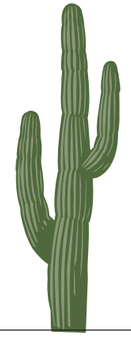
OUUDS
The University of Oklahoma Urban Design Studio

CHILD DESERTS



A professional project approved for the College of Architecture, Urban Design Studio by Christopher S. Cook – 2011

The Absence of Children in the Urban Environment

The University of Oklahoma
Graduate College

Child Deserts: The Absence of the Child in the Urban Environment

A Professional Project
Submitted to the Graduate Faculty
in partial fulfillment of the requirements for the
degree of
Master of Science in Architectural Urban Studies

By

Christopher Scott Cook
Tulsa, Oklahoma
2011

A Professional Project approved for the
College of Architecture
Urban Design Studio

By

Shawn Schaefer, Chair
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Showa Omabegho, PhD, MUP

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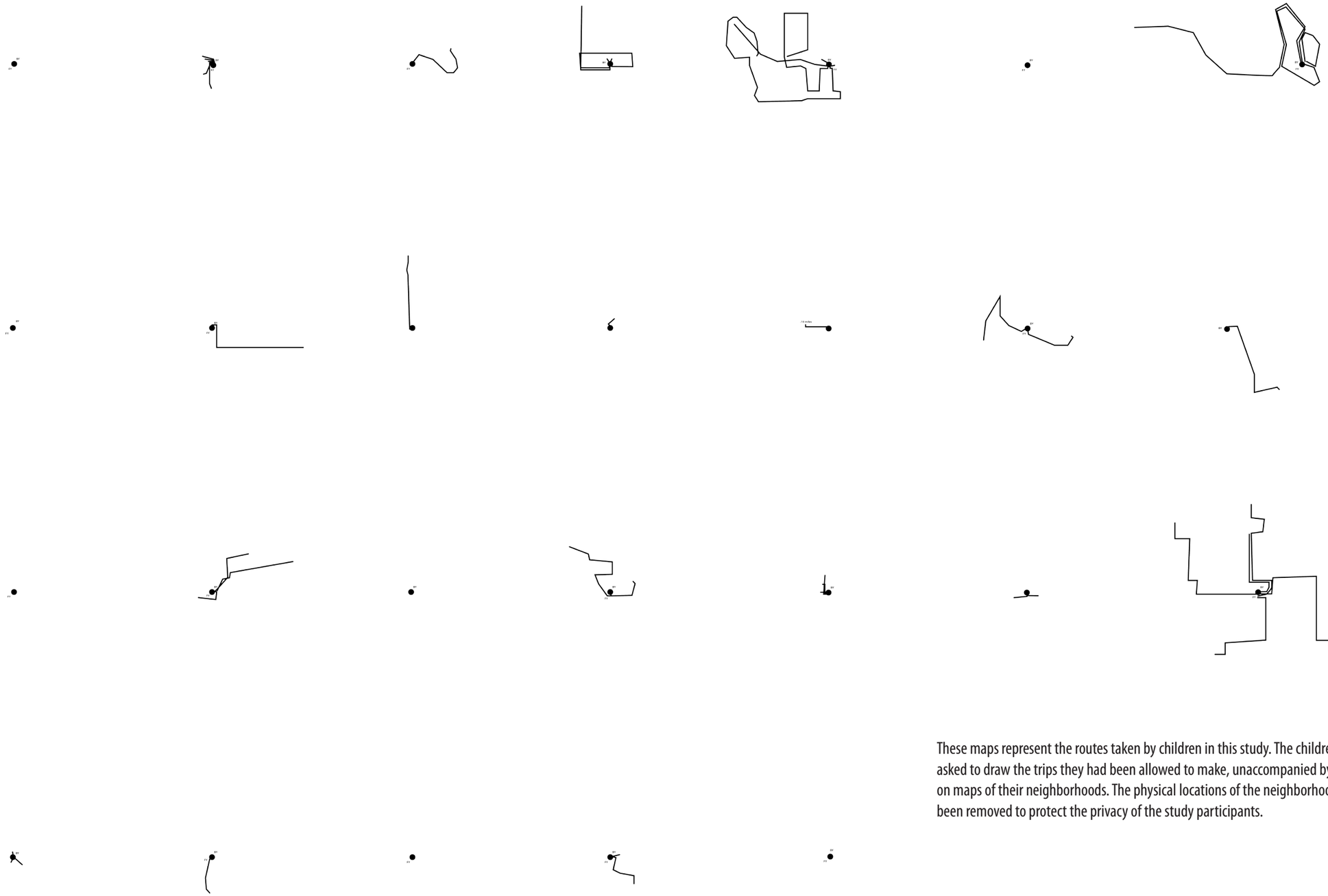
Finally, I want to acknowledge Sophia June Cook, my daughter, to whom this project is dedicated. I cannot make up for the time I missed with you throughout the past three years, but you should know that I could never have done this without the knowledge that you would be waiting at home for me with a new drawing or just a kiss and a hug. I undertook this project to show you that even old people have to keep learning and to, hopefully, contribute to a better understanding of the world in which you are living.

Table of Contents

URBAN PATHS OF CHILDREN



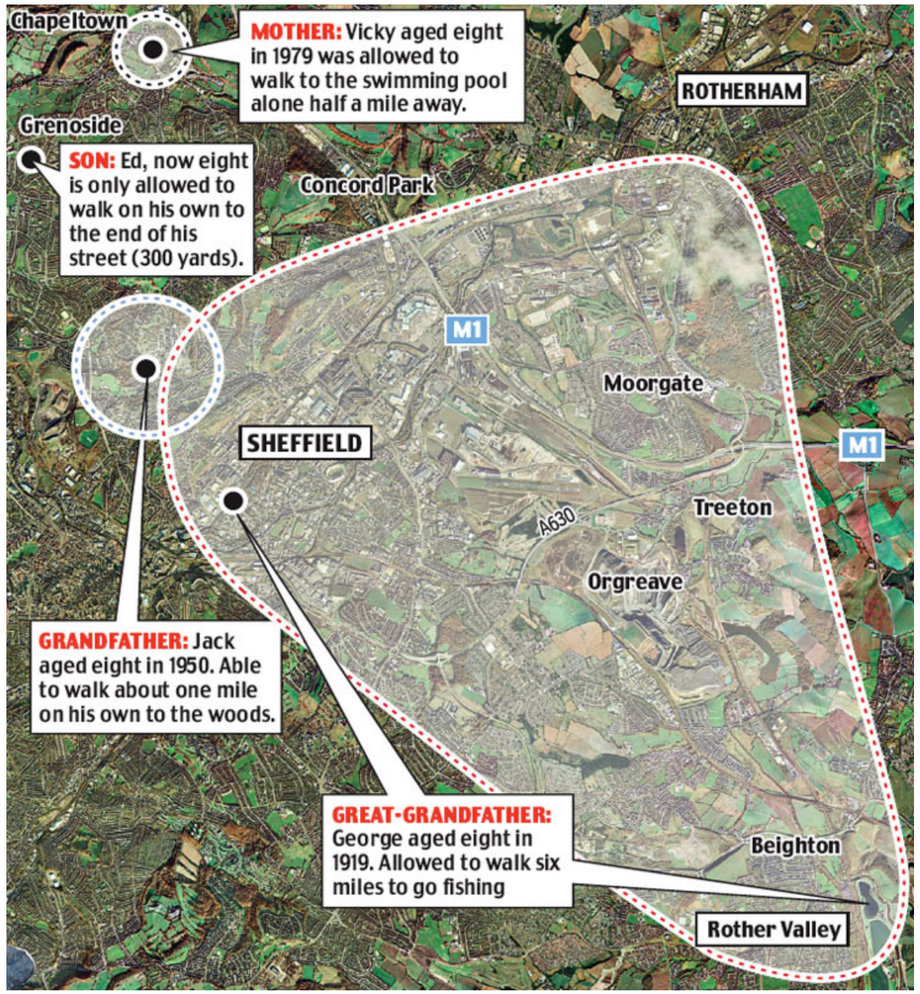
These maps represent the routes taken by children in this study. The children were asked to draw the trips they had been allowed to make, unaccompanied by an adult, on maps of their neighborhoods. The physical locations of the neighborhoods have been removed to protect the privacy of the study participants.

Background

The catalyst for undertaking this research was a story and accompanying graphic from the Daily Mail, a newspaper in the United Kingdom. The graphic showed the "range" of four generations of one British family over the course of several decades. The trend, as you can see, shows a rapid and unerring decline in the distance children were allowed to roam with each successive generation. I began to think back on my own childhood and then to compare it to what I see everyday on my drive to and from work. In the morning, seemingly endless lines of cars and minivans in front of my neighborhood school, sitting close by a row of empty bike racks. In the afternoon a virtual desert of afternoon play symbolized by a nearly empty playground. I remember my own neighborhood as a place that, for all intents and purposes, was "owned" by children. We knew our neighbors and they knew us. We knew which backyards were "safe" and which had dogs that made a sneaky crossing unwise. Our bicycles crowded the roads making travel difficult for motorists, not the other way around. I wanted to know if the lack of independent play is as dire as it seems, and what can be done about it.

Ferreting out the reasons why children seem to spend more time inside than they do in the great outdoors is a difficult task. The first problem is that reliable data on how much time children spent playing outside in decades past is nearly impossible to find. Studies on the matter are few and far between. Instead, researches are forced to rely on largely anecdotal evidence that comes in the form of assertions that go something like this: "When I was I kid, our parents would lock the door, and tell us to go play in the road." This type of evidence is hardly the stuff of scientific inquiry, but it also cannot be readily dismissed. In fact, if our collective memories reflect a time when children would engage in this sort of play, there is likely some truth to the matter. Given that little hard data exists on this subject, we instead have to turn to evidence that, at least, tangentially supports this line of thinking. For example:

- Forty years ago about 48% of children walked or biked to school. Today, 88% are driven to school either by bus or car. [1]
- American children spend an average of less than half an hour per week in unstructured outdoor play. [2]
- In a study of 830 mothers, 70% reported playing outdoors every day when they were young, compared with only 31% of their children. [3]
- Between 1981 and 1997, the amount of time U.S. children aged 6 to 8 spent playing outdoors decreased by four hours per week, while the amount of time they spent indoors in school increased by almost 5 hours per week. [4]
- A child is six times more likely to play a video game on a typical day than to ride a bike. [5]
- The number of seven and eight year-olds permitted to go to school on their own dropped from 80% in 1970 to 9% in 1990. [6]
- One in five children live within walking distance (a half-mile) of a park or playground. [7]



http://www.dailymail.co.uk/news/article-462091/How-children-lost-right-roam-generations.html June, 2007

BACKGROUND

Further complicating any inquiry into how much time children spend outside, without direct adult supervision, are the innumerable factors that contribute to whether or not a child plays outside, how much they do so, and under what circumstances. Social factors such as a fear of crime, or stranger danger, changing attitudes about structured versus unstructured play, and increased demands on both child and parent time surely play a role in the decline of outdoor play. Academic issues including the location of schools, an increased demand for academic and extra-curricular time, and a general increase in homework also contribute to the lack of free time children have to play outside. Further, the increasing role technology plays in our lives has to be considered. Technology has opened up more options for indoor activity whether this comes in the form of gaming or chatting with friends via text or chat software. Finally, our neighborhoods have changed in ways that, at first glance, seem to make childhood play more difficult. Fewer neighborhoods with sidewalks, less dense urban spaces, and a general lack of play spaces all contribute to a decline in outdoor child play.

Stranger Danger

Every modern culture seems to have constructed its own narrative that justifies its collective fear of the stranger. Despite the fact that stranger abductions are rare, and becoming even more scarce, society seizes the latest headline in an attempt to justify a parent's worst fears: "someone may steal my child." When Americans hear the story of Elizabeth Smart, the Salt Lake City girl who was taken from her bedroom by religious zealots, they internalize this fear and seemingly use it to justify keeping their own children on a short leash. Americans are not the only ones who react this way to crime. The British responded in much the same way to the murders of five children near Manchester by Ian Brady and Myra Hindley. After the Moor Murders, parents were fearful of letting their children wander the streets that, before the murders, had been a playground for the children of the industrial city. Even small town Oklahoma could not escape the fear of the random killing of a child when in 1977 three girl scouts were murdered at a summer camp near Locust Grove. Despite the random, unprecedented, and isolated nature of the crime, parents in the largely rural area were suddenly afraid to let their children wander the creeks and hills of the region.

While these fears are understandable, the reaction to these events, and others like them appears to have put into action the adage 'That when everyone is a criminal, the only safe place is a prison.' Parents simply locked their children inside, an environment they could control, and turned away from allowing independent outdoor play. If the outside world was too dangerous and too difficult to control, the home would simply have to serve as the playground. This study sheds light on this factor by asking parents to consider what role crime, and their perceptions of crime, plays in deciding whether or not to allow their children to roam unsupervised, and how far they allow them to wander.

Technology

Another factor that can limit outdoor play involves the increasing use of technology by children. Children in the United States average around 30 hours of electronic media exposure each week.[8] This time trades off with other activities that children can be doing, such as playing outdoors. Additionally, while electronic gaming and the internet may be forms of play in and of themselves, electronic media does not constitute unstructured play because it is a one-way sensory experience that fails to engage the child with the many options presented by outdoor play.[9]

Structured vs. Unstructured Play and Overscheduling

"The ability to play is one of the principal criteria of mental health."
Ashley Montagu (Scientific American)

"If I get to pick what I want to do, then it's play. . . if someone else tells me that I have to do it, then it's work."
Patricia Nourot, Professor of Education - Sonoma State University


Free Play – http://www.cincbayarea.org/inspiration-play.htm

Children engage in two types of play: structured and unstructured. Structured play is organized and usually involves rules, time limits, and or adult-supervision. Team sports are an example of structured play, but board games and electronic media fall into this category as well. This type of play is valuable because it teaches children team-work and organization.[10]


Free Play – http://www.cincbayarea.org/inspiration-play.htm

Unstructured Play, or free play, is child-driven. It requires little input from adults and relies on the child's imagination for form. Eugenio Rothe, a child psychologist, describes free play in this way:

"Free-form play, the kind children engage in without the direction of adults, allows kids to create and explore their world, to conquer their fears, to learn how to share, negotiate and resolve conflict. It forces them to exercise their bodies as well as their brains."[11]

The trend toward overscheduling is not a new one. The first serious examination of this phenomenon came in David Elkind's The Hurried Child in 1981. It is important to note that Elkind defined the "hurried child" in ways that encompassed something more than simply scheduled time. He described the hurried children as those who are " ...forced to take on the physical, psychological, and social trappings of adulthood before they are prepared to deal with them."[12] He was specifically concerned about the increasing desire of schools, parents, and society at large to make children into miniature adults.

Part of this desire is manifest in the ways we schedule activities for children. Elkind continues to write about this problem but it is unclear if he could have anticipated how far we have come since 1981. Initially, though, Elkind voiced his worries about the increasing demands on children's time by examining summer camps. Elkind was troubled by the increasing variety of camps

BACKGROUND

http://www.iparenting.com/channels/news/index.php?newsid=3710

that were not designed with fun in mind. For example, traditional summer camps morphed into specialty camps for every sport, musical activity and academic activity imaginable. He summarized his position in this way: " The change in the programs of summer camps reflects the new attitude that the years of childhood are not to be frittered away by engaging in activities merely for fun. Rather, the years are to be used to perfect skills and abilities that are the same as those of adults. . . The pressure to engage in organized, competitive sports at camp and at home is one of the most obvious pressures on contemporary children to grow up fast."[13]

30 years later, the wave of outside activities has not subsided, in fact, the demands on children's outside time has only grown. From organized after school care, to ACT and SAT prep courses, the opportunities to schedule children's time has skyrocketed over the past 20 years. This decline can be measured and explained in a number of ways. Studies suggest that as parents increasingly rely on two incomes they tend to increase the efficiency of how they schedule their own time, as well as that of their children. Additionally, this leads to more organized after school activities because the parents need child care until they return home from work. Further, these studies point to a desire for their children to be more competitive when it comes to the college admissions process. [14]

It is important to note that although some studies suggest that heavily scheduled children excel in such circumstances, all children benefit from free play. Further, some children crack under the stresses of these schedules. Problems that arise can include anxiety, fear of school, and depression. Additionally, when children are too focused on activities as a way of getting into the right college or job, they can become too focused on achieving the desired end results by any means necessary. This can lead to increased pressure to cheat on tests, and decreases ethical decision-making. Finally, the effects on adults can be just as damaging. Managing schedules is not easy and many parents report a feeling of having no downtime for themselves. Studies also suggest that, under the pressure to maintain a busy schedule, parents report a sense of inadequacy as they strive to keep up with their perceptions of other parents' schedules. [15] In essence, a vicious cycle ensues in which parents respond to the stresses of overscheduling by scheduling even more activities.

http://www.leisureopportunities.co.uk/detail1.cfm?pagetype=detail&subject=news&codeID=59513

Getting the Balance Right

The debate over how much independence children are allowed has much to do with what we think about childhood play. In any case, whatever we think about this debate, the data shows that unstructured play is being moved aside for other activities. A University of Michigan study showed that 3-5 year olds have lost around 500 minutes of independent play each week from 1981-1997. Older children, those in the 6-8 year old range, lost roughly half of that time. [16]

http://mrsfussypants.com/2008/12/five-handy-ways-to-spoil-your-children-february/

Further, schools and other institutions exhibit a clear bias towards structured time. Put simply, structure is productive and productivity is the goal. Our adult culture increasingly transfers its performance driven ideals onto children in an attempt to engineer child-sized adults. The Chronicle of Higher Education summarized the situation this way:

"The emphasis on standardized testing, on attempting to constantly monitor, measure, and quantify what students learn, has forced teachers to spend more of the school day engaged in so-called direct instruction and has substantially reduced or eliminated opportunities that children have for exploring, interacting, and learning on their own. Recess has, in many districts, vanished from the schedule entirely. After school, parents shuttle their kids from activity to activity, depriving them of unstructured time alone or with friends."[17]

Another factor, contributing to a decrease in unstructured playtime is that American society is simply evolving into one that privileges structure over more organic time systems. This results in the feeling that we are always "too busy". When adults work more hours they increasingly turn to scheduled after school activities to occupy the time of their children and to provide them with a safe environment. As this happens, fewer and fewer children are at home in our neighborhoods when the children that do come home from school contemplate what do with their time. If no friends are home, the problem becomes cyclical, because kids, lacking friends with which to play, stay inside and choose activities that are more structured, like electronic media. [18]

The impacts of this shift away from unstructured play are significant. On the individual level, childhoods deprived of play, particularly independent play, can damage the emotional and intellectual development of children. Imagination and creativity are

BACKGROUND

fostered in environments that privilege free over structured play. The creative benefits of independent play can be found by examining the basic differences between structured play and free play. Structured play has boundaries, or rules, that are predetermined and not spontaneous. Free play, by definition, has few rules, and those that do exits evolve out of the mind of the child. [19]

At the societal level, free play is where children learn complex social rules that cannot be taught by teachers and parents. Independent play is the time and the setting in which children learn to be fully functioning members of the adult world. Anthony D. Pellegrini, an educational psychologist at the University of Minnesota, summarizes this process:

"You don't become socially competent via teachers telling you how to behave," Pellegrini says. "You learn those skills by interacting with your peers, learning what's acceptable, what's not acceptable." Children learn to be fair and take turns — they cannot always demand to be the fairy queen, or soon they have no playmates. "They want this thing to keep going, so they're willing to go the extra mile" to accommodate others' desires, he explains. Because kids enjoy the activity, they do not give up as easily in the face of frustration as they might on, say, a math problem — which helps them develop persistence and negotiating abilities." [20]

Consider one of the plagues of modern American culture: bullying. American schools and politicians decry the rise in persistent and, often violent, bullying that faces American school children. This study does not seek to shed light on whether or not there has indeed been an increase in bullying, but the public perception clearly indicates a growing concern over this phenomena. David Elkind, the pioneer at the forefront of the over-scheduling debate, suggested in the New York Times that children may indeed be perpetrating more acts of bullying because they have lost important social skills developed by, for example, walking to school with their peers, unaccompanied by adults. It is on these walks, forms of free play, that children learn negotiating skills, and that people have wildly differing personalities that must be dealt with in creative and unique ways.[21]

The results of this lack of socialization can be devastating and long lasting. One study conducted in 1997 in Ypsilanti, Michigan examined the differences between children that attended pre-schools that emphasize play versus those that allowed little or no free play opportunities. One of the results of this study showed children who attended free play schools had a 1 in 10 chance of committing a felony by the age of 23. Those children that were schooled in environments that focused on structured time had a 1 in 3 chance of being charged with a serious crime.[22]

The combinations of factors that have coalesced to produce an environment where independent play is on the decline are complex and difficult to measure. This study focuses on three variables (scheduling, parental attitudes about factors that contribute to the decision of whether or not to allow independent outdoor play, and the consumption of electronic media. Moreover, the study seeks an understanding of what role the urban environment has on the decision-making process of parents and on the effects of ways the urban form is affected by this lack of free play. In essence, the study rests on a broad hypothesis in the form of the following questions: Does the urban environment impact the independent range of the child?

Methodology

PROJECT TIMELINE

August 2010	- Review literature - Finalize study objectives and make necessary revisions to plan of study	**January 2011**	- Finish child/parent visual presentation - Begin observational studies
September 2010	- Design parent and child studies - Start process of planning and preparing for child movement/technology study (including submitting IRB forms for approval) - Begin initial planning (site selections) for observational study	**February 2011**	- Continue observational studies - Start independent play plan (recommendations)
October 2010	- 1st jury presentation - Conduct parent and child studies - Finalize site selection for observational study	**March 2011**	- Conclude observational studies - Continue work on independent play plan
November 2010	- Compile data from parent and child studies - Define variables for observational study	**April 2011**	- Compile observational study data and ready for presentation - Poster design - Begin work on final presentation document
December 2010	- 2nd jury presentation - Begin child/parent survey visual presentation - Refine variables for observational study	May 2011	- Finish work on final presentation document - Final jury presentation

METHODOLOGY

This study is composed of three components:

The first two required IRB approval from the university. The proposal was submitted and approved. The parent and child survey were conducted using four classes of fifth grade students and their parents at Holland Hall School in Tulsa, Oklahoma. I teach at Holland Hall and considered the possibility that this could be considered a sample of convenience, but it is in a division of the school in which I do not teach and the permission of the Headmaster and the Head of the Middle School was obtained in advance. Additionally, after several discussions with my advisor about this issue we decided it was appropriate to proceed. An IRB application was submitted to the University of Oklahoma - Norman and the project was approved by the IRB review board. A total of 50 subjects and their parents were surveyed. Although these subjects are largely homogenous with respect to income and other basic demographic characteristics, they vary widely in terms of location. Fifth graders were selected because they are at an age that traditionally has some level of independence when it comes to short-range travel, though they still rely on their parents to travel longer distances. The third part of the study is observational in nature so it does not require IRB approval. All three parts of this study seek to ascertain, to one degree or another, how much time children spend engaged in independent outdoor play. In addition, my research attempts to shed some light on the factors that may have led to a decline in this type of play.

Part One: Parent Survey:

The first part of the parent study surveyed parents about how much time their children spend using technology. One of the theories that attempts to explain the decline in independent play purports that children are simply budgeting their time in ways that favor interaction with technology instead of time spent outdoors.

Parents were also asked to describe the amount and nature of their child's "scheduled time". Scheduled time is time spent outside of school on activities such as sports, arts and other scheduled activities. Scheduled time, in many ways, is the opposite of independent play, and at the very least, cuts into to limited amounts of time that can be spent outdoors in unsupervised play.

The last part of the parent survey seeks to understand parental attitudes about unsupervised outdoor play. Parents were asked to rate, using a likert scale, their concerns about crime, infrastructure, and maturity when they consider whether or not to allow their children to roam unsupervised. They were also asked to consider the overall appropriateness of their neighborhood for independent outdoor play. (see appendix A for parent survey form)

Part Two: Child Survey

The survey given to children will be a bit more complicated. If successful, however, it will show the "neighborhood range" of the children studied. The students were asked to two things: first, they were asked to use a map given to them by me to mark every time they go outside of their homes for one week. The "trips" include anywhere outside of their house, including their own yard, but they must be unsupervised and must not require adult transportation. In other words, the study seeks knowledge on how far children are allowed to go from their own homes without an adult; second, on one map they were asked to mark the routes and destinations of any unsupervised trips they had ever been allowed to make without adult supervision. The second part of this study was much more successful than the journaling segment because the return rate was much higher. To protect the privacy of the child, the final presentation shows only the frequency, destinations, and distance of trips. To do this, the background map was deleted leaving only a set of scaled lines showing each trip. These maps make it possible to compare children to each other based on a number of factors including gender, age, amount of time spent consuming media, and time spent in scheduled activities, as well as parental attitudes regarding the parent's level of permissiveness regarding independent outdoor play. (see appendix A for child survey form)

This data alone, although limited in scope, is useful in attempting to determine whether or not the basic assumptions of this research are valid. In addition, when compared to their parent's responses, it is possible to correlate parental attitudes about unstructured play, the use of technology by the child and scheduled time, with the number and length of trips the child is allowed to make.

Part Three: Observational Analysis

The observational component of this study focuses on the actual neighborhoods in which the study participants reside. This part of the study, because it does not rely on interviews with actual subjects, does not require IRB approval. The observational analysis looks at the actual physical conditions of a subset of the study's participants and attempts to quantify some aspects of the urban form that may contribute to the range of the children in those neighborhoods. In other words, does the neighborhood have sidewalks, parks, and open space that encourage independent play. By examining these characteristics and comparing them to the responses of the parents and the range of the child, it may be possible to reach some conclusions on the impact of the appropriates of the urban form for independent child play.

