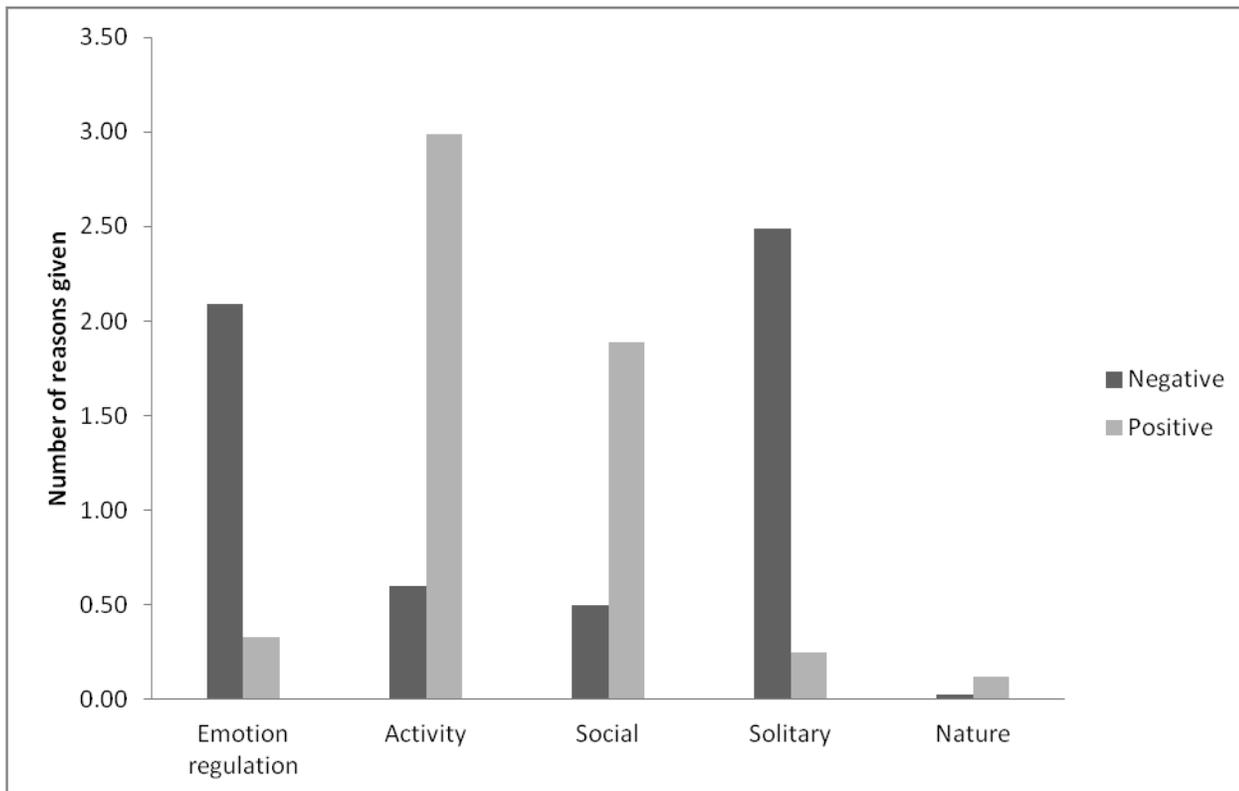
2.3 The Measures

Each child was asked to indicate where they would go to play when experiencing two positive (happy and excited) and three negative emotion states (angry, sad, and nervous) on a total of six different playground models. Each choice was coded as either a public location choice or a private location choice. The reasons that they gave for why they chose a location were coded as emotion regulation reasons (such as "So I can feel better"), social reasons ("To be with my friends"), activity related reasons ("To play soccer"), solitude reasons ("So I can be alone"), or nature-related ("To enjoy nature").

3. RESULTS

3.1 Reasons Given for Choices of Where to Play in Response to Positive and Negative Emotions

To evaluate the extent to which reasons given were a function of emotional valence (positive versus negative) and type of reason given, a 2 (Positive vs. Negative Emotion) by 5 (Type of Reason Given for Choice) within-subjects ANOVA was carried out on the average number of reasons given for each positive or negative emotion. The results indicated a significant main effect for Type of Reason for Choice, $F(4, 111) = 79.36, p < .001$, and a significant Type of Reason for Choice X Positive vs. Negative Emotion interaction, $F(4, 111) = 266.21, p < .001$. The main effect of Emotion Valence was not significant. Post hoc analyses with Bonferroni corrections indicated that the main effect of Type of Reason for Choice reflected more reasons being given in categories of solitary, activity, and emotion regulation than in the social category, which in turn had higher rates than the category of nature. Figure 1 graphs the significant interaction effect, presenting the average number of reasons given for categories of emotion regulation, activity, social, solitary, and nature reasons as a function of whether the emotion was positive or negative. Post hoc analyses with Bonferroni corrections indicated that the significant interaction effect was attributable to more emotion regulation and solitary reasons being given in response to negative than to positive emotions, while more activity and social reasons were given for positive than for negative emotions. For negative emotions, solitary and emotion regulation reasons were given significantly more often than activity or social reasons, which in turn were given more often than nature reasons. In contrast, for positive emotions, activity reasons were given significantly more often than social reasons, which were given more often than emotion regulation and solitary reasons, and these latter two were also more frequent than nature reasons.

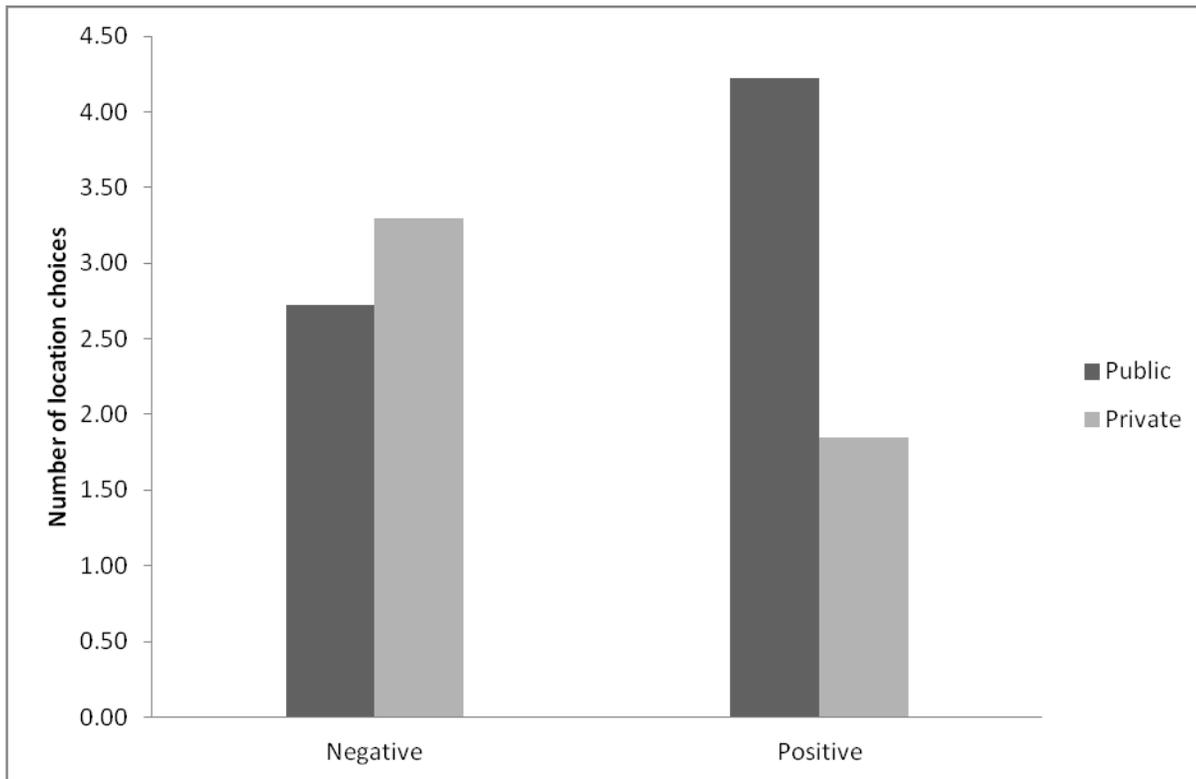


3.2 Environmental Choices for Public and Private Locales as a Function of Emotion Valence

To assess the extent to which choices of where to play differed for public and private areas and for positive and negative emotional states, a 2 (Public vs. Private) by 2 (Positive vs. Negative Emotion) within-subject ANOVA was carried out. There was no significant main effect for emotion valence, but there was a significant main effect for Public vs. Private areas, $F(1, 114) = 41.96, p < .001$, with public areas being chosen more often ($M = 3.33, SD = .77$) than private areas ($M = 2.72, SD = .80$). There was also a significant Public vs. Private X Emotion Valence interaction, $F(1, 114) = 137.77, p < .001$ that is presented in Figure 2. Bonferroni-corrected posthocs indicated that more choices were made for public than for private areas for each positive emotion state, while for each negative emotion state more choices were made for private than for public areas. More choices of public areas were made for each positive emotional state than for each negative emotional state, while more choices of private areas were made for each negative emotional state than for each positive emotional state.