Operational Hypotheses

Three operational hypotheses were tested based on the results of the three components of this study.

Overscheduling hypothesis: Increasing demands on children's time related to school and outside-of-school activities decrease the amount of time children are able to spend in independent outdoor play.

Technology hypothesis: Increased use of electronic media is redirecting children's play from outdoor to indoor environments.

Parental Attitudes hypothesis: Parental attitudes related to crime, infrastructure, child maturity and neighborhood quality determine children's independent play range.

Results

Summary of Results - Parent Survey

Overscheduling Hypothesis

Increasing demands on children's time related to school and outside-of-school activities decrease the amount of time children are able to spend in independent outdoor play.

Results: Parents in this study reported that the vast majority of their children (77%) spend up to two hours per evening on homework, on top of an eight hour school day. National data support these validity of this data, as well as the assertion that over time school-related demands have increased for children.

Additionally, 93% of students in this student participate in outside of school activities, with the majority (64%) spending more than five to ten hours per week participating in these activities. Further, 17% were engaged in these activities more than 10 hours per week. Comparing this data to that of previous generations is difficult, but taken as a whole, the study suggests that children are busy, perhaps busier than previous generations, and that they have limited time to engage in outdoor play. Results: Children are scheduled for much of their day and this limits their ability to spend time in independent outdoor play. It was not possible to correlate this to range because of the way the questions regarding scheduling were posed on the survey.

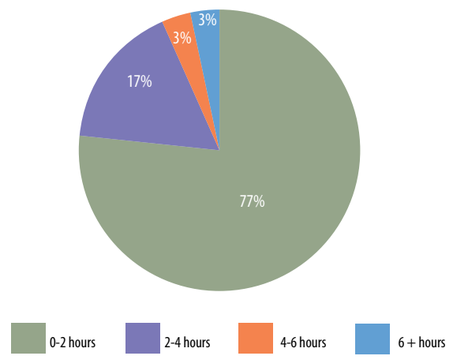
Technology Hypothesis

Increased use of electronic media is redirecting children's play from outdoor to indoor environments.

Results: Most parents responded that their children spent less than 2 hours per day using electronic media (television, gaming systems and computers). About 80% responded that their child has no access to television, gaming systems or computers in their bedrooms.

This question was used to determine whether or not the child could use electronic media without the knowledge of an adult. These results run counter to almost all recently available national surveys. This study's population reported that they use electronic media far less than the average child, and that very few have access to unmonitored media in their bedrooms. Two theories may help explain these results. First, the population studied was fairly homogeneous with respect to income, race, and age. Further, these parents tended to have higher incomes and may have access to data about the dangers of exposure to electronic media. Second, it is possible that parents underreported the time their child consumes electronic media, either due to a lack of knowledge about their child's habits or because they misunderstood the nature of the question. Results: No correlation was found between the participant's range and consumption of electronic media.

How much time do you estimate that your child spends consuming electronic media each day?

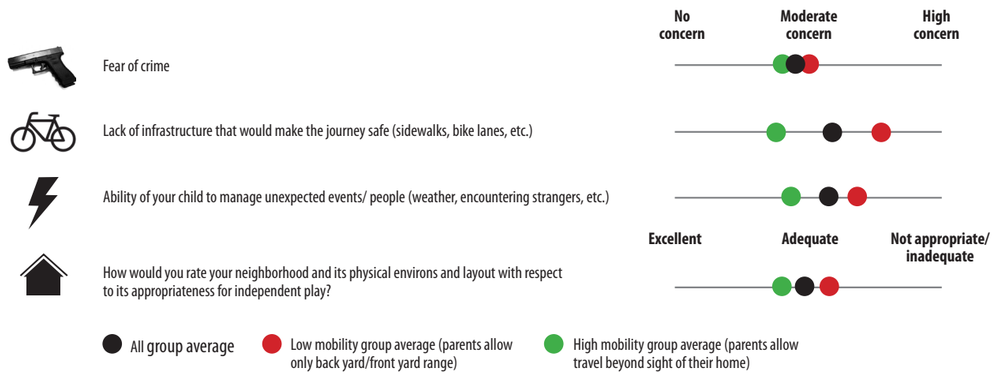


Parental Attitudes Hypothesis

Parental attitudes related to crime, infrastructure, child maturity and neighborhood quality determine children's independent play range.

Results: In all four categories measured, parents who allowed their children greater independent play range (High Mobility Group - parents who allowed trips beyond sight of their homes) expressed less concern than parents who allowed trips only within sight of their homes (Low Mobility Group) about variables that influence their decision-making regarding independent play. These parents also expressed more positive feelings about the general quality of their neighborhood for independent play (see chart below). A statistical analysis (see results in appendix B) indicates that the results related to lack of infrastructure and the ability of the child to handle unexpected events are statistically significant factors that may be related to the distance children are allowed to roam. Results for attitudes about crime and general appropriateness of the neighborhood were not statistically significant. There was no discernible correlation to actual range reported by the child survey maps.

Parental Survey Question: When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

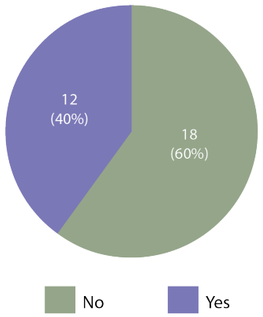


RESULTS

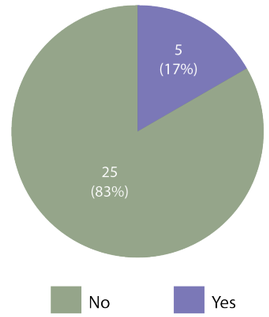
Summary of Parent Responses

The following charts represent a summary of responses from all parents surveryed. 50 surveys were sent and 30 surveys were returned.

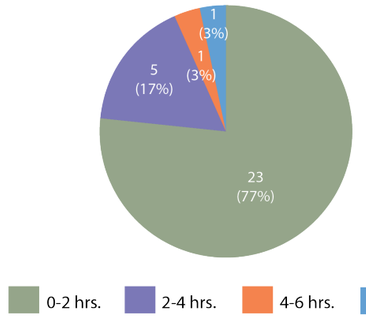
Does your child have a personal cell phone?



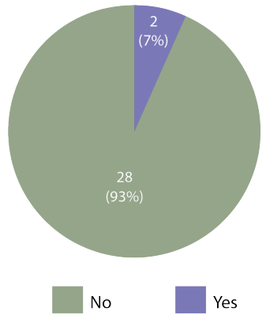
Does your child have a computer in his or her room?



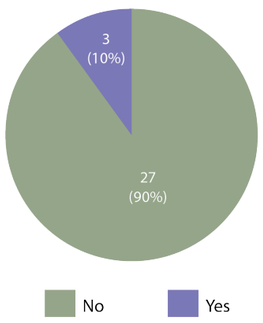
How much time do you estimate that your child spends consuming electronic media each day?



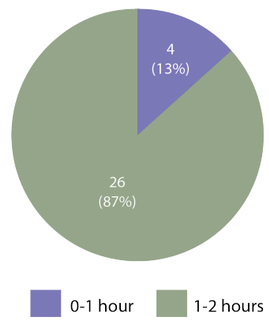
Does your child participate in formal learning, athletic, or artistic activities outside of school hours?



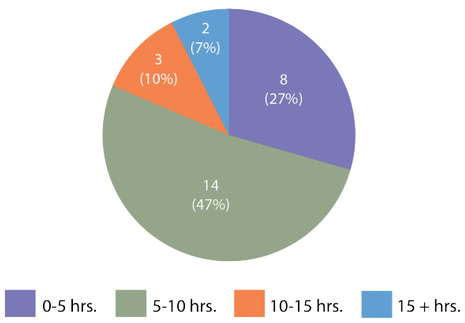
Does your child have a stand-alone gaming system in his or her room?



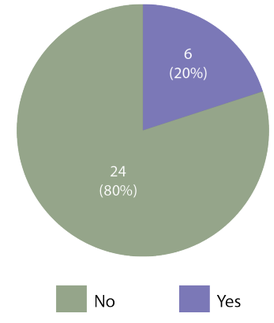
How many hours of homework does your child have on a typical weeknight?



If your child participates in out-of-school activities, how many hours per week do they participate?



Does your child have a television in his or her room?



RESULTS

Individual Survey Results - Child and Parent Survey

The following pages contain the individual results for the thirty study participants (both parent and child) who responded to the survey. The left side of the page is a map that shows the results of the child mapping survey. The children were given a map of their neighborhood and were asked to draw the routes of all the trips they had ever been allowed to make without adult supervision. This map does not reflect the frequency of the trips taken; instead it reveals the routes and range of each individual child.

Because of concern for the privacy of the participants, all landmarks and identifying features of the neighborhood had to be left off these maps. To help provide an urban context for these maps, an observational study was conducted that looked at four factors: neighborhood type, quality of sidewalk infrastructure, and access to park and stores or businesses within ¼ of a mile from their home. It should be noted that 'excellent' sidewalk access means sidewalks existed on all streets within the child's neighborhood. 'Poor' sidewalk access is defined as no sidewalk access in the child's neighborhood. There were no occurrences of 'medium' sidewalk access (defined as sporadic sidewalk access). Also, noted on the left side of the page is the average distance of trips (range) for all study participants as well as the average distance of trips taken by the individual child. The average distance for all study participants reflects only trips outside the front and backyard. Study participants who reported only front or back yard access were assigned a distance of .01 miles for their range, but front yard and back yard trips were not calculated as a part of the overall average distance for the larger study group average.

Summary of Child Map Survey Results:

Average Distance of All Trips (excluding back and front yard trips) - .29 miles

% of children with 'excellent' sidewalk access - 27%

% of children with 'poor' sidewalk access - 73%

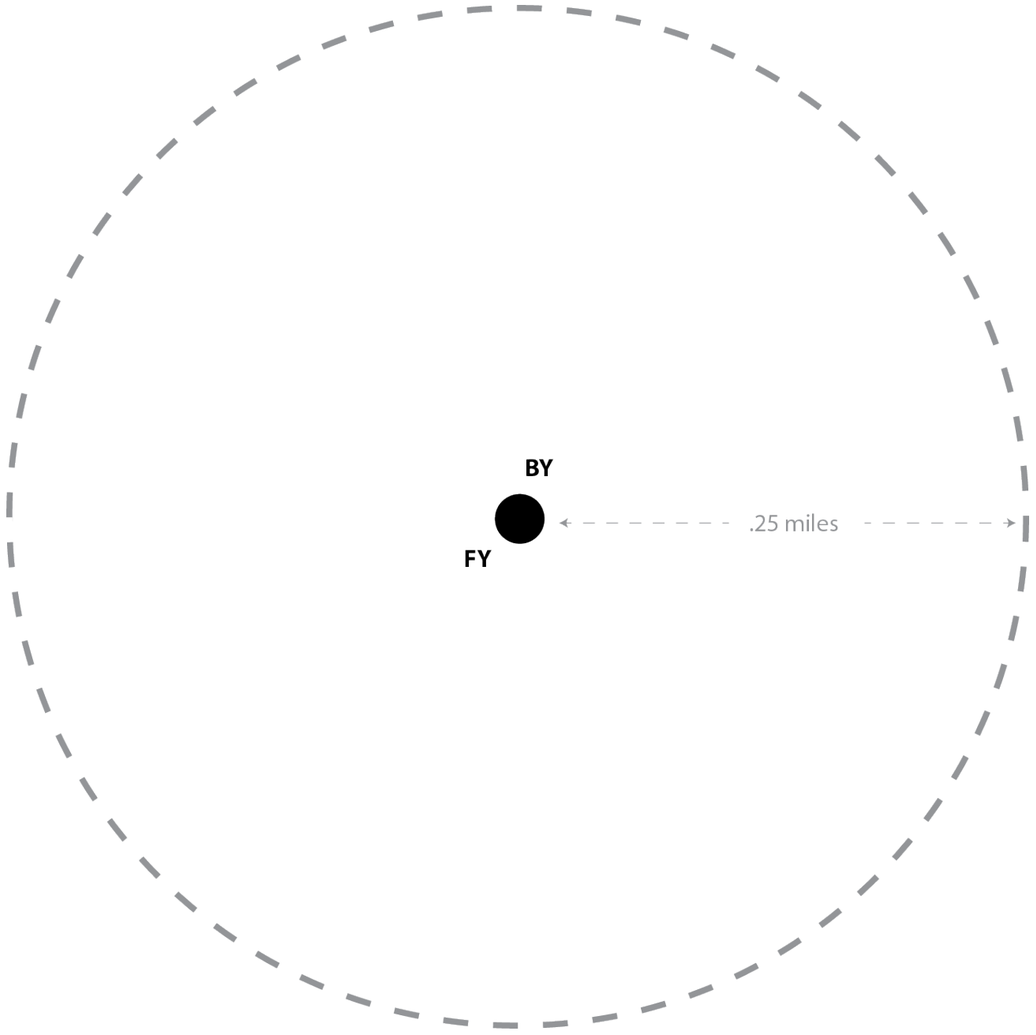
% of children with access to parks (within ¼ mile of home) - 96%

% of children with access to stores or businesses (within ¼ mile of home) - 31%

The right side of the page displays the results of each child's parental survey. The specific wording of the questions asked of parents can be found in Appendix A, but in general, parents were asked about their child's access to technology, the time their child spends on outside activities, and their attitudes regarding factors that affect their decision making with respect to outside play opportunities. Basic demographic information is also provided. The section regarding parental attitudes notes three scores for each variable. The low-mobility group (red) is the average score for all parents who reported allowing only and back and/or front yard access. The high-mobility group (green) is the average score for all parents who allowed travel beyond the sight of their own homes. The individual parent response for that page (blue) indicates the response of the individual parent's response to the question.

There was a statistically significant relationship found for two categories regarding parental attitudes and access to greater range. Parental attitudes regarding infrastructure , such as sidewalks, and the distance which they allow their children to roam had a P value of .0219. While the P value for maturity and the ability to handle unexpected situations was .0138. In other words, there was a statistically significant relationship between parental attitudes about maturity and infrastructure and permissible travel distances. While both scores are considered statistically significant as a measure of association, they cannot necessarily be determined to be causative. It is important to note that this study population was relatively homogenous with respect to both age and income, so a larger sample size with more heterogeneity may produce different results. Two categories (neighborhood quality and crime) were not statistically significant with respect to attitudes and range. (See Appendix B for detailed statistical analysis)

SUBJECT 1 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .01 miles

Neighborhood Type: Suburban – Medium Density

Park Access: Yes

Sidewalk Access: Excellent

Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Female | **Race:** Caucasian | **Siblings:** 1 sibling / 17 years old

MOBILITY FACTORS

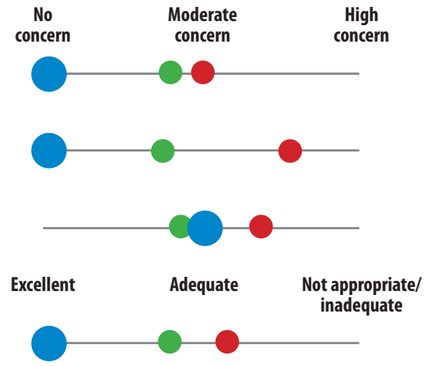
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

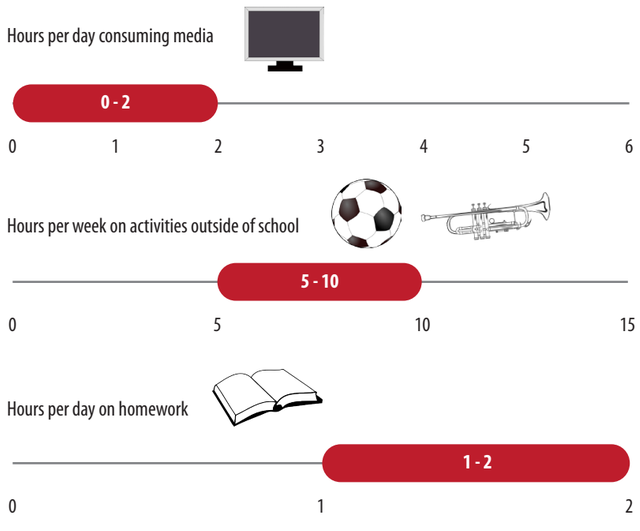
Computer in room

Stand-alone gaming system in room

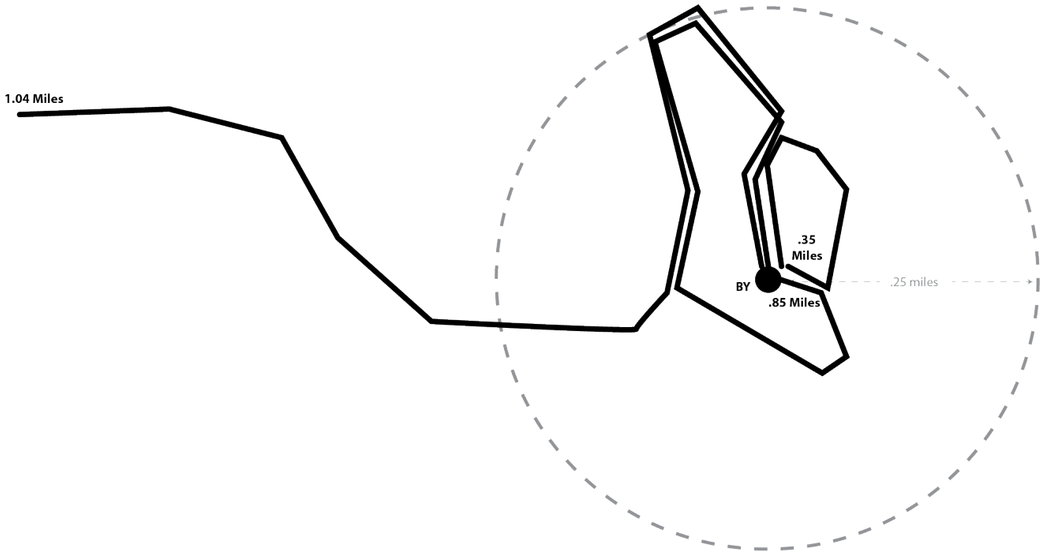
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 2 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .71 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Excellent

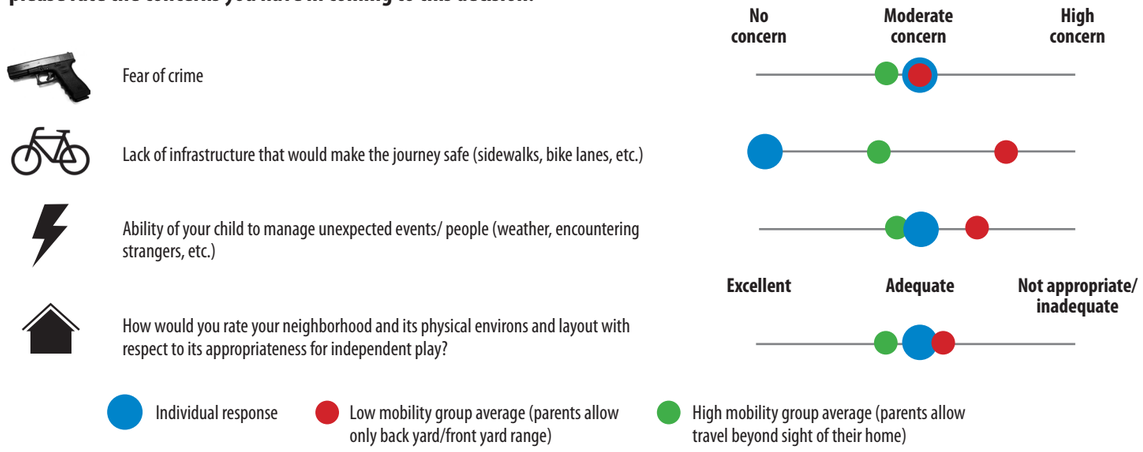
Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Female | **Race:** Caucasian | **Siblings:** 2 siblings / 13 years old

MOBILITY FACTORS

When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

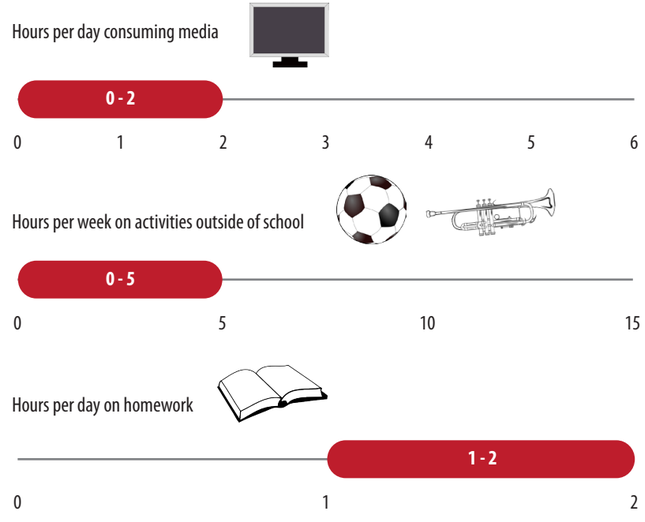


TECHNOLOGY USAGE

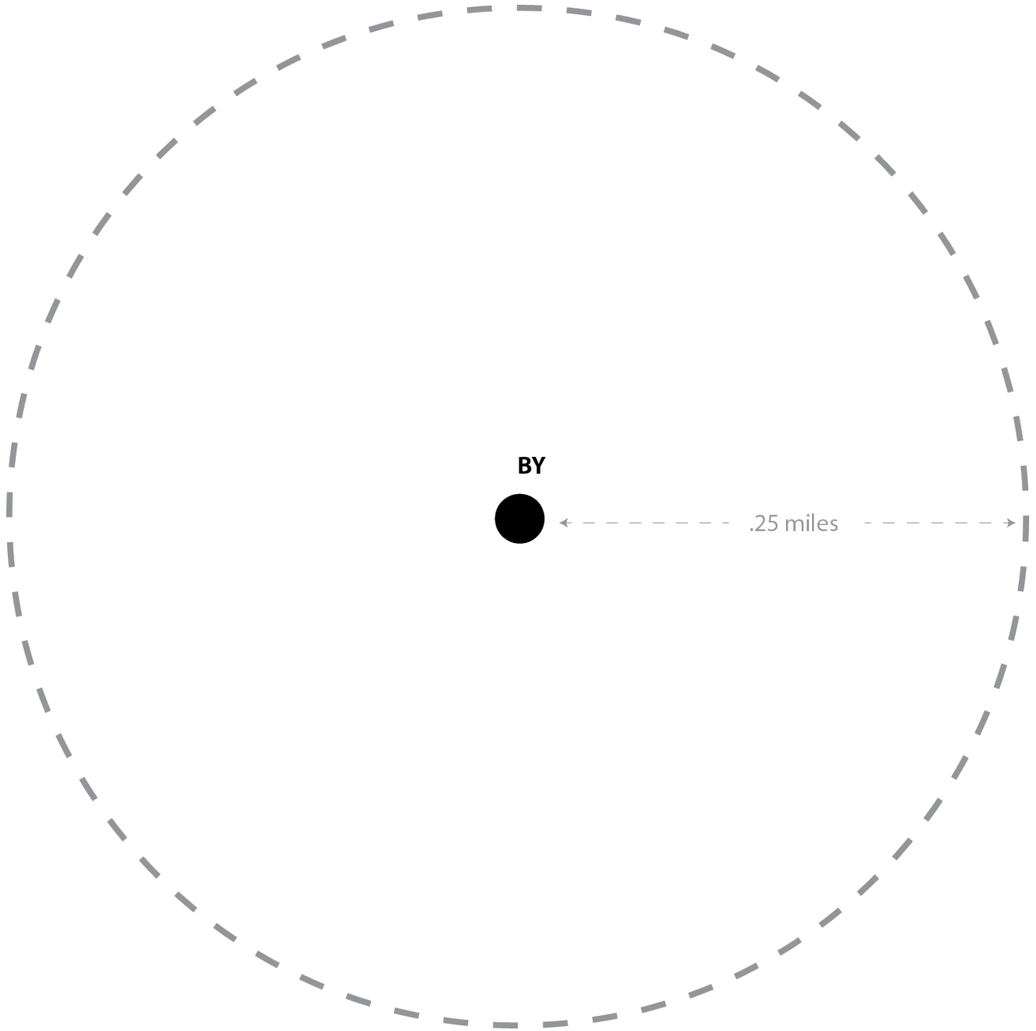
Does your child have any of the following?

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 3 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .01 miles

Neighborhood Type: Urban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Female | **Race:** Caucasian | **Siblings:** 1 sibling / 4 years old

MOBILITY FACTORS

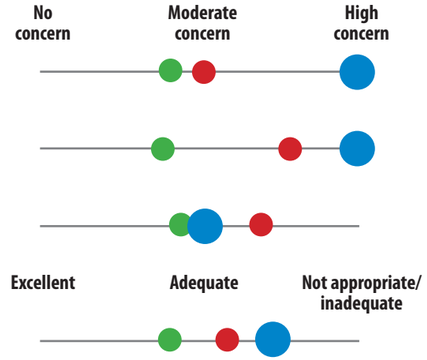
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

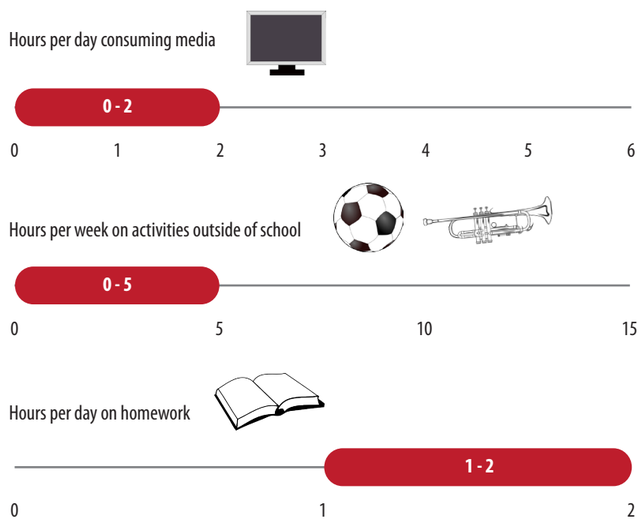
Computer in room

Stand-alone gaming system in room

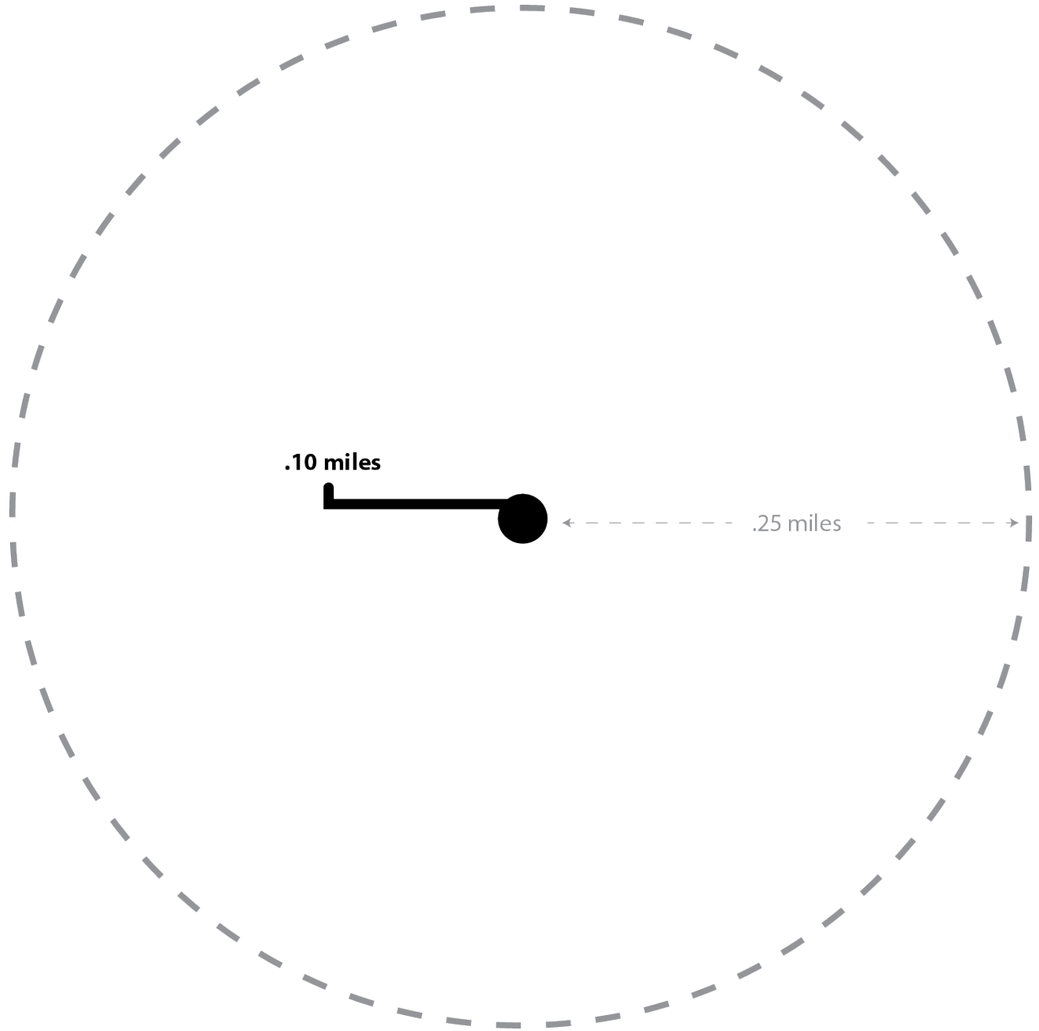
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 4 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .10 miles

Neighborhood Type: Rural - Acreage

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 2 siblings / 13 and 15 years old

MOBILITY FACTORS

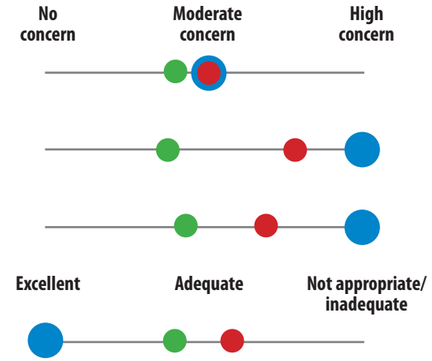
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

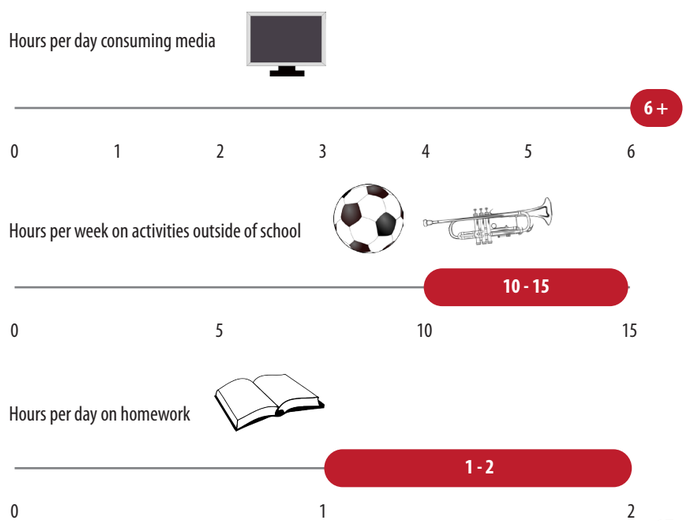
Computer in room

Stand-alone gaming system in room

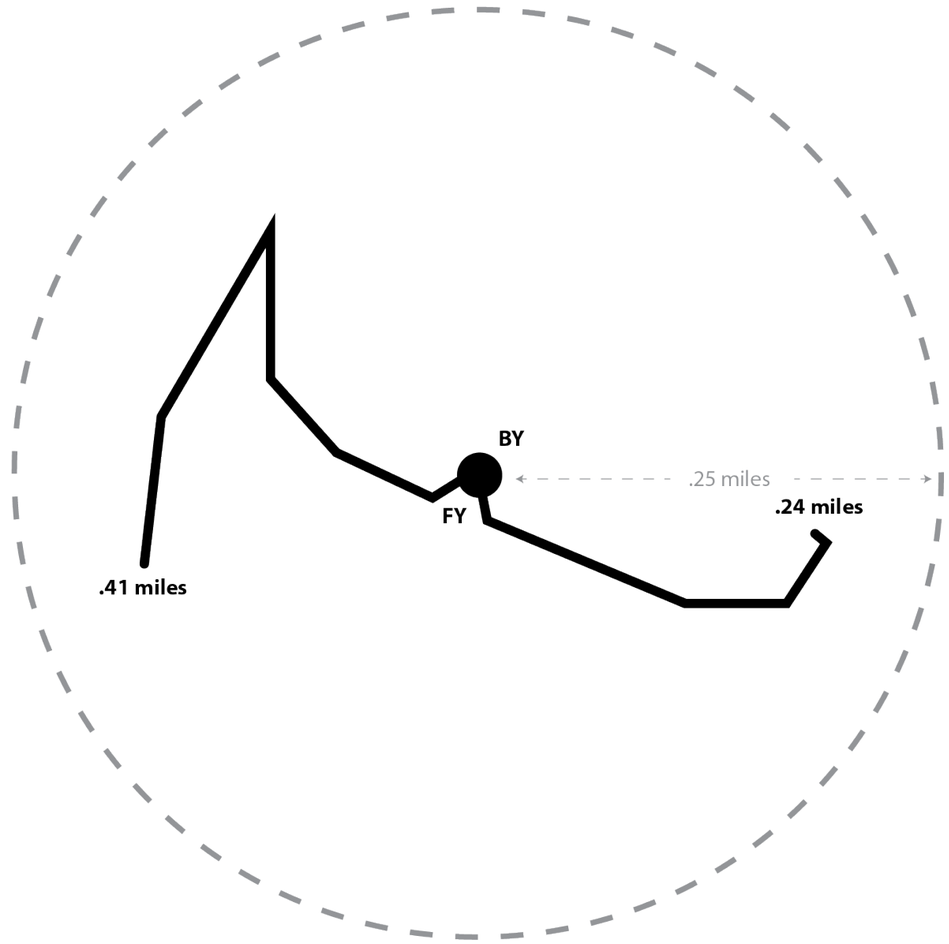
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 5 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .36 miles

Neighborhood Type: Suburban - Low Density

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 2 siblings / 12 and 8 years old

MOBILITY FACTORS

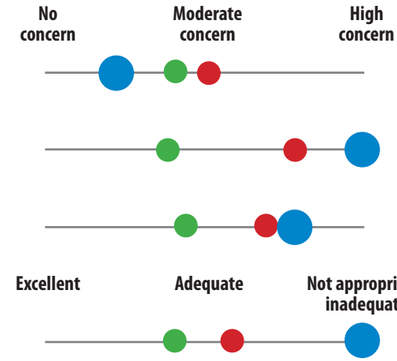
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

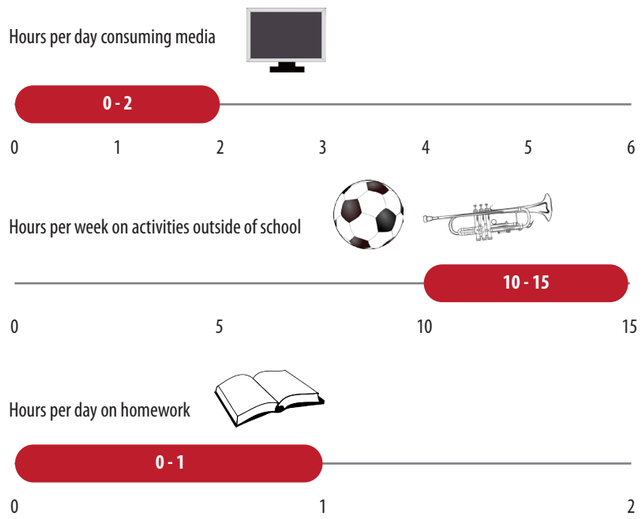
Computer in room

Stand-alone gaming system in room

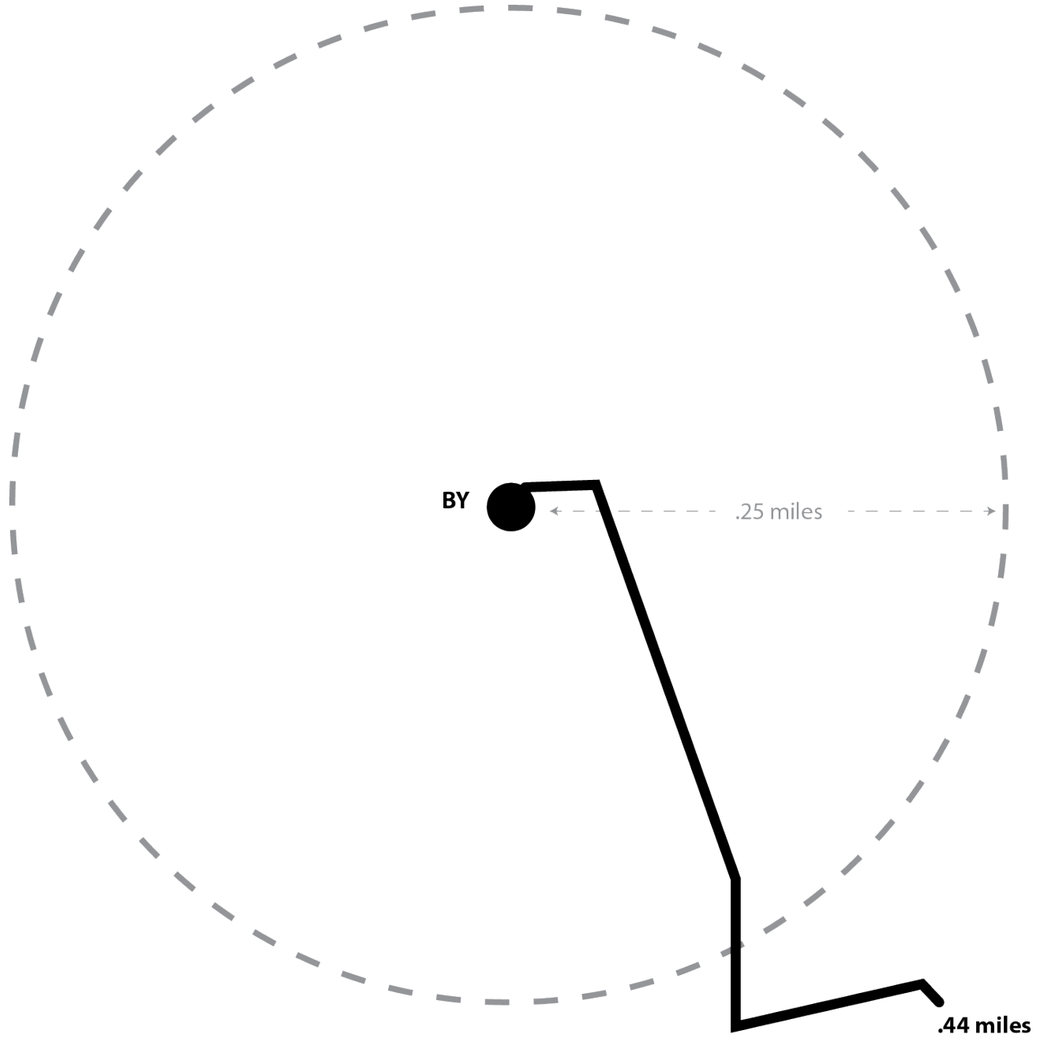
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 6 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .44 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: Yes

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 1 sibling / 13 years old

MOBILITY FACTORS

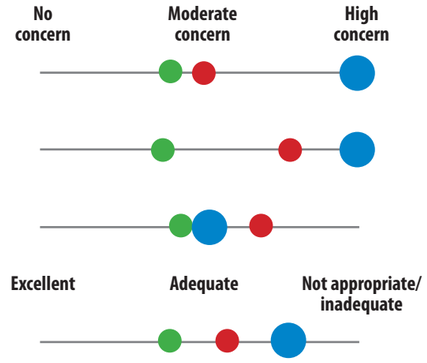
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

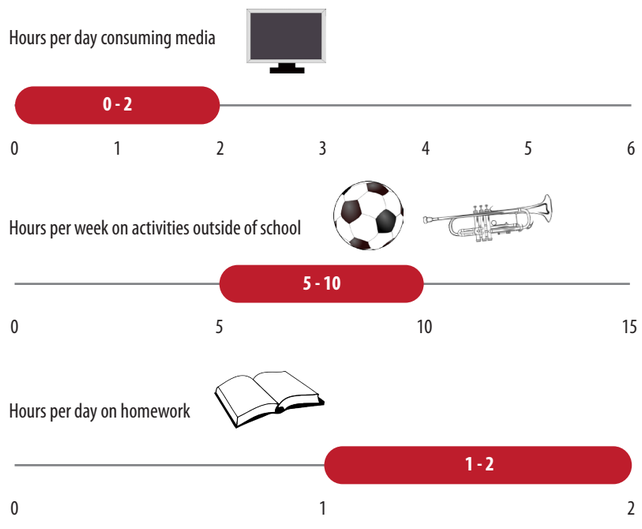
Computer in room

Stand-alone gaming system in room

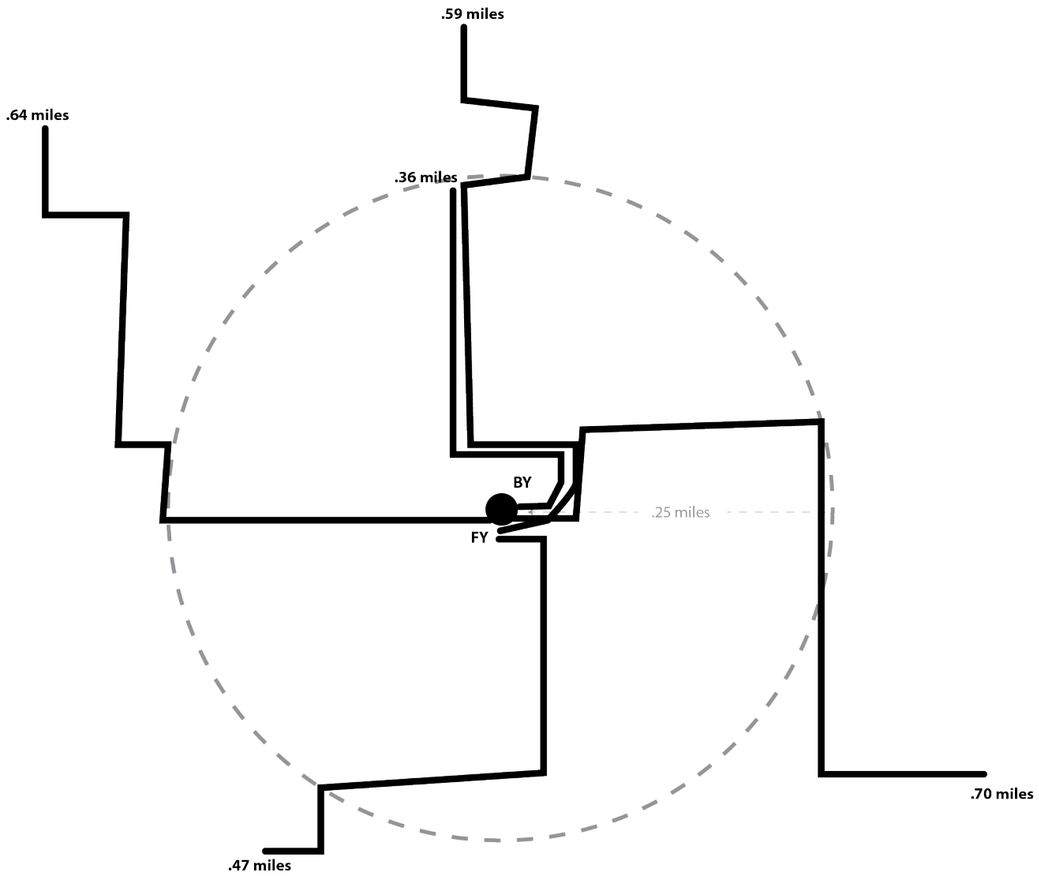
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 7 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .53 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 1 sibling / 14 years old

MOBILITY FACTORS

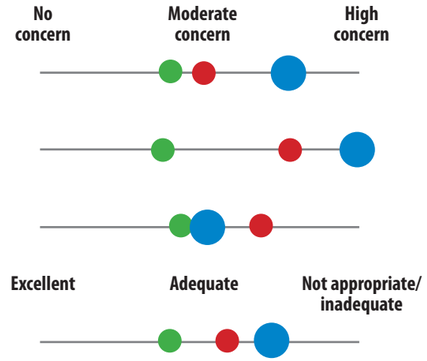
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

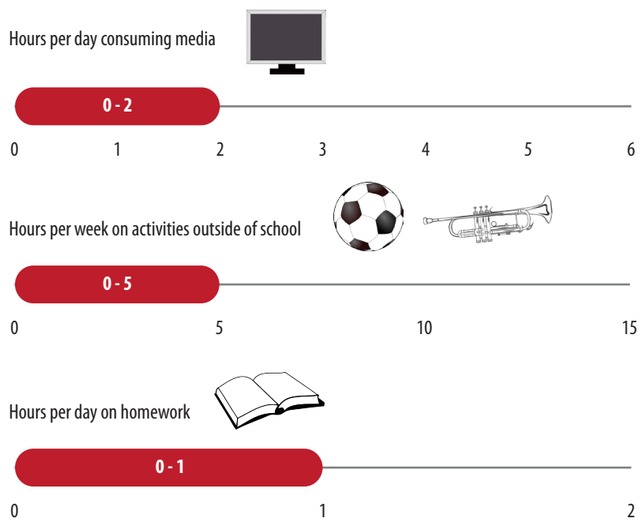
Computer in room

Stand-alone gaming system in room

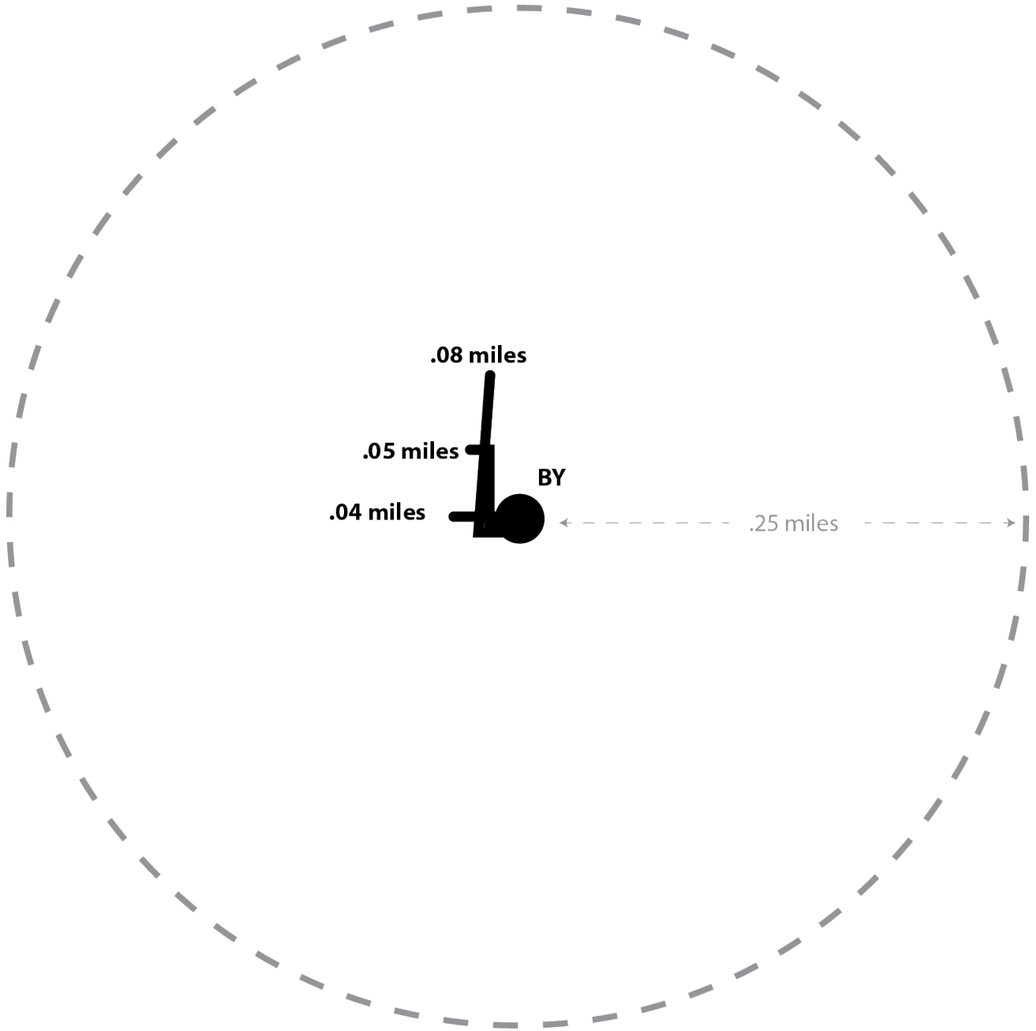
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 8 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .06 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Excellent

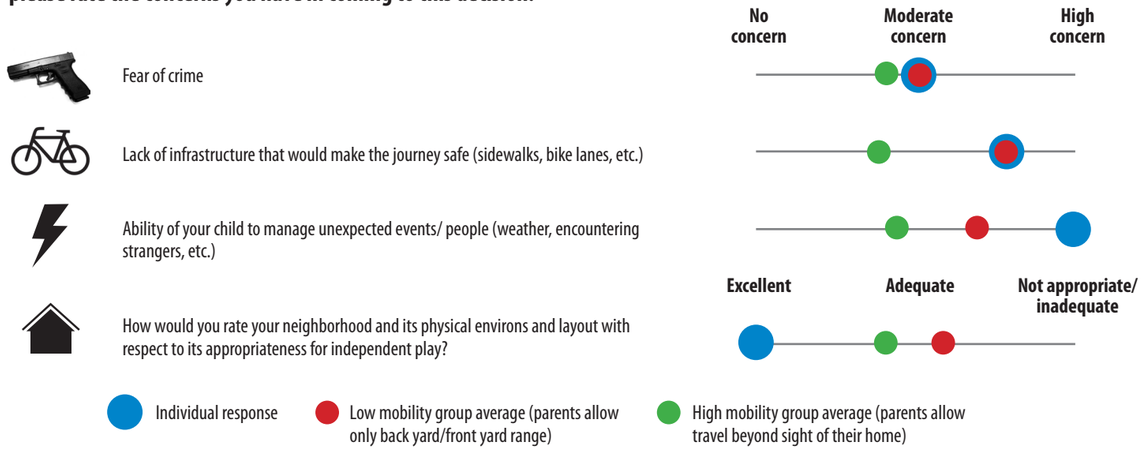
Store/Shop Access: Yes

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Female | **Race:** None given | **Siblings:** No answer