3.3 Untangling Physical and Social Features of the Environment

In most playgrounds, physical and social aspects of the environment are inextricably linked: in general, public areas such as play structures and soccer fields have higher social densities than more peripheral areas. By presenting children with two patterns of information about social densities on each playground we were able to unconfound the relative importance of physical features and social features. If children responded similarly to the two social density models, this would suggest that it was physical elements that were more important for choices than social elements. Differences between models varying on where social densities were highest would suggest that social elements were more important. Because patterns of social density were anticipated to be more strongly related to choices of private areas in response to negative emotions, a univariate ANOVA comparing Central and Peripheral Social Density conditions on number of choices of private locales for negative emotion states was computed. Children who saw greater social densities on central, public areas of the playground chose private locales more often than children who saw greater social densities on peripheral, private areas in response to negative emotional states, confirming the importance of social features of the environment.



4. DISCUSSION

4.1 Emotion Regulation Reasons

About one fifth of the reasons given by children for their choices of where to play were emotion regulation reasons, but children were much more likely to give emotion regulation reasons in response to negative emotion states. This makes sense in that very few people probably set out to change the way that they feel when they are experiencing a positive emotional state. This finding convinced us that the children did indeed understand the questions that we were asking them in the way that we had intended.

4.2 Areas Chosen for Emotion Regulation

Children chose very different areas to go to when they were experiencing negative emotions than when they were experiencing positive emotions. For negative emotions they chose more private, peripheral locations, while for positive emotions they were more likely to select public areas. This suggests that in fact dealing with negative emotions is more difficult in the company of others, and this notion is supported by the finding that the same private locales in the environment were chosen less often in response to negative emotions when higher social densities were portrayed in these areas.

Children's solitary reasons for choices of where to go, like emotion regulation reasons, were given more often for negative emotions than for positive emotions, and this suggests that reasons given of wanting to be alone and wanting to regulate one's emotional state are similar. In contrast, social reasons and activity related reasons were given more often in response to positive emotions. These findings reinforce the notion that emotion regulation for negative emotions may be best accomplished on one's own, particularly in a school environment where one has little control over whether one can associate just with close friends.

The idea that nature is particularly important for self-regulation in general, and also perhaps for emotion regulation (Korpela et al., 2001), was not supported in the present study. Very few children reported choosing where to play on the basis of natural features of the environment.

4.3 Agreement of Findings with Other Research

We have carried out additional studies to explore the significance of spatial selection and these have reinforced our beliefs that choosing where to go is important for emotion regulation. We examined undergraduates' choices of areas to be in as a function of emotional state and type of locale. Similar to the children in the present study, the undergraduates were much more likely to choose private locations such as their bedrooms over public areas such as cafes or pubs when in negative moods, while the reverse was true for positive moods (Ledingham & Parkinson, 2001). Thus, this pattern of choices is not unique to one age group. In another study, we found that our measure of emotion regulation reasons given for locale choices correlated appropriately with measures of children's emotion regulation ability as reported by mothers and teachers, and that number of emotion regulation reasons given was negatively correlated with children's scores on aggression (Puddester, 2011). We thus feel quite confident that the environments that individuals choose to place themselves in do have an impact on their ability to regulate their negative emotions, and that choosing locales with low social densities is one effective means of helping to change negative emotion states and regulate one's behavior. Thus, where you choose to place yourself physically does appear to make a difference to how you feel.

5. FUTURE WORK

In this study we asked children about where they would choose to play when experiencing different emotions, but what they told us verbally might differ substantially from how they actually behave on the playground. Future work will examine whether in fact children's observed emotional expressions are predictive of where they actually choose to play on the playground. It will also examine other ways in which better emotion regulators differ from less effective regulators.

6. CONCLUSIONS

Children report choosing where to play in order to change how they feel much more often when they are feeling negative emotions such as anger, nervousness, and sadness. When feeling happy or excited they are much more likely to choose where to play on the basis of potential activities or possibilities for social interaction. Thus, children do seem to be aware that the place that they choose to play in will have profound implications for how they feel. Children who lack this awareness of how different parts of the environment will affect them may have difficulties managing both their emotions and the way that they relate to others.

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