MOBILITY FACTORS

When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

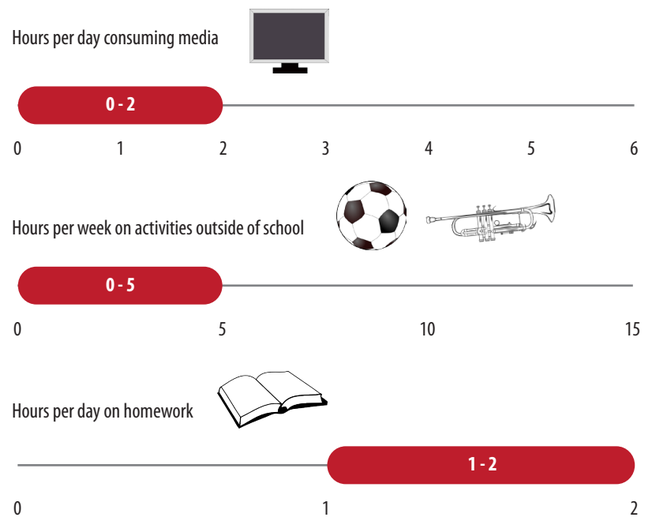


TECHNOLOGY USAGE

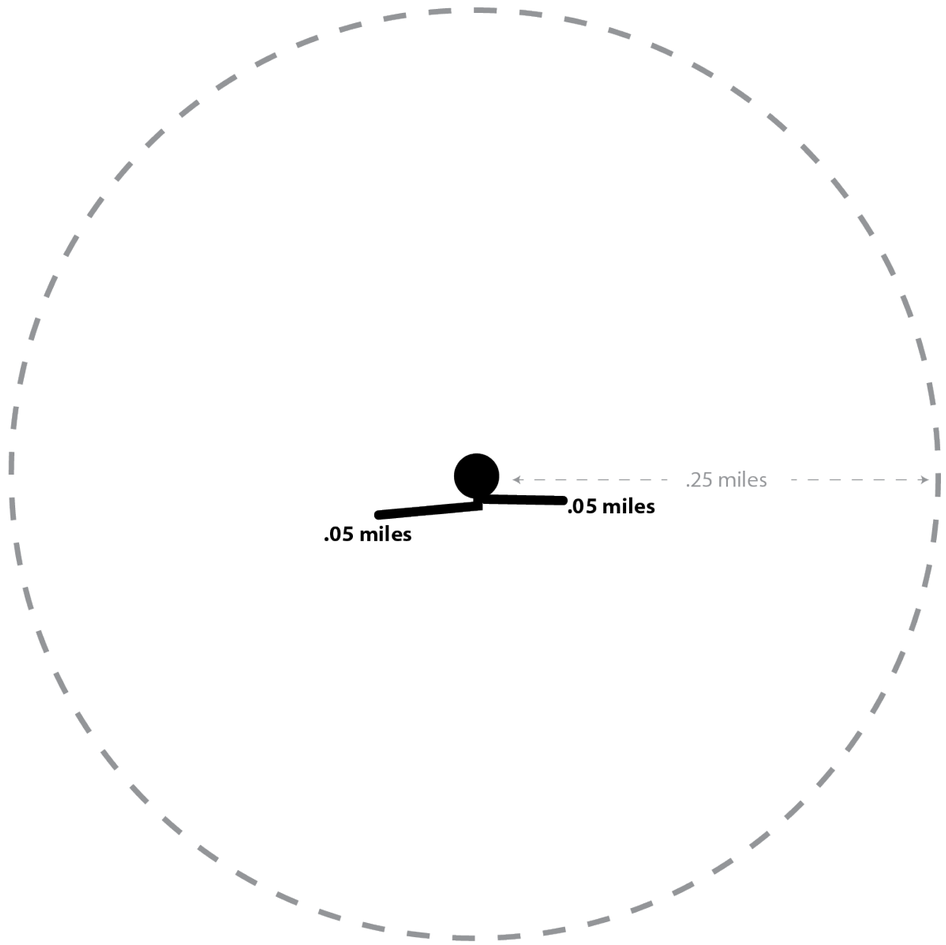
Does your child have any of the following?

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 9 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .05 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Excellent

Store/Shop Access: Yes

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Male | **Race:** None given | **Siblings:** None

MOBILITY FACTORS

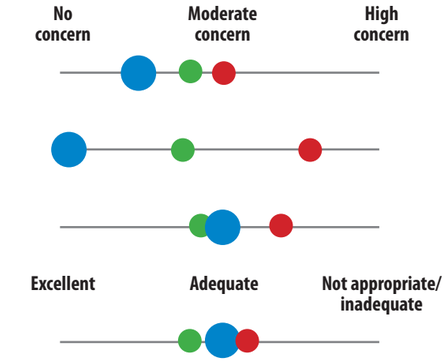
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

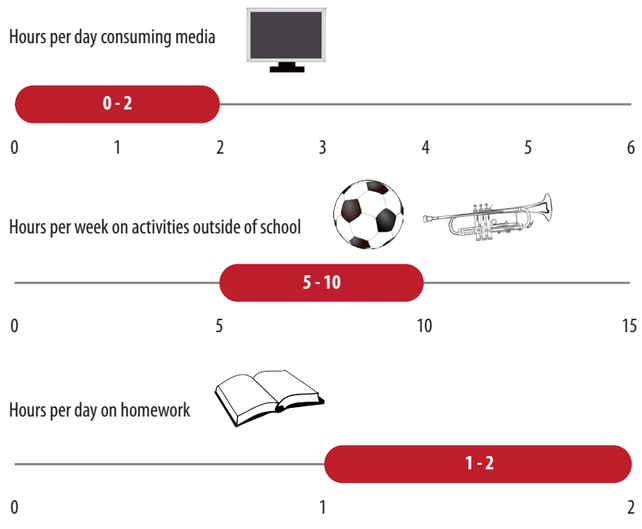
Computer in room

Stand-alone gaming system in room

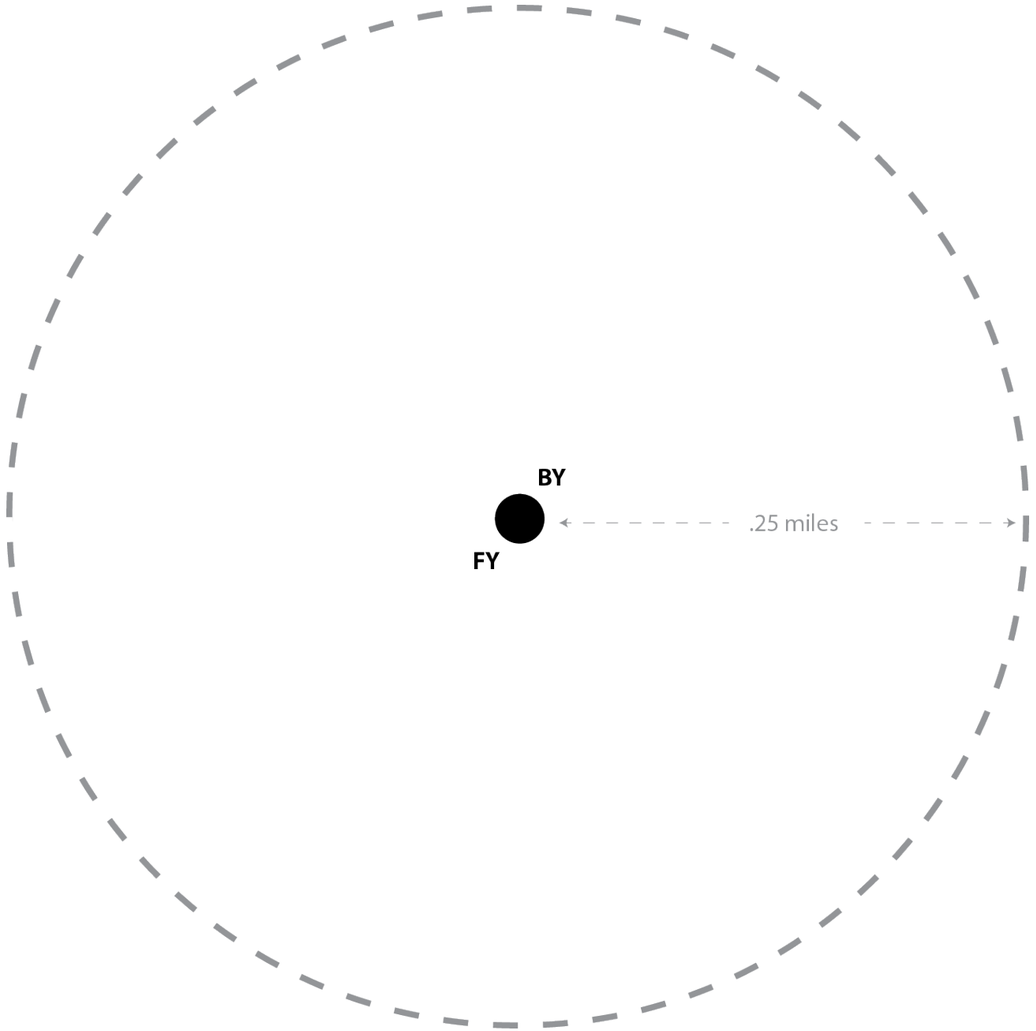
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 10 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .01 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 11 | **Gender:** Female | **Race:** None given | **Siblings:** None

MOBILITY FACTORS

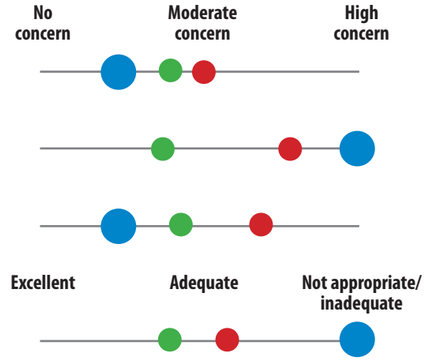
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

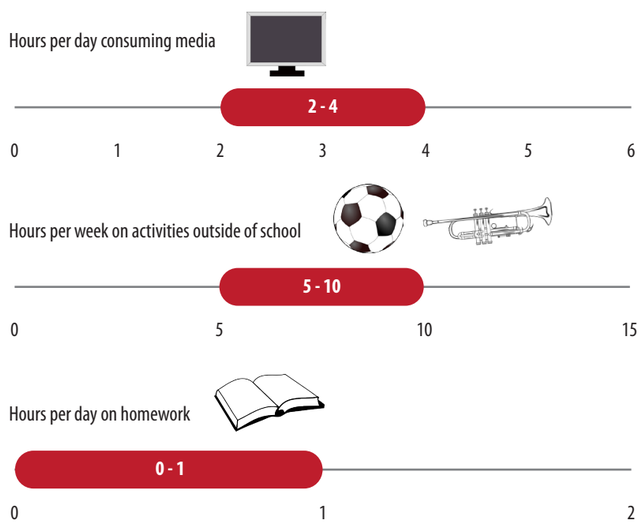
Computer in room

Stand-alone gaming system in room

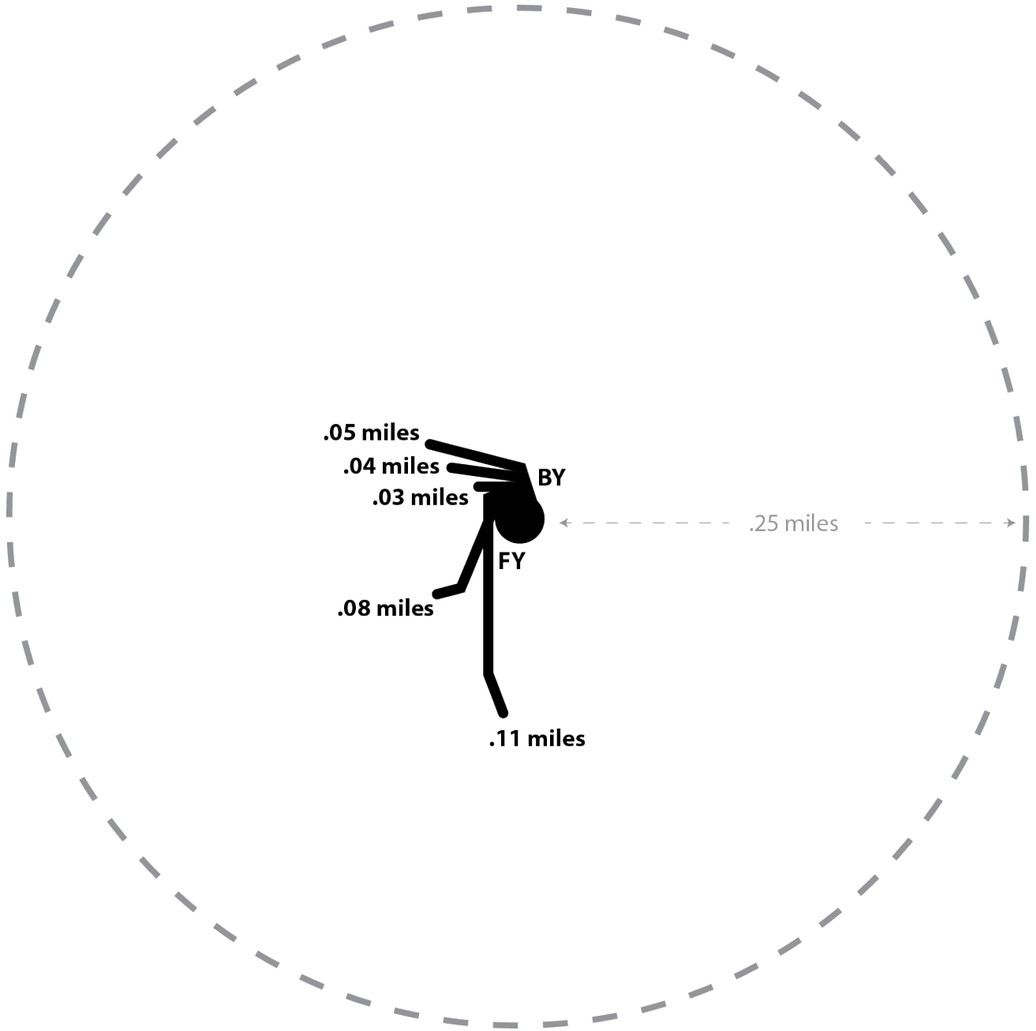
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 11 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .062 miles

Neighborhood Type: Suburban - Low Density

Park Access: Yes

Sidewalk Access: Excellent

Store/Shop Access: Yes

DEMOGRAPHICS

Age of Child: 11 | **Gender:** Female | **Race:** Caucasian | **Siblings:** 3 siblings / 15, 13 and 9 years old

MOBILITY FACTORS

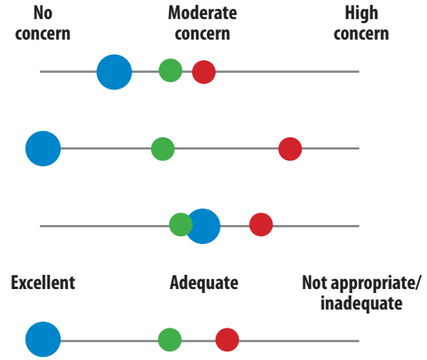
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

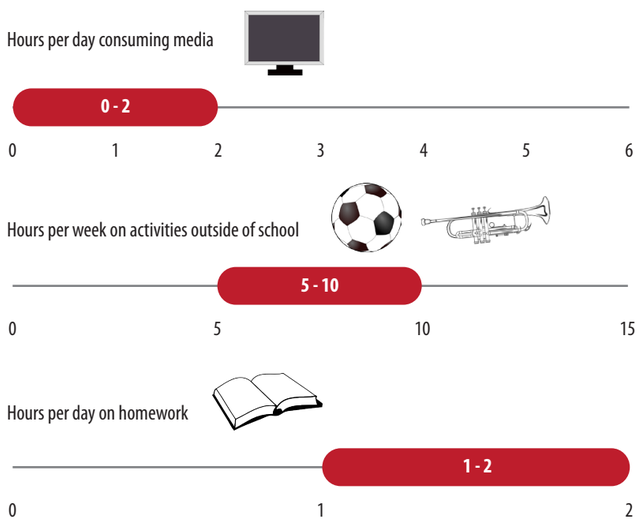
Computer in room

Stand-alone gaming system in room

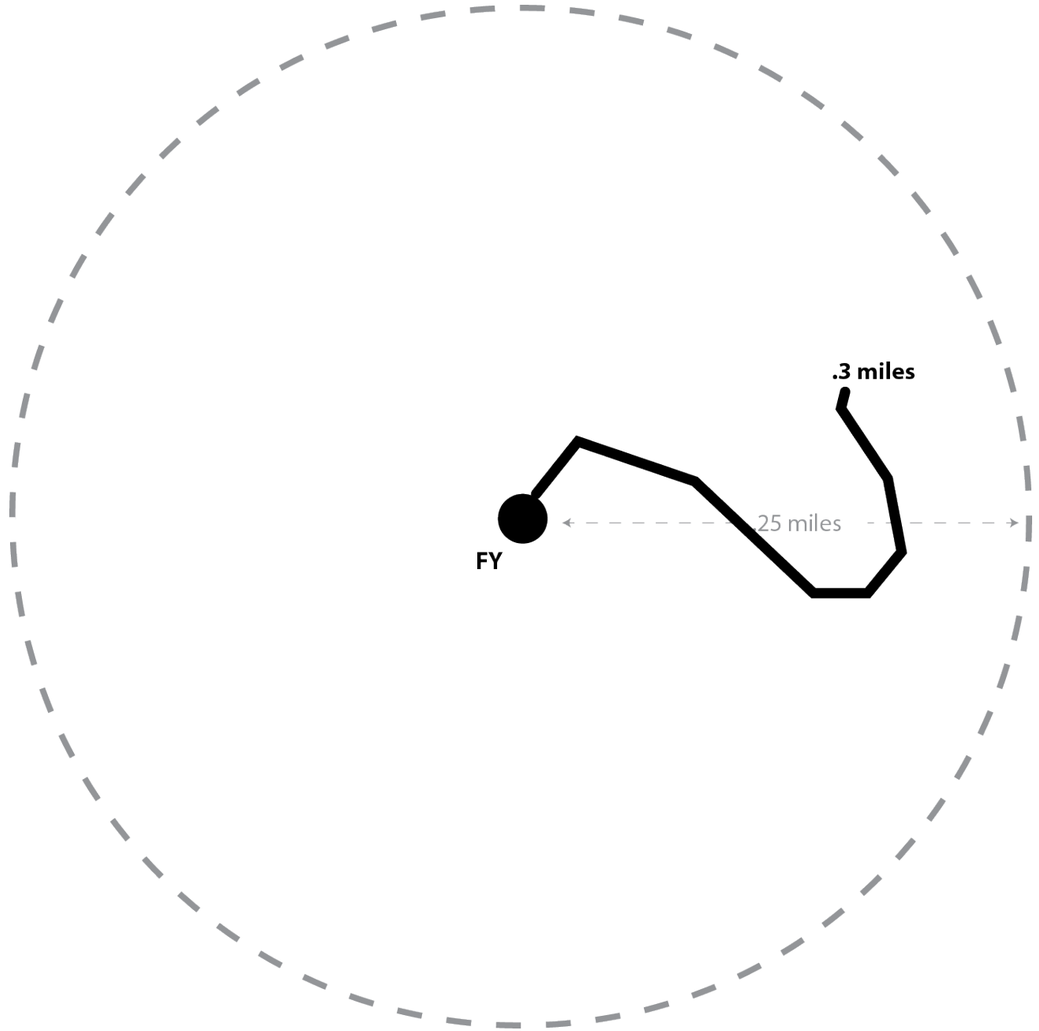
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 12 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .3 miles

Neighborhood Type: Urban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: Yes

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 1 sibling / 8 years old

MOBILITY FACTORS

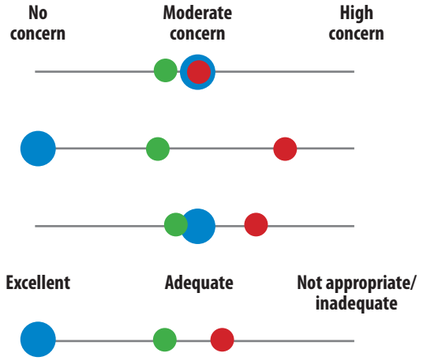
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

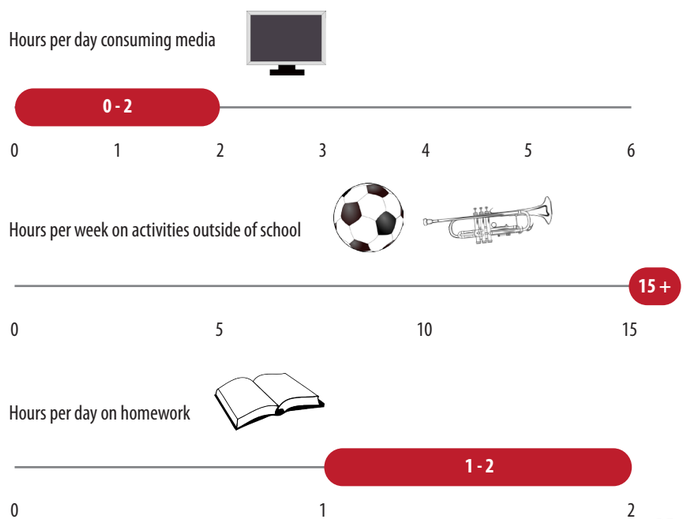
Computer in room

Stand-alone gaming system in room

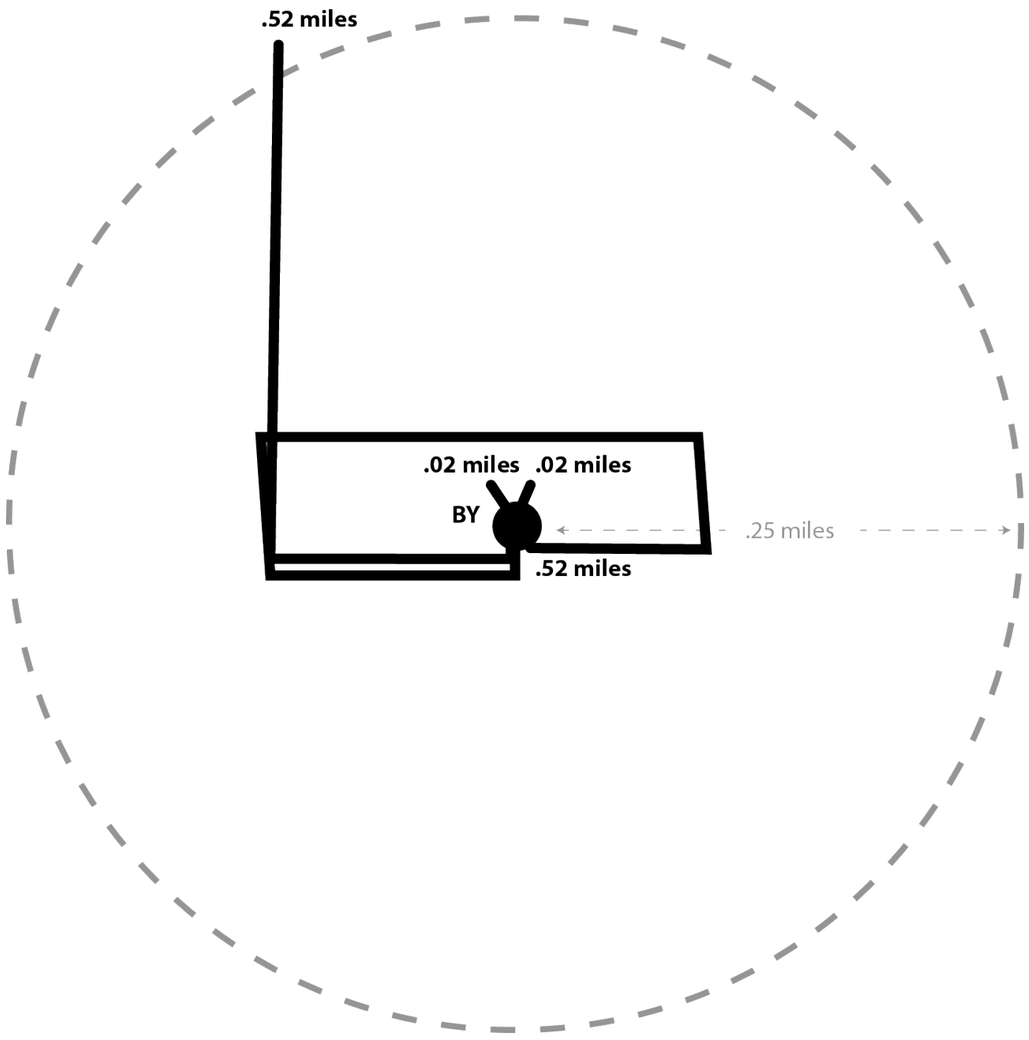
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 13 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .27 miles

Neighborhood Type: Urban - Medium Density

Park Access: Yes

Sidewalk Access: Excellent

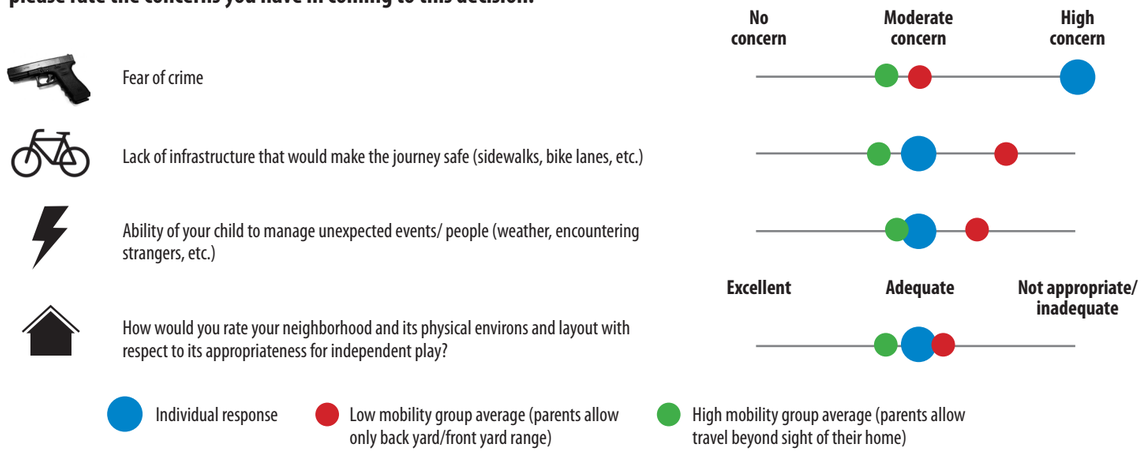
Store/Shop Access: Yes

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Female | **Race:** Caucasian | **Siblings:** 2 siblings / 12 and 17 years old

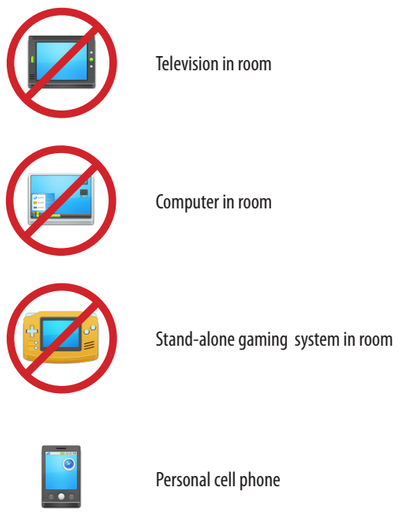
MOBILITY FACTORS

When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.



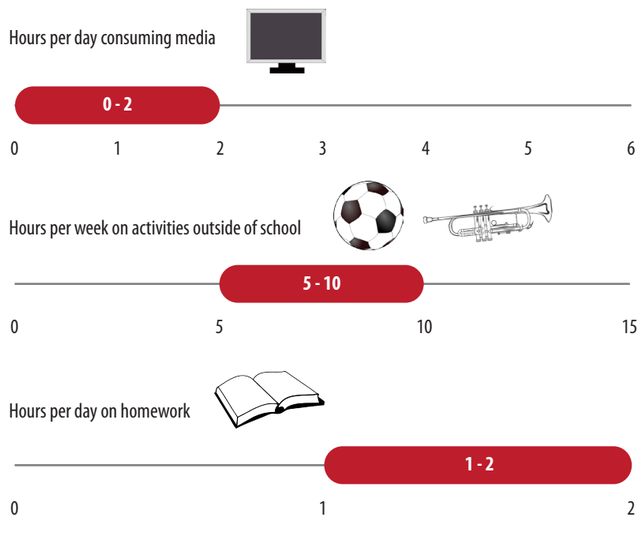
TECHNOLOGY USAGE

Does your child have any of the following?

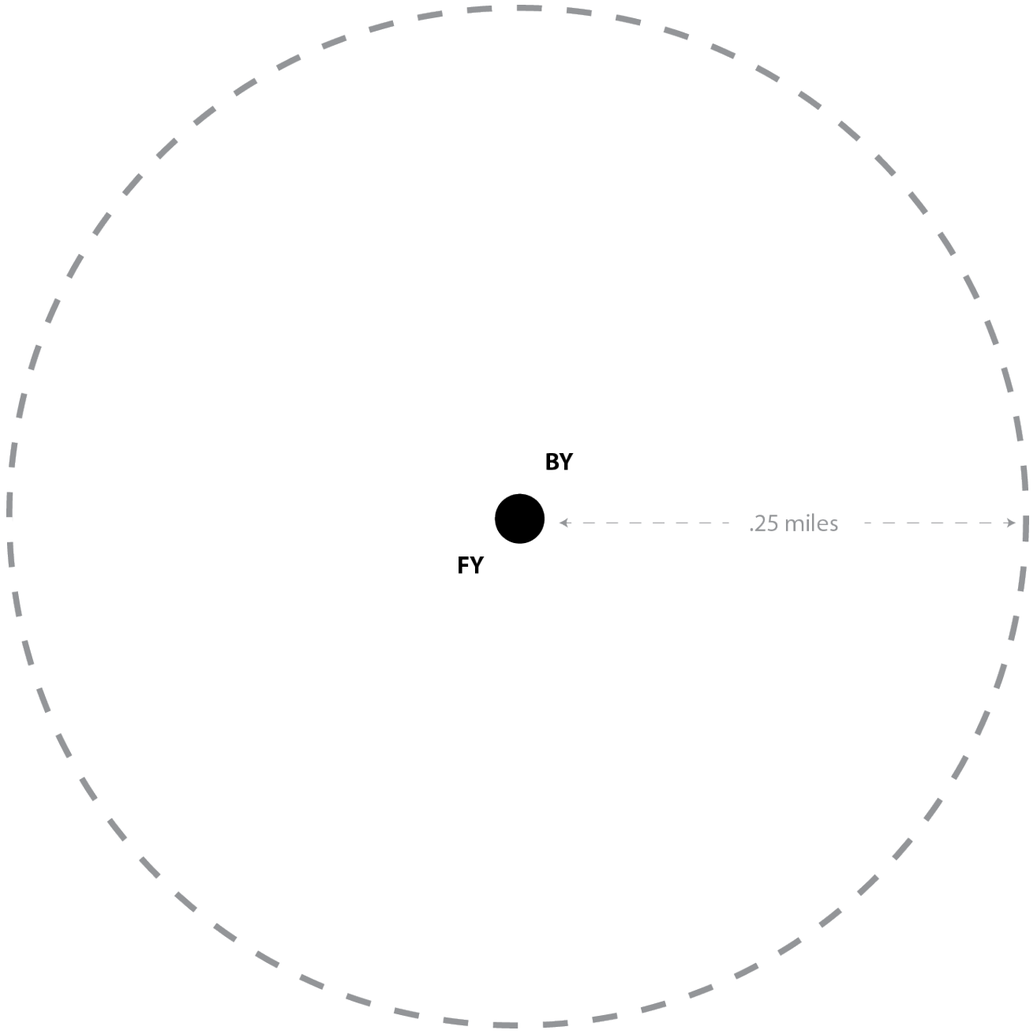


SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 14 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .01 miles

Neighborhood Type: Urban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Female | **Race:** Caucasian | **Siblings:** 2 siblings / 13 and 15 years old

MOBILITY FACTORS

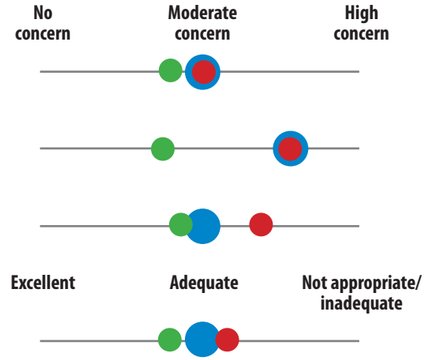
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

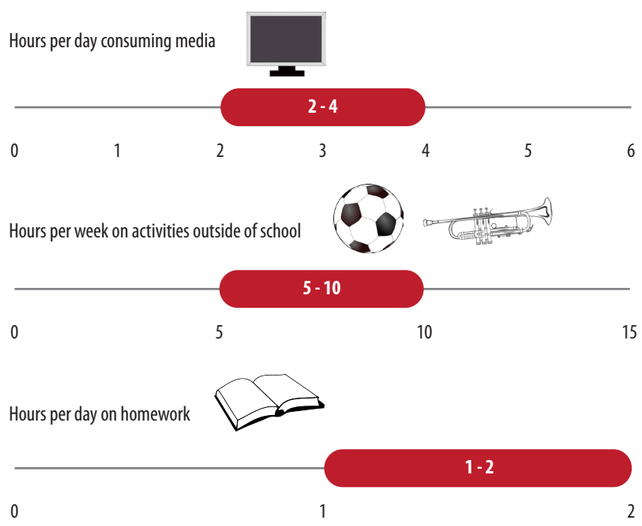
Computer in room

Stand-alone gaming system in room

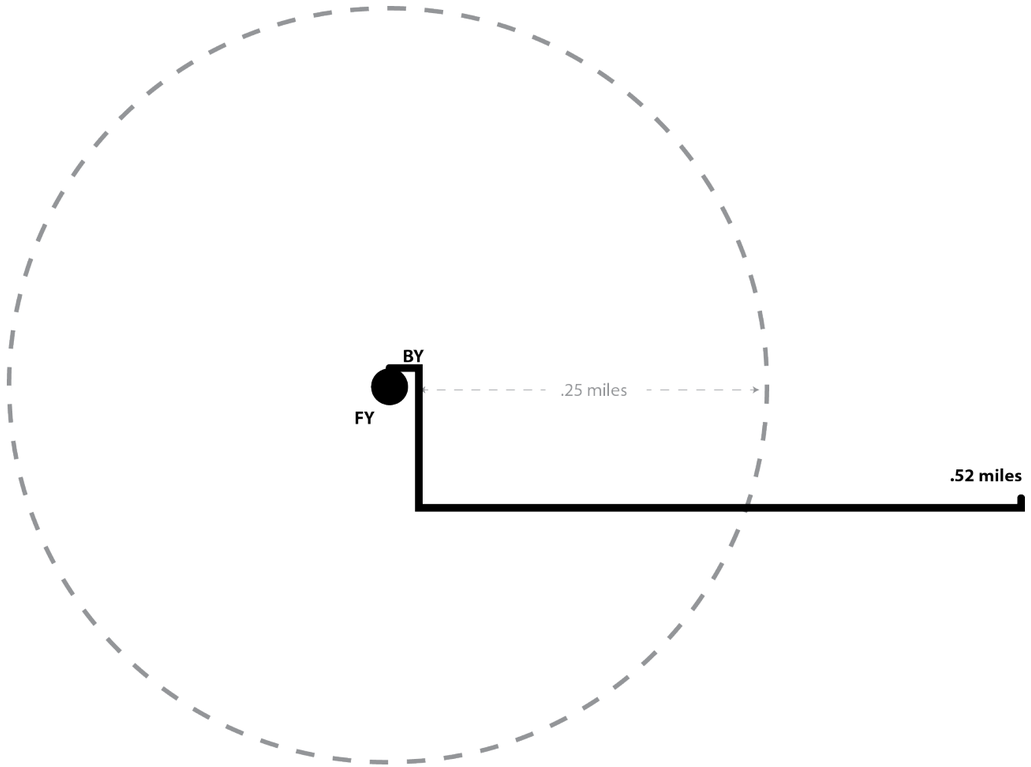
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 15 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .52 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: Yes

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Female | **Race:** African American | **Siblings:** 3 siblings / 13, 14 and 17 years old

MOBILITY FACTORS

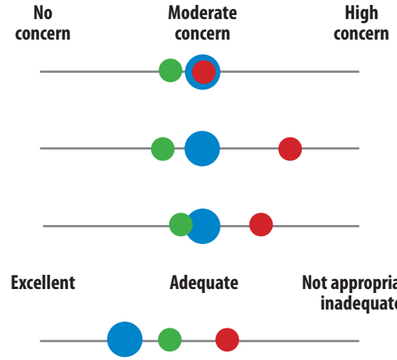
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

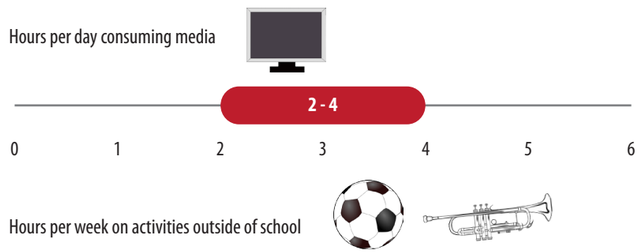
Computer in room

Stand-alone gaming system in room

Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?

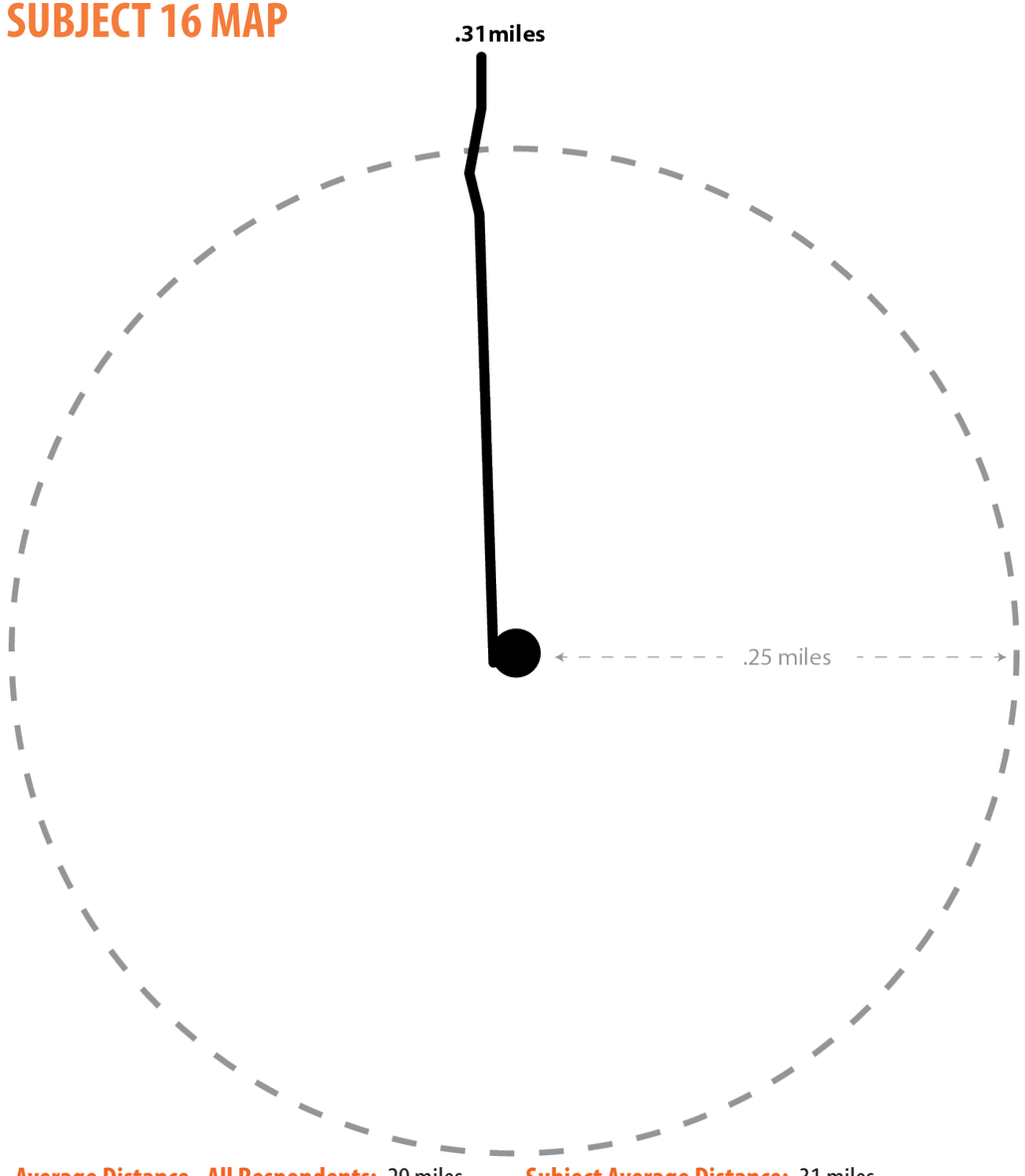


CHILD DESERTS The Absence of Children in the Urban Environment

A professional project approved for the College of Architecture, Urban Design Studio by Christopher S. Cook – 2011

OUUDS
The University of Oklahoma Urban Design Studio

SUBJECT 16 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .31 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

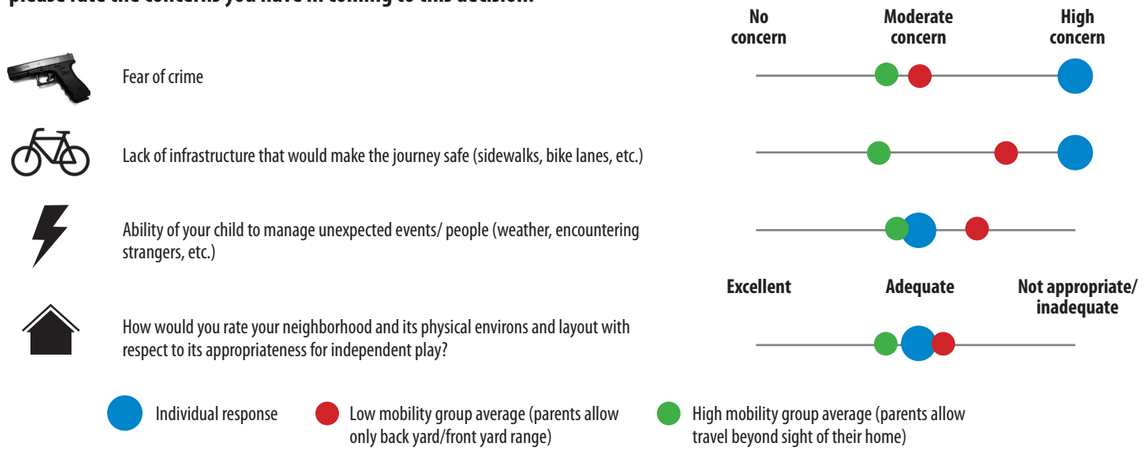
Store/Shop Access: Yes

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 2 siblings / 8 and 16 years old

MOBILITY FACTORS

When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.



Individual response

Low mobility group average (parents allow only back yard/front yard range)

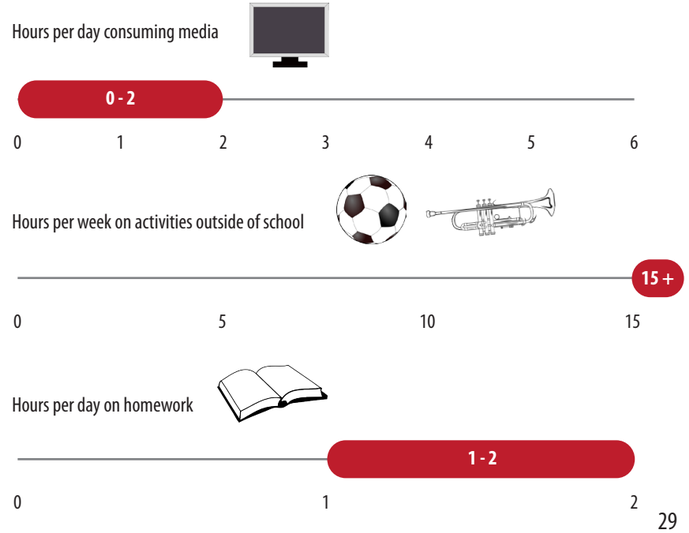
High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 17 MAP

No Map Data

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 1 sibling / 12 years old

MOBILITY FACTORS

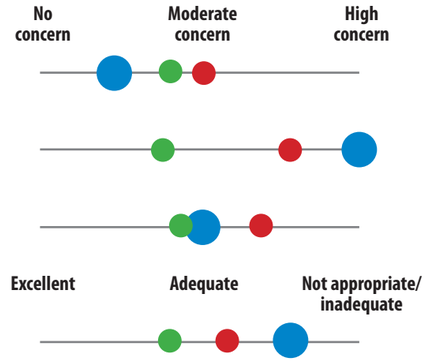
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

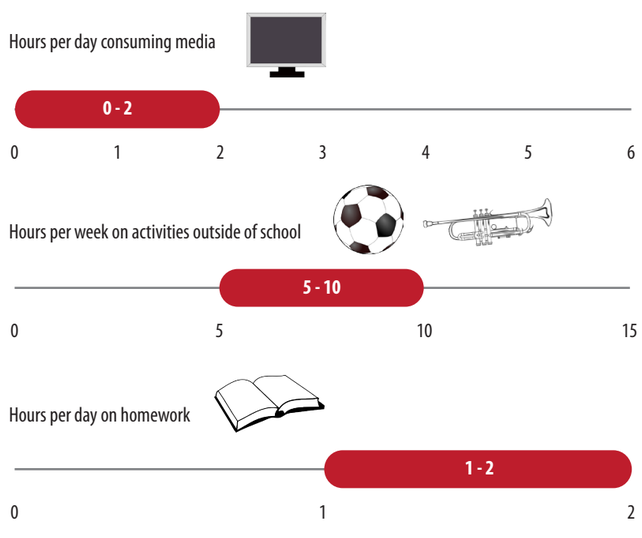
Computer in room

Stand-alone gaming system in room

Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 18 MAP

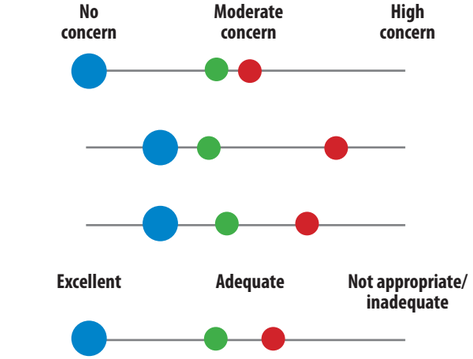
No Map Data

DEMOGRAPHICS

Age of Child: 11 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 1 sibling / 9 years old

MOBILITY FACTORS

When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.



Individual response

Low mobility group average (parents allow only back yard/front yard range)

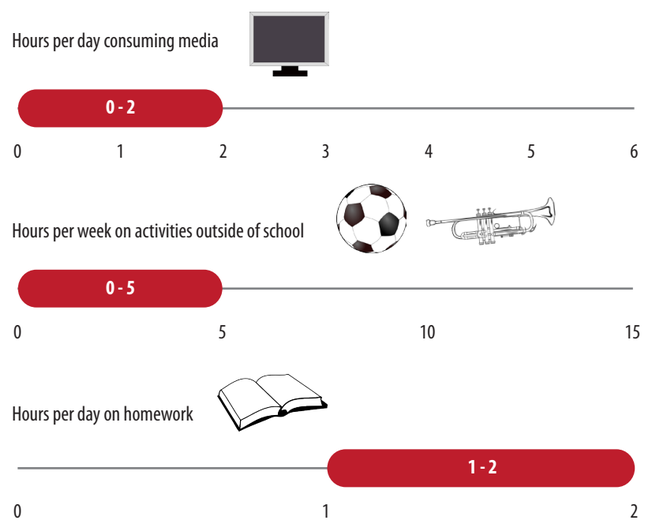
High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

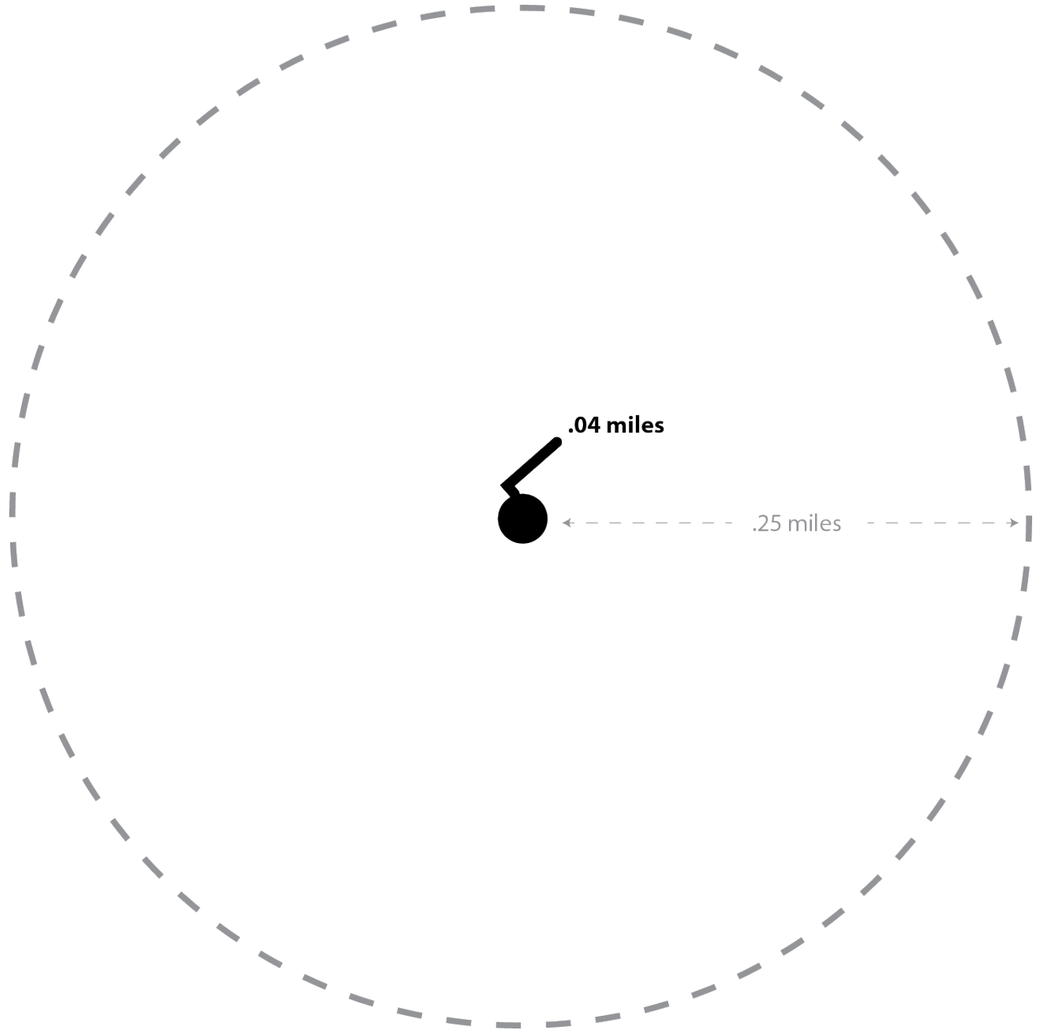
Does your child have any of the following?

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 19 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .04 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

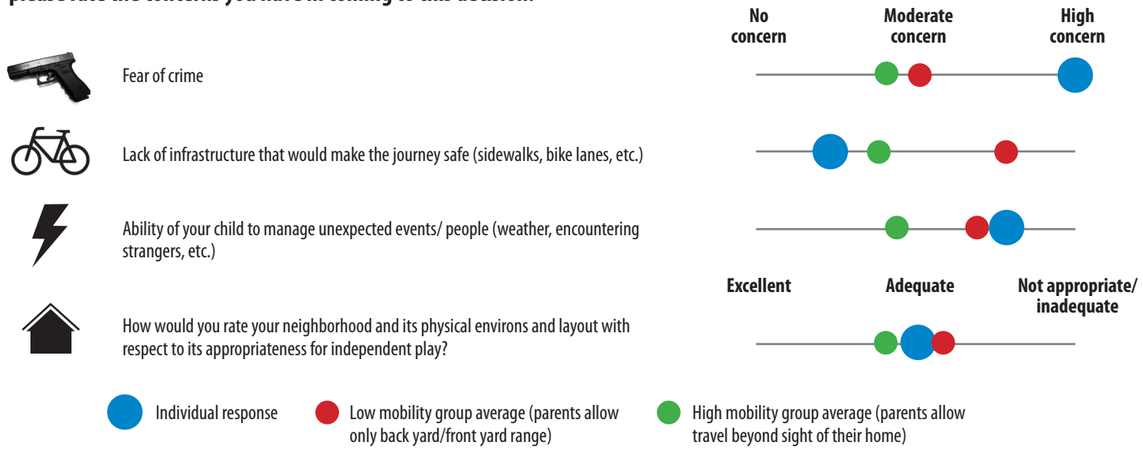
Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 11 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 1 sibling / 13 years old

MOBILITY FACTORS

When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

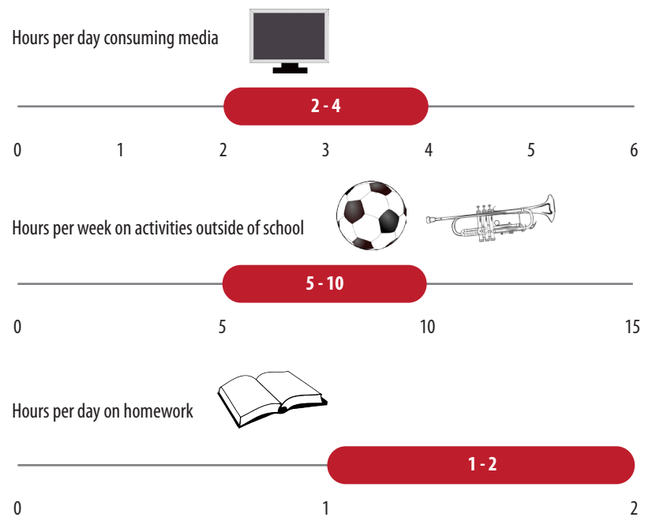


TECHNOLOGY USAGE

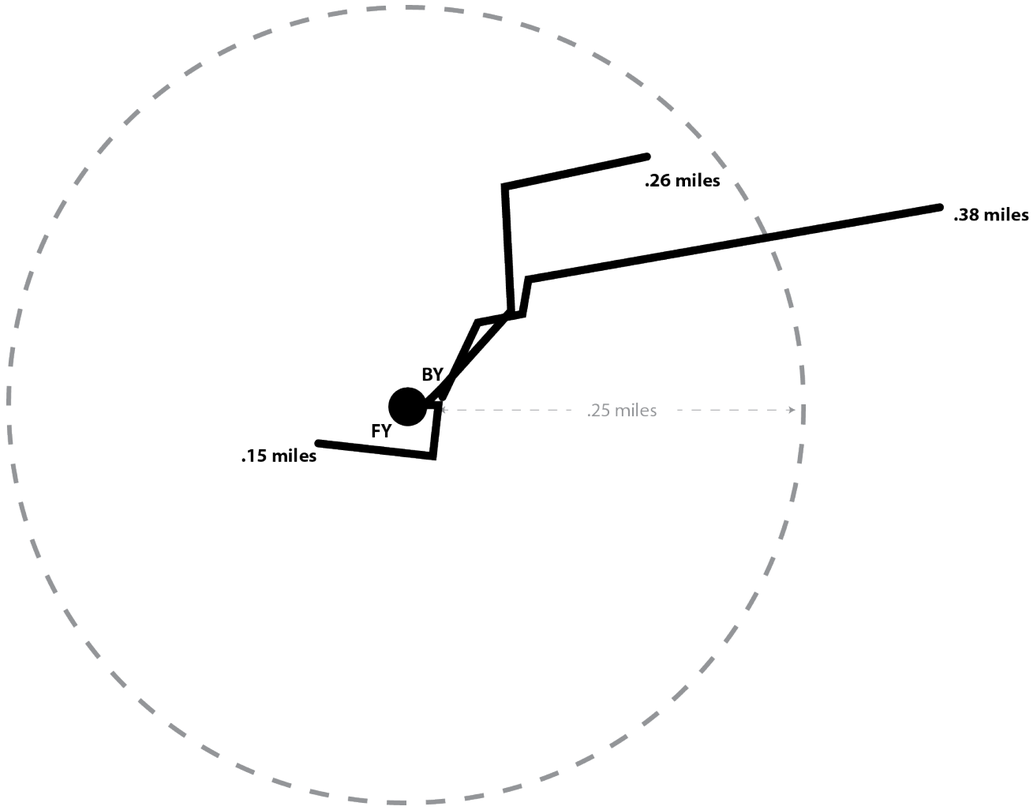
Does your child have any of the following?

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 20 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .26 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: Yes

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 1 sibling / 12 years old

MOBILITY FACTORS

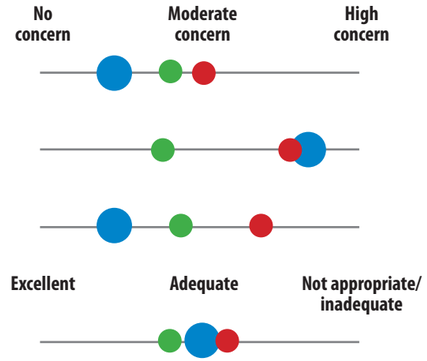
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

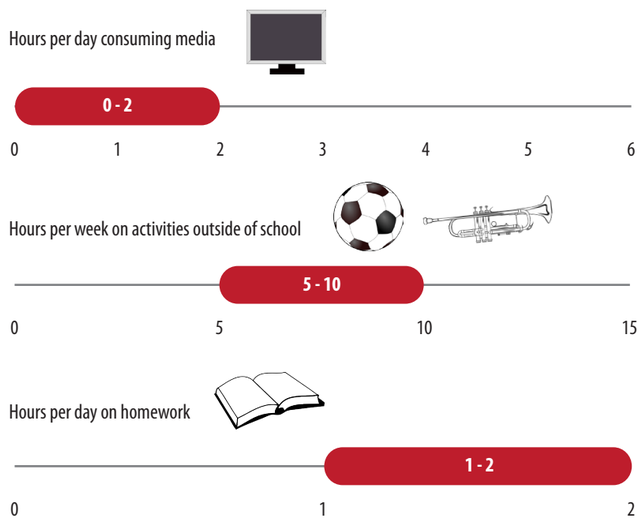
Computer in room

Stand-alone gaming system in room

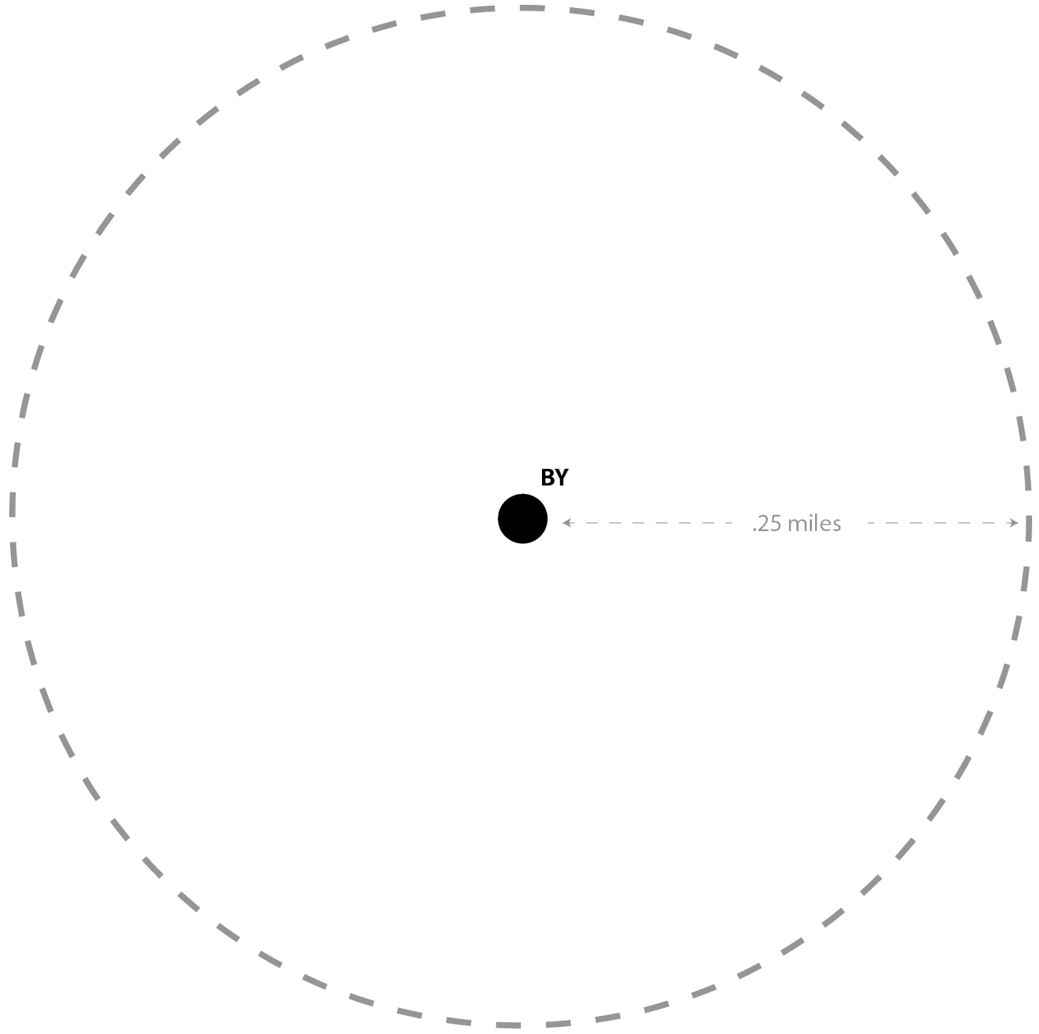
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 21 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .01 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

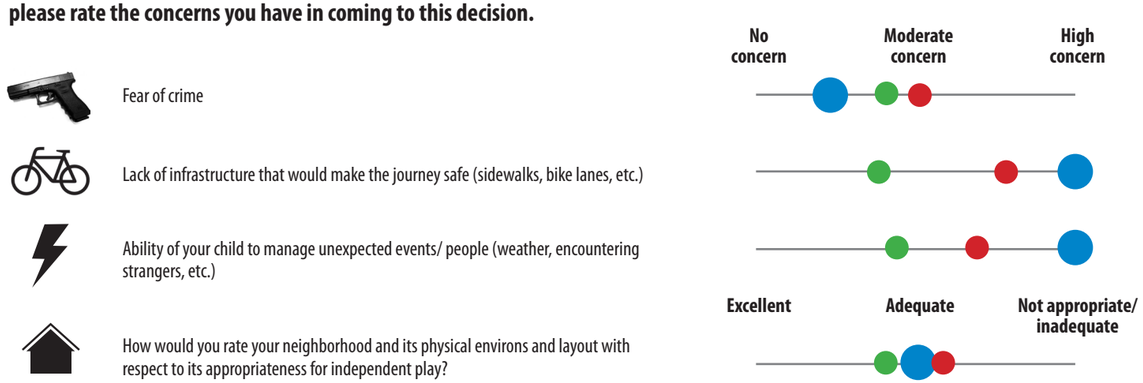
Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 11 | **Gender:** Female | **Race:** Asian | **Siblings:** None

MOBILITY FACTORS

When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

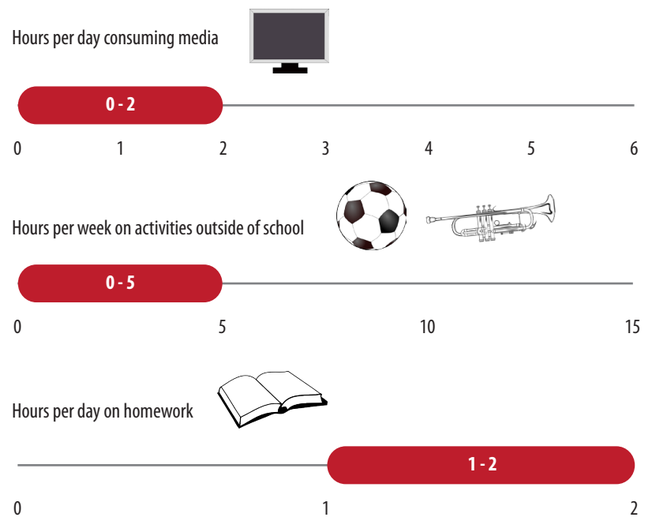


TECHNOLOGY USAGE

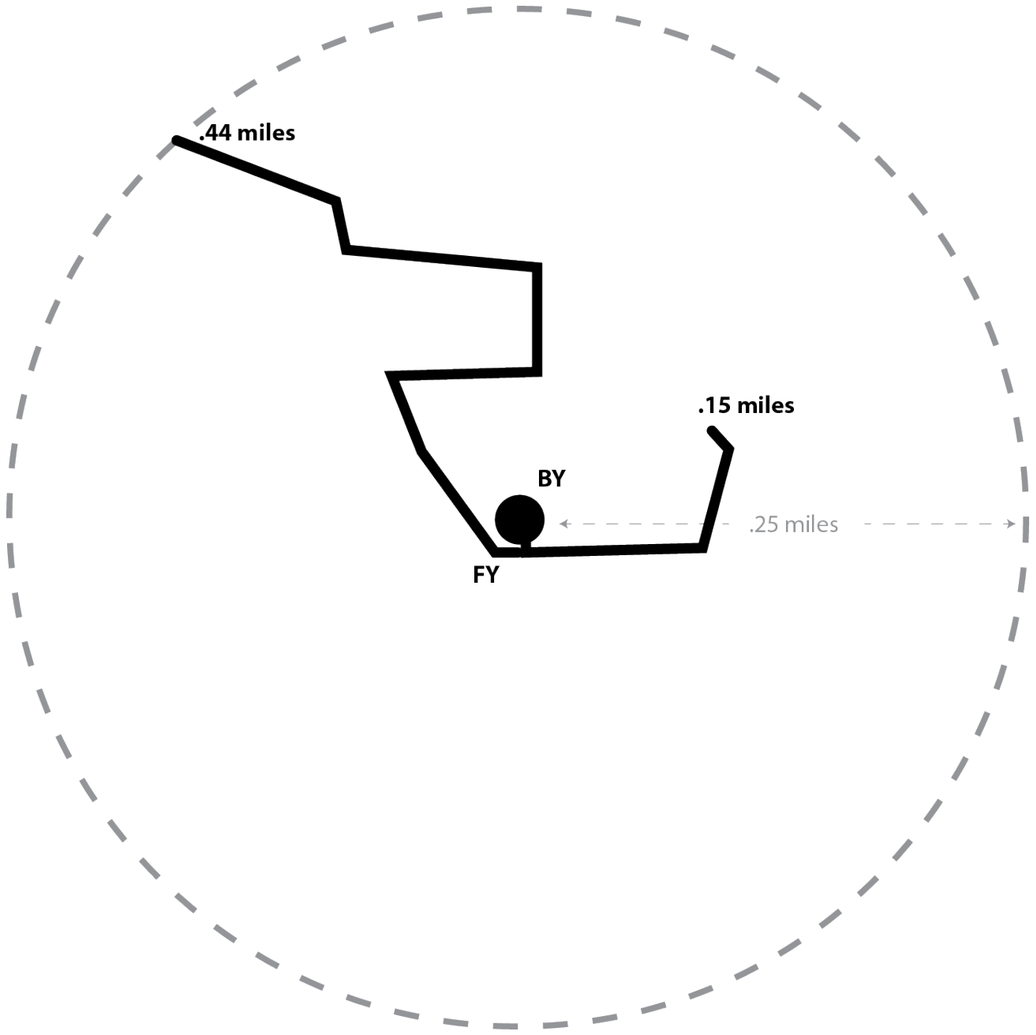
Does your child have any of the following?

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 22 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .26 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Excellent

Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 1 sibling / 13 years old

MOBILITY FACTORS

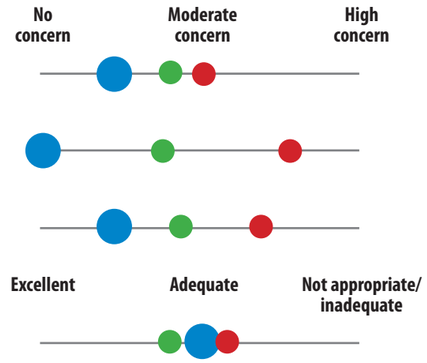
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

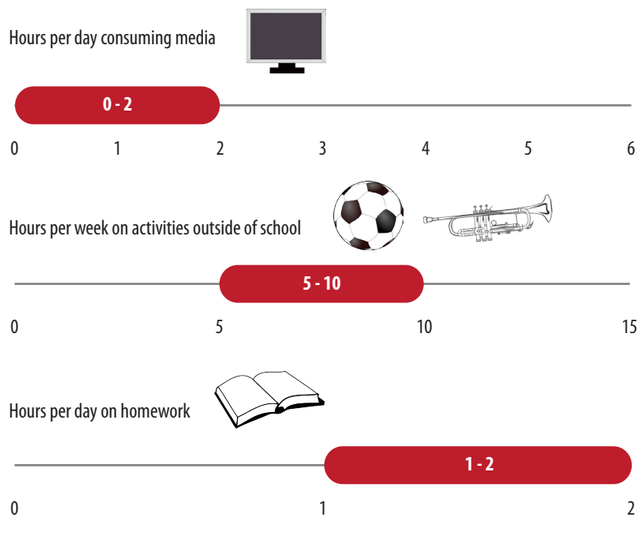
Computer in room

Stand-alone gaming system in room

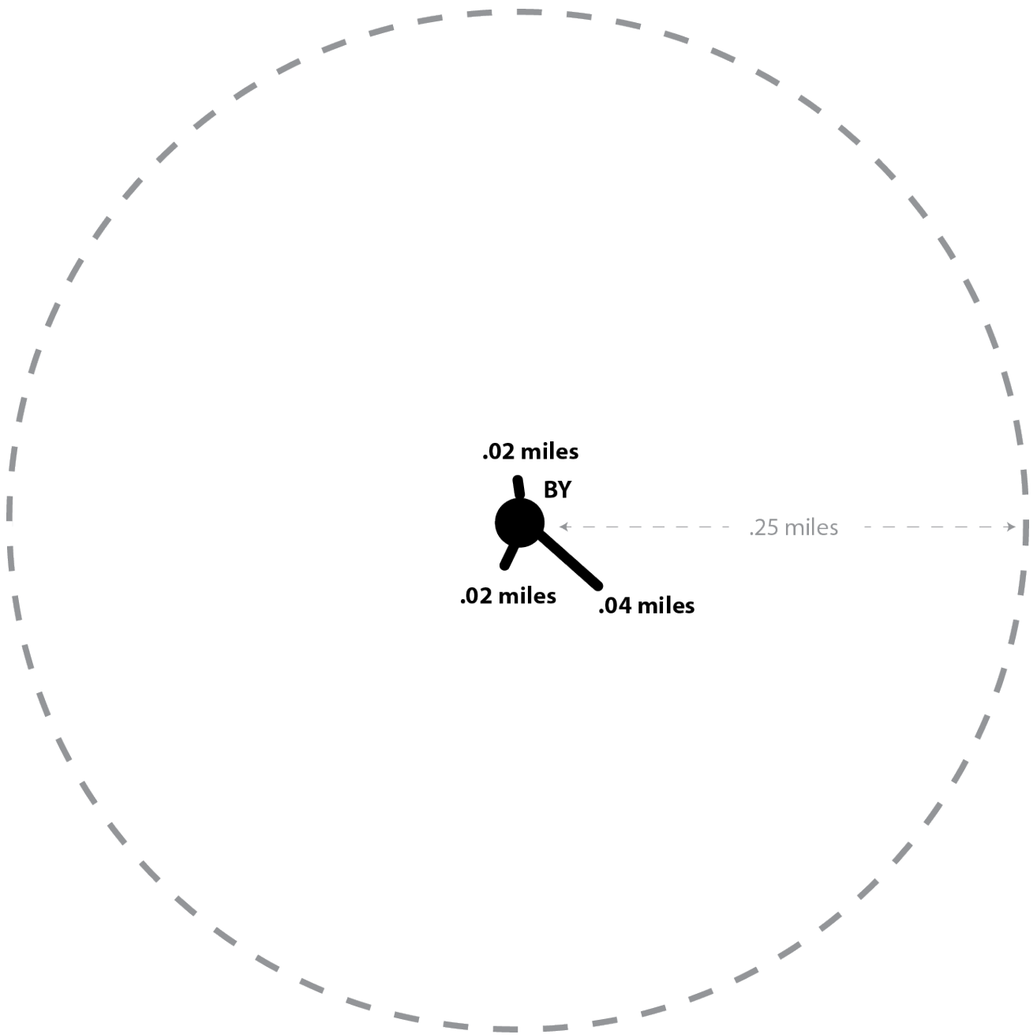
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 23 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .026 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 11 | **Gender:** Female | **Race:** Caucasian | **Siblings:** 2 siblings / 12 and 15 years old

MOBILITY FACTORS

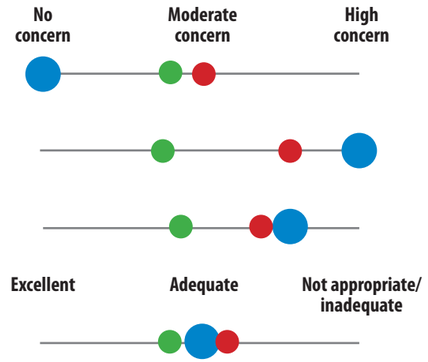
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

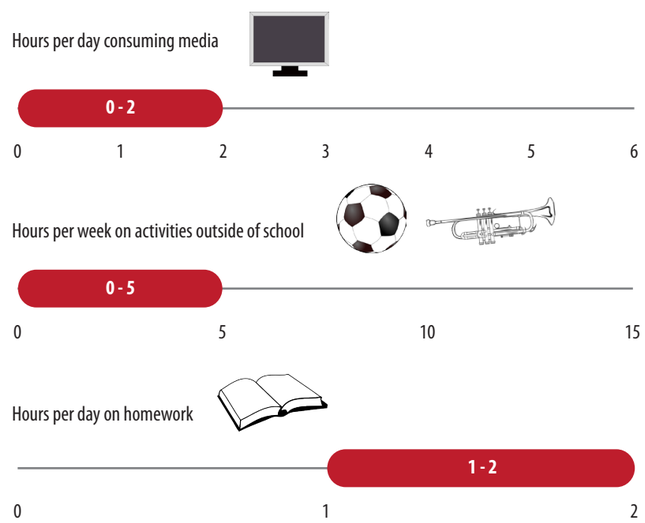
Computer in room

Stand-alone gaming system in room

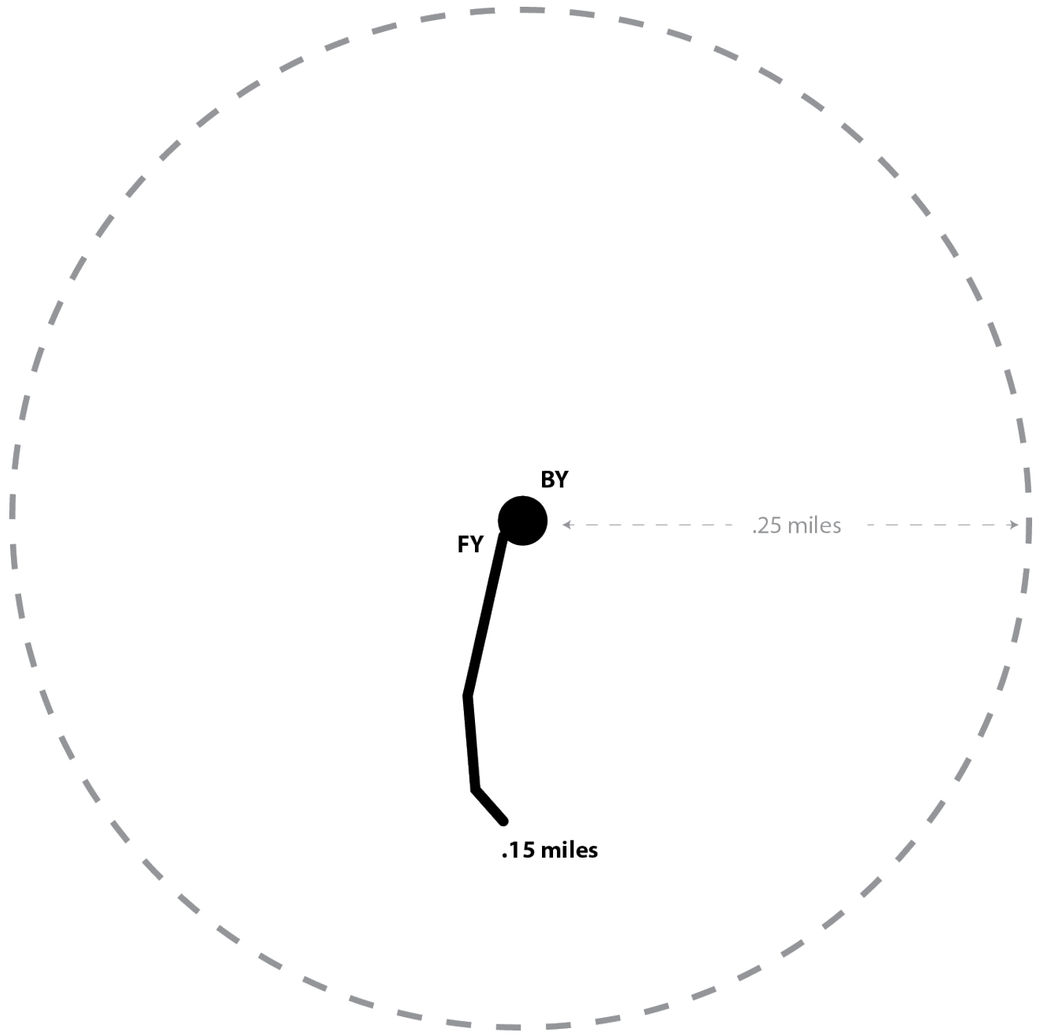
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 24 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .15 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 11 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 2 siblings / 7 and 9 years old

MOBILITY FACTORS

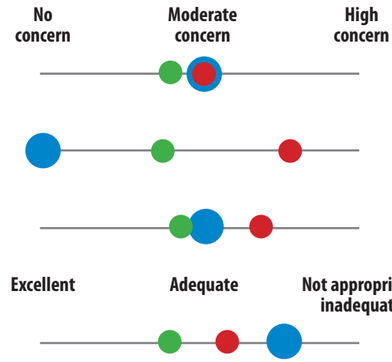
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

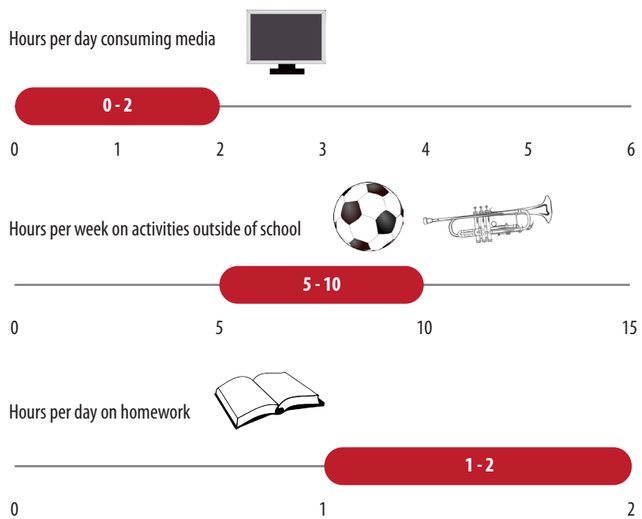
Computer in room

Stand-alone gaming system in room

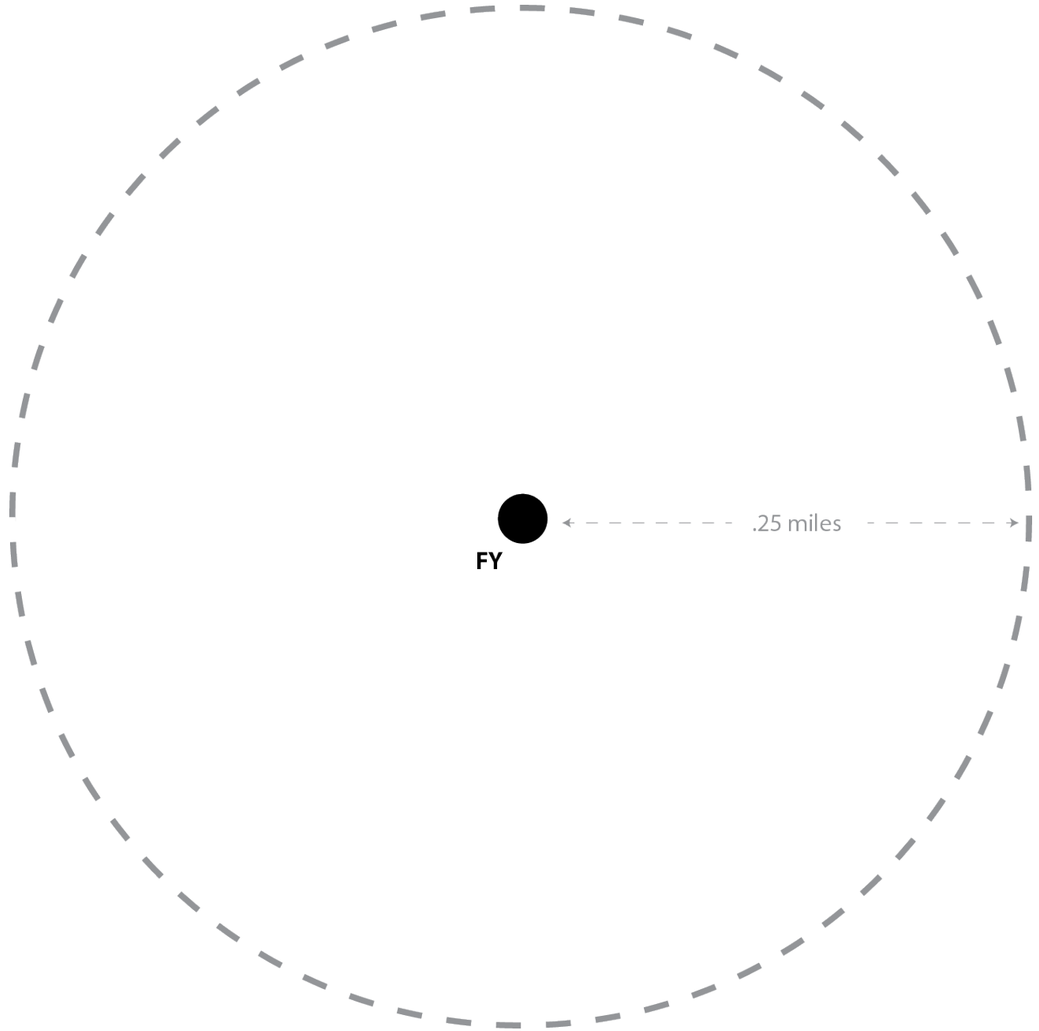
Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 25 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .01 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

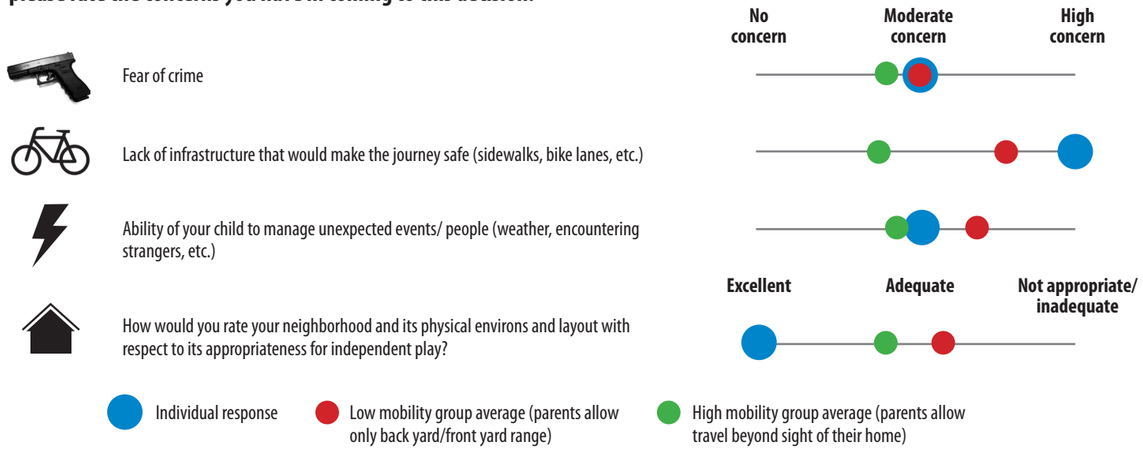
Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Female | **Race:** Caucasian | **Siblings:** 2 siblings / 19 and 24 years old

MOBILITY FACTORS

When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

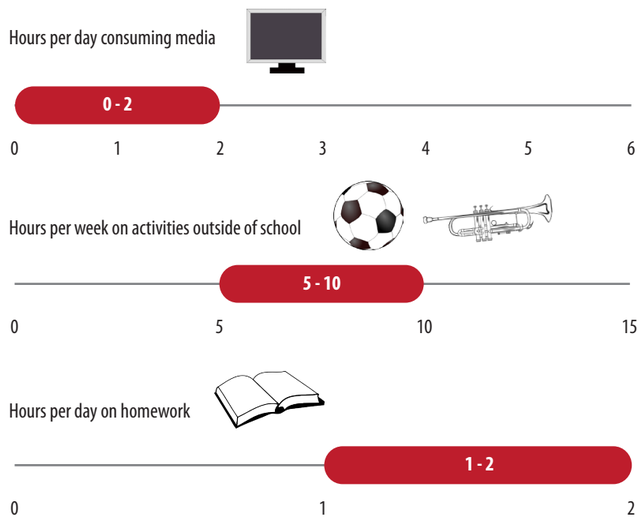


TECHNOLOGY USAGE

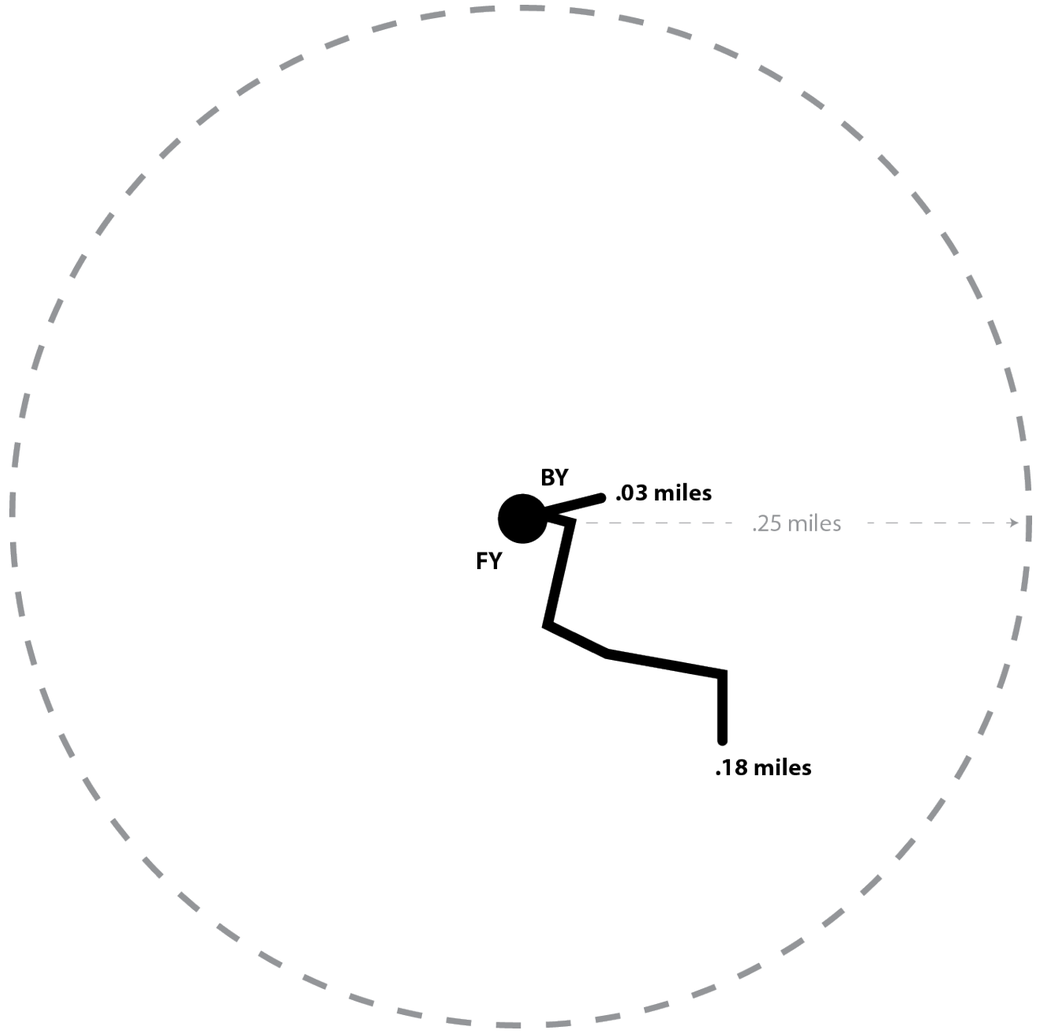
Does your child have any of the following?

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 26 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .10 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

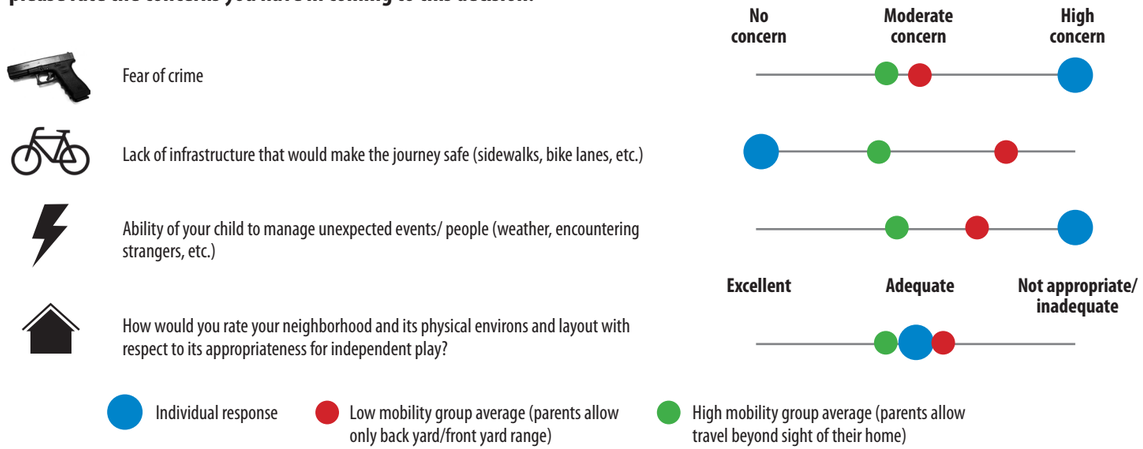
Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Female | **Race:** Caucasian | **Siblings:** 2 siblings / 15 and 16 years old

MOBILITY FACTORS

When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

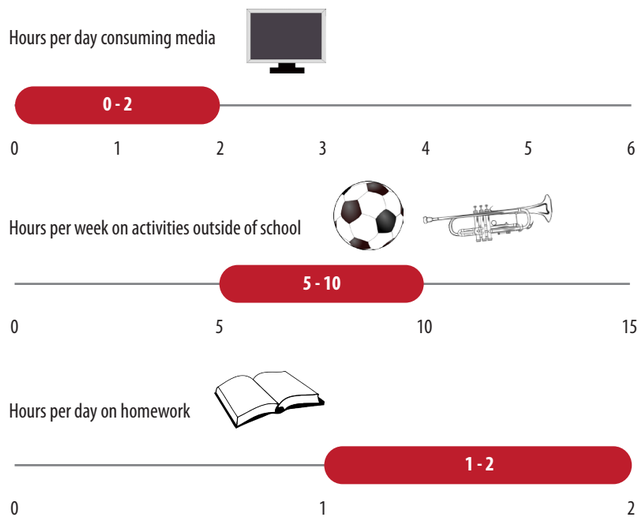


TECHNOLOGY USAGE

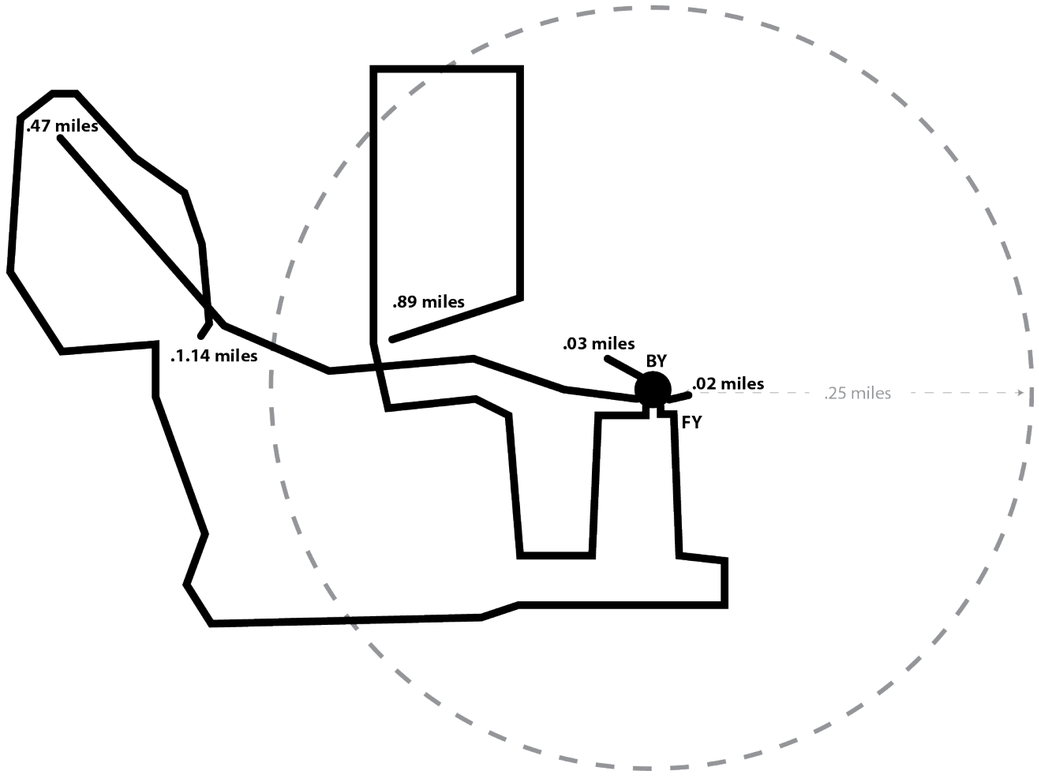
Does your child have any of the following?

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 27 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .54 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

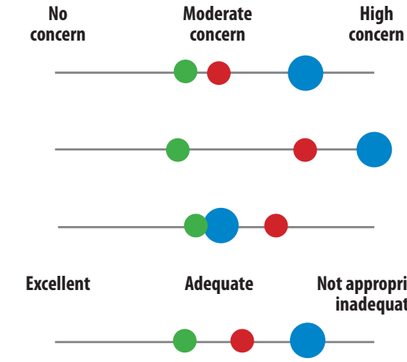
Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 11 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 2 siblings / 8 and 12 years old

MOBILITY FACTORS

When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.



Individual response

Low mobility group average (parents allow only back yard/front yard range)

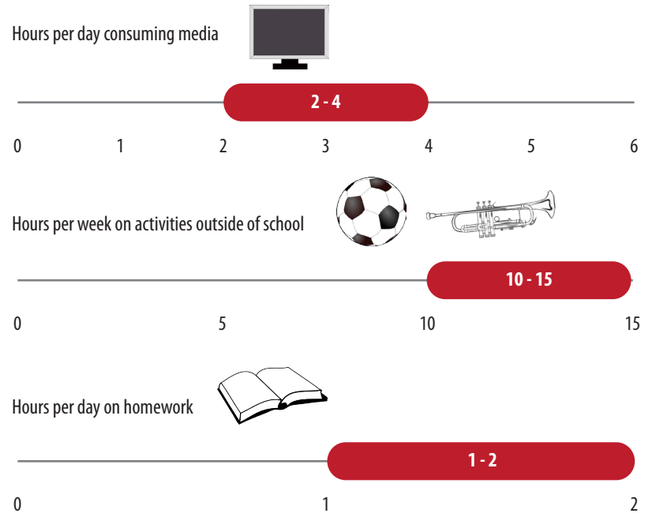
High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

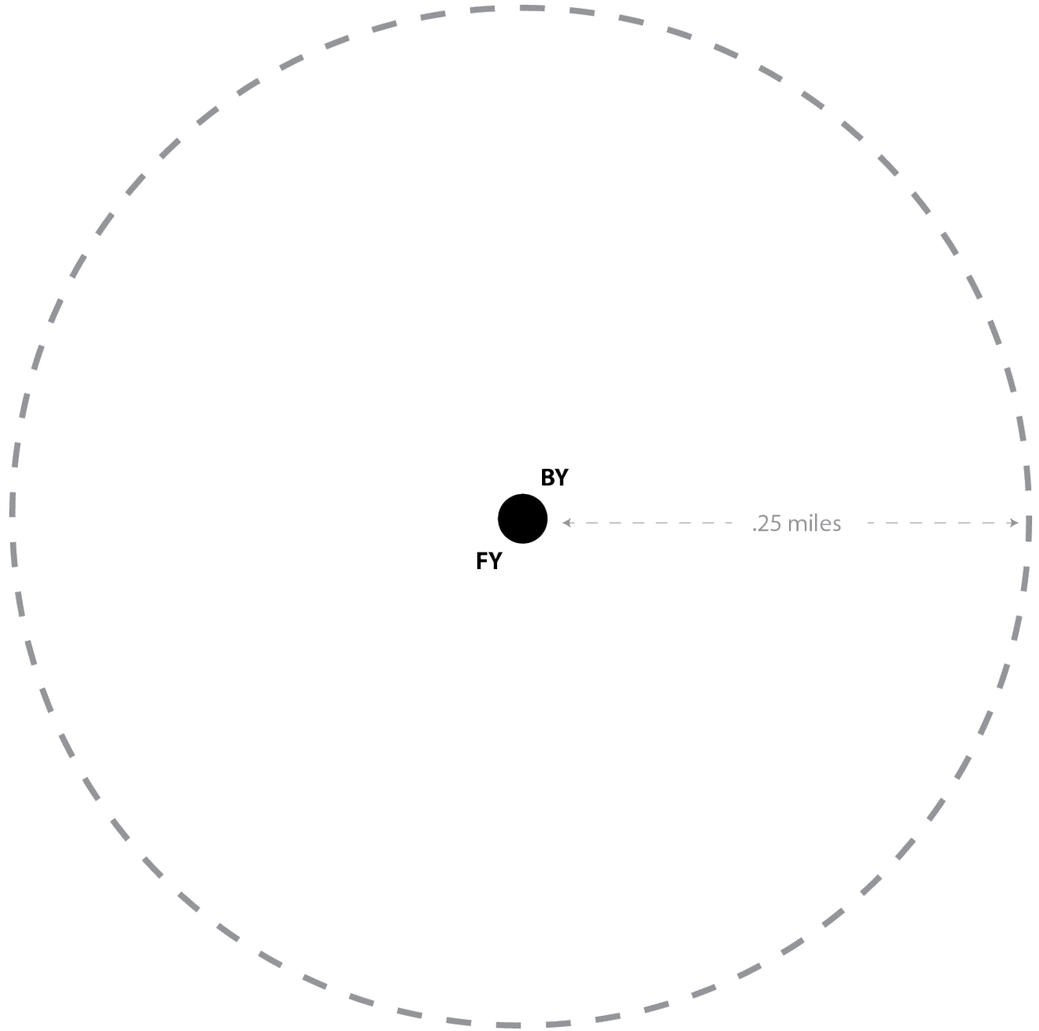
Does your child have any of the following?

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 28 MAP



Average Distance - All Respondents: .29 miles

Subject Average Distance: .01 miles

Neighborhood Type: Suburban - Medium Density

Park Access: Yes

Sidewalk Access: Poor

Store/Shop Access: No

DEMOGRAPHICS

Age of Child: 11 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 4 siblings / 3, 12, 13 and 20 years old

MOBILITY FACTORS

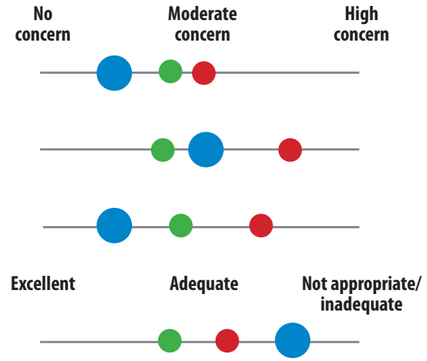
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

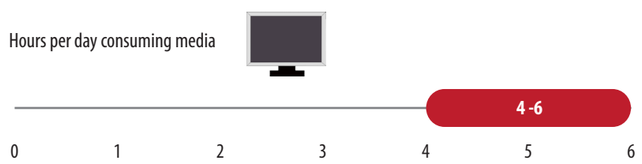
Computer in room

Stand-alone gaming system in room

Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 29 MAP

No Map Data

DEMOGRAPHICS

Age of Child: 11 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 1 sibling / 8 years old

MOBILITY FACTORS

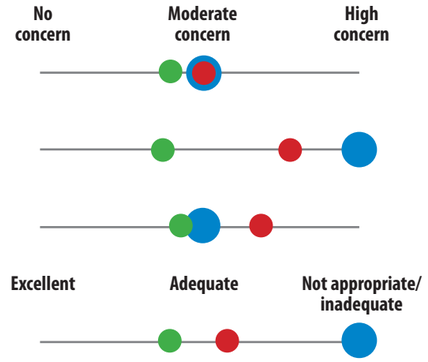
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

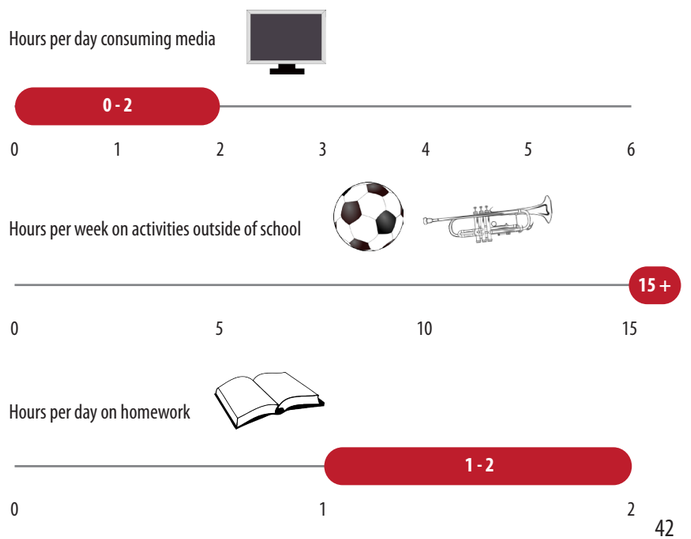
Computer in room

Stand-alone gaming system in room

Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



SUBJECT 30 MAP

No Map Data

DEMOGRAPHICS

Age of Child: 10 | **Gender:** Male | **Race:** Caucasian | **Siblings:** 2 siblings / 6 and 9 years old

MOBILITY FACTORS

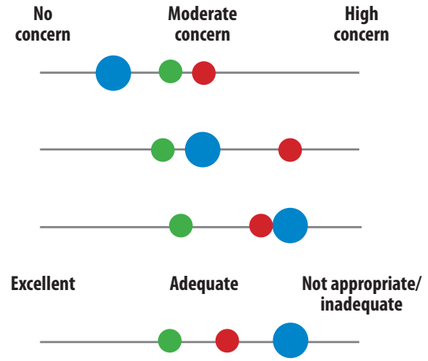
When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision.

Fear of crime

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes, etc.)

Ability of your child to manage unexpected events/ people (weather, encountering strangers, etc.)

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent play?



Individual response

Low mobility group average (parents allow only back yard/front yard range)

High mobility group average (parents allow travel beyond sight of their home)

TECHNOLOGY USAGE

Does your child have any of the following?

Television in room

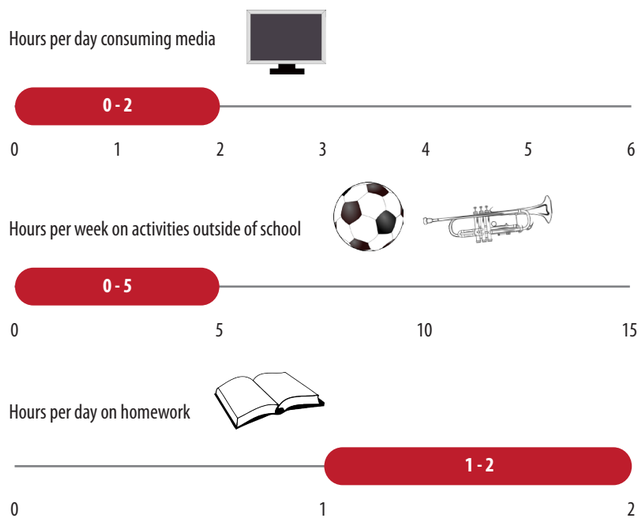
Computer in room

Stand-alone gaming system in room

Personal cell phone

SCHEDULING FACTORS

How much time does your child spend on the following activities?



Recommendations

There are several ways to that communities, neighborhoods and parents can increase child mobility and independent play. In essence, these changes fall into three categories: infrastructure, schools, and community building measures.

Infrastructure: Reclaiming the Neighborhood for the Child

As the number of children at play in the urban environment has decreased, the dangers involved in child play have increased. This creates a vicious cycle in which fewer children at play actually makes that play more dangerous, thereby decreasing future independent urban play. This interplay produces some strange statistics. Witness the fact that the pedestrian injury rate for children fell 29% between 2002 and 2007. Safe Kids worldwide attributes this not to a decrease in the danger associated with the street, but rather in a dramatic decline in the number of kids walking to school - a decline from 42% in 1969 to 16% in 2001.[23] It is possible to extrapolate that the injury rate may have actually increased for each individual child, since the overall number of children exposed to the street has declined more rapidly than the accident rate. A good example of this cycle can be found on the streets outside almost every American home. At one time, the street was a shared space but suburban street design, the type that dominates many American cities, including Tulsa, are not designed to be shared by pedestrians, whether they are adults or children.

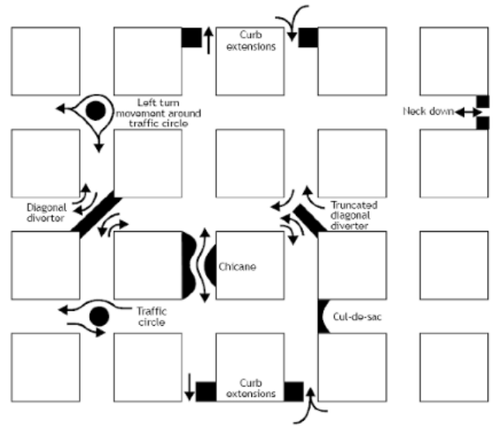
Cities can implement strategies that would allow for a more child-friendly streetscape, not just with respect to the movement of the child, but one that also allows for play in or near streets. This study suggests parents not only consider the infrastructure of their neighborhoods when they consider whether or not to allow independent outdoor play, but also that parents who limit outdoor free play and roaming do so, at least in part because they have concerns about the urban form's infrastructural appropriateness for child play. To address some of these concerns the following recommendations are made:

A) Sidewalks - While the parents in this study did not specifically single out a lack of sidewalks as a specific problem, sidewalks are an important part of a child's transportation infrastructure. Many American neighborhoods, including a substantial number in Tulsa, either have limited, or dysfunctional, sidewalk infrastructure. Simple regulatory changes such as requiring all new developments to have sidewalks and mandating that street rehabilitation projects, even non-arterial projects, include sidewalk construction and/or refurbishment as a part of the planning and budget processes would go far in addressing this problem.

(B)Traffic Calming - Existing suburban streets are, in many ways, hostile to the child and to the concept of shared space. The streets are designed to move traffic onto major arterials, not as a space that can be used by everyone in the community, including those who do not possess a car. In these cases, the street exists as an impediment to independent child play. Cities and neighborhoods can implement traffic calming strategies as a way of making infrastructure more child-friendly.

Traffic calming strategies may be as simple as speed humps in a neighborhood, or they can be based on more complicated infrastructural changes such as traffic circles, chicanes, or neck downs. Calming can also be accomplished in more creative ways, such as street art that creates a desire by the driver to slow down and take a look at the street in front of him or her. All of these methods, though, are designed to slow traffic making independent play safer for children.

http://sustainableflatbush.org/2007/05/25/community-traffic-calming-coming-to-brooklyn/



http://www.fhwa.dot.gov/publications/research/safety/pedbike/05085/chapt20.cfm

http://www.mrsc.org/Publications/mrnews/mrnews0305.aspx

http://www.mrsc.org/Publications/mrnews/mrnews0305.aspx

RECOMMENDATIONS

Schools - Promoting Safe, Independent Travel to School

In the past children had an almost daily opportunity to be outside, with little adult supervision, when they walked or rode their bike to school. The evidence of the decline in this practice was mentioned previously in this report, but others have described this decline more precisely and its incumbent effects. The California Department of Transportation summarizes this situation in this way: "Thirty years ago, 60% of children living within a 2-mile radius of a school walked or bicycled to school. Today, that number has dropped to less than 15%. Roughly 25% commute by school bus, and well over half are driven to or from school in vehicles. And back then, 5% of children between the ages of 6 and 11 were considered to be overweight or obese. Today, that number has climbed to 20%. These statistics point to a rise in preventable childhood diseases, worsening air quality and congestion around schools, and missed opportunities for children to grow into self reliant, independent adults."[24]

The reasons for this decline in the number of children walking or riding bikes to school are numerous but the three most important factors seem to be a fear of crime, a lack of access to nearby schools, and traffic congestion. Parents in this study reported a moderate concern regarding crime when they make decisions about whether or not to let their children play outside unattended. Despite the fact that the majority of their neighborhoods are very safe by almost any standard, they still internalize this fear of crime as was described in the background portion of this study. As one author noted: "Over the past one hundred and forty years, Americans have experienced regular periods of intense public anxiety about child abduction. These episodes of alarm often have as much to do with how Americans perceive or characterize child abduction as with the actual number of such crimes. These perceptions influence what the public imagines is most dangerous to children in the society. Although most citizens today are rarely aware of it, their own fears and responses to child kidnapping have been shaped over the years by a series of historical developments: especially the growth of modern media, changes in family patterns and expectations for parents, and structures of policing and law. When parents today express horror (and fascination) about the terrible ordeal of Jaycee Dugard, they are following a tradition that began in 1874."[25] Essentially, we tend to take what we hear on the news and apply that situation to our own situation which can inspire a great deal of fear, whether that fear is rational or not.

The data on child abductions, however, do not validate our fears. Most national studies find that only around 100 children are kidnapped every year by strangers - resulting in 50 deaths. While this is a terrible tragedy for those families that are unfortunate enough to have to deal with it, it by no means represents a clear danger to the average child.[26] Further, the actual incidence of all violent crimes against children has dropped from 80 cases per 1000 children in 1973 to 50 cases per 1000 children in 2003.[27] In summary, when considering crime, it is much safer to walk to school today than it was 30 years ago.

Another factor affecting bike ridership and walking to school has to do with distance. Over time more and more children are located more than one mile from school - one mile being considered the maximum radius for ease of journey for the child. The CDC summarizes this trend: "Between 1968 and 2001, the number of schools decreased by about 1,000 (70,879 to 69,697) while the number of students increased by over 2 million (NCES, 2003). Consequently, fewer students live within a mile of their school as compared to earlier times. This results in larger schools located further from home than small neighborhood schools for many school children. Hence, distance to school has changed over time.[28] The increase in distance from schools is a much more difficult problem to address because it involves longterm demographic changes regarding where students live. Further, building new neighborhood schools is on the decline in most cities including Tulsa, where it was recently announced that more schools would be closing placing, even more children outside of this one mile radius.

Finally, the problem of traffic represents a 'chicken and egg' problem. As the number of students being driven to school increases, there is more traffic and thus a greater theoretical chance of accidents involving student pedestrians. However, at the same time, there are fewer students walking or riding bikes to school, so it may be that the danger is actually lessened because there are fewer children that could potentially be involved in these types of accidents. So when evaluating data that suggests that child pedestrian/auto accidents declined by 51% between 1987 and 2000, or a similar decline of 60% in child bicyclists/auto accident injuries in the same time period, one is left wondering if this because there are not as many children who could be involved in this type of accident, or if an increase in overall traffic has simply not resulted in more accidents overall.[29] In any case it seems difficult to argue that less traffic around schools would result in higher pedestrian deaths among children. Further, there is also a great deal of evidence that indicates that children are much more likely to be injured in the car rather than outside of it.[30]

With all of this said, addressing the problem of fewer children walking or riding bikes to school is not hopeless. There are programs that attempt to do just that and this study recommends further promotion and implementation of these methods.

Safe Routes to School - The Safe Routes to School program is a federal program designed to help communities reduce traffic congestion around schools by providing safe lanes of travel for children. The program provides funds to help local communities implement projects and activities that promote safe child travel to and from school.[31] This program is already in over 10,000 schools nationwide. The program encourages all of the following approaches that encourage independent child access to schools:

SafeRoutes
National Center for Safe Routes to School

- Walkability and bikeability audits of the safety of streets around schools
- Programs to improve sidewalk conditions near schools
- Use of traffic calming devices to slow traffic and give pedestrians priority
- Programs that educate children on walking and biking safely, and challenge them to walk or bike often
- "Walking school buses" in which one or two parents or volunteers escort a group of children on the walk to school
- Increased traffic enforcement around schools
- School construction that includes renovation and improvement of existing schools, and locating new schools to reduce walking hazards and avoid major traffic threats
- Cooperation among school officials, law enforcement officials, and transportation planners.[32]

RECOMMENDATIONS

Community Building - Playborhoods

One idea that many parents and neighborhoods may find useful is the concept of the Playborhood. Playborhoods aren't really a "thing" as much as they are an idea. Mike Lanza, the founder of this group, founded the website and the movement as a part of his desire to foster independent play environments for his two children. Like many parents, he had a vision of childhood that did not coincide with the reality he saw everyday around him. His family and many of their neighbors decided to join together to create an urban environment that fostered independent play and community building.[33]

Although Mike Lanza came up with the idea behind Playborhoods, the principles behind them are quite familiar as they are rooted in social structures that have existed for decades. Put simply, Playborhoods seek to reconstruct now defunct neighborhood social structures. They include the parent who watches the kids as they roam the streets and landscapes of the neighborhood or as they walk to school. Although this is a form of supervision, it is 'loose supervision' in that it does not seek to direct the activity of children, rather it provides a watchful eye in case of emergencies, accidents, or disputes that cannot be resolved by the children themselves. While this form of supervision has not entirely disappeared, it has no doubt been hindered by the fact that more and more parents both work away from home. That being said, a reduction in the potential number of neighborhood parents does not mean they have entirely disappeared, it simply means that parents have to network in order to facilitate this form of supervision. A commitment by neighborhoods to facilitate this form of community is not one that will grow by accident. However, in many ways, with the rise of social networking, it may be easier to encourage the growth of this type of movement than it was in past generations. For example, a neighborhood Facebook page can promote community building by allowing contact between neighbors that otherwise might not occur.

Some of the more popular measures promoted through concepts like playborhoods include:

- Block Parties - events designed to increase contact between neighbors that may evolve into more opportunities for independent outdoor play.
- Promotion of activities like trick-or treating - Many neighborhoods have virtually lost this form of child play. Better relationships with neighbors may help promote a return to this kind of activity.
- Preserving and Promoting Parks and Open Spaces - Parents who are aware of the value of these types of spaces want to defend them. Increased contact among neighbors can promote a common awareness of the value of these spaces and increase their use by community members.
- Loose Supervision of Independent Play - Neighbors who know each other are more likely to allow their children to roam among different places in the community. Kids generally need some supervision, and as trust grows among community members, they may be more likely to allow independent child play with one or two houses acting as a sort of 'home base'.
- Neighborhood Watches - Again, this idea revolves around the concept of knowing the members of the community. If parents are concerned about crime, they can start a neighborhood watch program that seeks to make the neighborhood more safe.
- Promotion of Street Play - Neighborhoods that value independent play can promote it by simply being more cautious when driving and by changing their concept of the street from a place only for cars to a shared space that is appropriate for certain types of child play. In the past, children used the street for games and other activities and this acted as a natural traffic calming system.

These are only a few of the ideas associated with a concept like Playborhoods, but there are many more that grow organically from increased communication among neighbors. Active neighborhoods do not have to be a thing of the past, but it does take effort to make them grow. An organized effort, such as the Playborhood, can give communities a set of principles around which to organize these efforts.

RECOMMENDATIONS

Suggestions for Future Research

This study, as many do, revealed as much about the deficiencies of the design of the study protocol as it did data that is immediately useful. Therefore, it is important to make suggestions about how future researchers can correct these design flaws on subsequent studies dealing with childhood range and child-friendly neighborhood design.

This study's population was rather heterogenous (50 students, mostly in the same age and income cohort), but this was an anticipated issue. The study conducted was more of a pilot study than a comprehensive analysis. Limited time, budget and manpower was the root of the decision to keep the study small, but future researchers would be well-served to select a larger, more heterogenous population, that controlled for variables like income, age and location. For example, many researchers have posited the idea that lower income children have more range because they are less scheduled and more loosely supervised by busy parents, many of whom cannot afford child-care or after school clubs. One more note about this study's population: all of these children attend a private school that does not allow children to ride bikes or walk to school. Additionally, many of the children live a great distance from the school. Obviously, even though the trend is well-established regarding the decline in the numbers of children who ride bikes or walk to school, a larger study would capture some of these children, and it likely would have an effect on the results.

The journaling component of this study was a good idea, but the results did not turn out as hoped. With so few subjects being asked to perform a rather arduous task - detailing their movements for a full week, the numbers of journals returned was simply not adequate in order to draw conclusions. Another issue that arose with respect to the journals was that when students left a map blank for a specific day of the study there was no way to determine whether or not they did not go anywhere on that day, or if they had simply forgotten to mark their routes. Some journals were returned completely blank for everyday. While it seems hard to believe that these children did not play outside at least once during the week, and though it would have furthered the initial biases of the researcher, there was simply no way to draw a valid conclusion as to their actions. Determining the daily movements of the children is, however, essential to achieving workable data because it would allow conclusions to be made about the frequency, rather than simply the range, of the trips. To the extent that time and scheduling are factors in the ability of children to play outside, it is important to get an accurate accounting of the child's daily movements.

The questions regarding time spent on outside activities, homework and consumption of media were also plagued by a design flaw. The questions allowed parents to answer with ranges (such as 0-2 hours or 2-4 hours). The problem with this design is that there is a significant difference between 0 and 2 hours. In one case, the child is spending no time, for example, on homework. In another case the child is spending 2 hours on homework each night. When looked at over the course of a week, there is an even larger difference between 0 hours and 10 hours. This issue probably could have been anticipated, but it was a deliberate choice. The study was trying to avoid having parents leave a blank, or simply mark an answer without fully considering their choice. It was thought that by offering ranges, parents may feel more comfortable assigning an accurate answer, instead of answering with a random number that either felt right, or was based on what they thought the researcher might want to hear.

Finally, future studies should ask parents about their own childhood ranges and the amount of time they spent outside as children. It would be interesting to compare the ranges of parents and their children for a number of reasons. Most important, though, it would allow for analysis of how parental attitudes regarding independent play might be correlated to their own experiences as a child. Put simply, this would allow researchers to ask the question: does the range of the child relate to the range of their parent? As with any study, there is a limit to how much a researcher can expect in terms of the time involved to complete the study, but in this researcher's estimation it would have been a useful question to ask.

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APPENDIX - A

Parent Survey

University of Oklahoma
Urban Design Studio
Independent Play Survey - Parent Section

Age of Child _____ Participant ID # _____

This portion of the study is to be completed by the parent or guardian.

Please answer the following questions by circling the choice that best characterizes your child's experiences/circumstances. You may refuse to answer any question by not marking an answer.

Technology Usage Survey

1. Does your child have a television in his/her room?

   YES NO

2. Does your child have a computer in his/her room?

   YES NO

3. Does your child have a stand-alone gaming system (Wii, Playstation, etc…) in his/her room?

   YES NO

4. Does you child have a personal cell phone?

   YES NO

5. How much time do you estimate that your child spends consuming electronic media each day? (Electronic media includes television, gaming systems, and computer/internet usage) (This number should be cumulative)

   0 - 2 hour 2 - 4 hours 4 - 6 hours 6 or more

GO TO NEXT PAGE

Scheduling Survey

1. Does your child participate in formal learning, athletic, or artistic activities outside of school hours? (These activities may include formal tutoring, private lessons, outside athletic teams and/or organizations such as Boy or Girl Scouts)

   YES NO

2. If the answer to Question #1 is yes, how many hours per week do they participate in these activities?

   0 - 5 hours 5 - 10 hours 10 - 15 hours More than 15 hours

3. Please list the activities your child participates in outside of school hours.

4. How many hours of homework does your child have on a typical weeknight?

   0 - 1 hour 1 - 2 hours 2 - 3 hours More than 3 hours

There is one additional page to complete in this study. It is titled Child Mobility. **GO TO NEXT PAGE**

APPENDIX - A

Parent Survey

Child Mobility Section

Please place a mark next to the places that your child is allowed to travel to by foot or non-motorized vehicle (bike, skateboard, scooter) without direct supervision from an adult:

_____ Backyard
_____ Front yard
_____ Friend's house on your immediate block (within sight)
_____ Friend's house on a different block (not within sight)
_____ Local store or business (less than 1 mile away)
_____ Neighborhood park or natural area (less than ½ mile away)
_____ A location(s) beyond one mile away (Please specify location below)

_____

_____

When considering whether or not to let your child travel without you (on foot or other non-motorized form of transportation), please rate the concerns you have in coming to this decision using the scales below:

Circle a number that reflects your level of concern:

1 = No Concern 3 = Moderate Level of Concern 5 = High Level of Concern

Fear of crime:
1 2 3 4 5

Lack of infrastructure that would make the journey safe (sidewalks, bike lanes etc):
1 2 3 4 5

Ability of your child to manage unexpected events/people (weather, encountering strangers):
1 2 3 4 5

How would you rate your neighborhood and its physical environs and layout with respect to its appropriateness for independent child play (you should consider all relevant aspects including physical layout, traffic, access to nearby friends, recreation facilities, and crime)?

Use the scale below to answer this question:
1 = Excellent 3 = Adequate 5 = Not appropriate/Inadequate
1 2 3 4 5

SURVEY IS COMPLETE - PLEASE PLACE IN THE LARGE ENVELOPE

APPENDIX - A

Child Survey

University of Oklahoma
Urban Design Studio
Independent Play Survey - Child Mapping Section

Age of Child _____ Participant ID # _____

This portion of the study is to be completed by the child. Parents may assist the child when necessary.

Starting on Date and ending on Date please mark on the map on the back of this page each time you leave your house without an adult. These trips should be either on foot or by non-motorized vehicle (bicycle, scooter, skateboard etc…)

Draw a line to the place(s) you went. There is no need to draw a line indicating you returned from that destination.

This line should reflect the direction and route you traveled as accurately as you can remember.

Circle the place(s) you went and label them in this way:
F- Friends House
P - Park
N - Natural area (creek, pond, woods etc…)
Y - Your back or front yard
S - Store or business

Please try to mark the map each time you make a trip without an adult using some form of non-motorized transportation. If you don't mark a trip and remember it later, simply mark the trip before completing the study.

Data Sheet

University of Oklahoma
Urban Design Studio
Independent Play Survey - Data Sheet

In order to conduct the mapping portion of this study, the researcher(s) need the physical address of the residence where the child primarily resides.

After you complete this form your child will be given a map of your neighborhood. Your child will then mark the trips they make, unaccompanied by an adult using non-motorized means of transportation, over the course a specific one-week period.

Age of Child _____ Gender _____ Race _____

Siblings _____ (Number of and ages)

Address where the child primarily resides:

Street name and house number: _____

City: _____

Zip Code: _____

Parents email address: _____

For use by researcher:

Participant ID # _____

APPENDIX - A

Permission Form

Dear Fifth Grade Parent,

You and your child, along with the remainder of the 5th grade class at Holland Hall, have been selected to participate in a study on independent play. This research is being conducted by Chris Cook (principal investigator), a member of the faculty in the Upper School at Holland Hall, as a part of his professional project for a Masters in Architectural Urban Studies at the University of Oklahoma.

This study has two parts: one component completed by the parents and the other to be completed by the child. The parent survey will ask questions about your child's use of technology, their scheduled time, and your attitudes regarding unsupervised outdoor play. It will take less than 15 minutes to complete.

The child survey will ask students to mark the route and destination of any unsupervised journeys they make outside of your home on a map for one week. The child will be given seven copies of a map of your neighborhood and they will mark the trips they take outside and unsupervised on a new map each day. They will not be required to make any trips for this survey, only to mark the trips they would normally take. For example, if they walk to a friend's house to play, they would mark the route they took to the friend's house. If they go outside to play in the backyard, they would mark a short line to the back of your house.

Given the potentially sensitive nature of this information, it is important that you know that your child's maps will not be revealed to anyone outside of the principal investigator. Once the maps are received, the lines they marked will be drawn into a mapping program and the specific locations will be deleted. What will remain is a set of lines with no reference to neighborhoods, locations, or your child's identity. The original copies of the maps will then be shredded.

It is also important that you know that this study, although approved by the Headmaster and the Head of the Middle School, is not sponsored by Holland Hall. Your child's grade, standing in class, or status in the school will not be affected if you decide not to allow him or her to participate.

This mailing includes a parent consent form, a permission slip for your child, a data sheet, and the parent survey portion of the study. If you decide to participate, and to allow your child's participation, simply complete the consent form, the permission slip, the data sheet and the parent survey and return it to your child's homeroom teacher in the large envelope in which you received this letter. Your child's survey materials will be delivered and given to him/her in their homeroom at school.

If you have any questions please feel free to contact me in any of the following ways:
Home Ph. 918-743-8024 Work Ph. 918-481-1111 ext 749 Email: cook4381@ou.edu

Thank you for your time and consideration of this matter.

Sincerely,

Chris Cook

Permission Form - continued

_____ *(Child's name-printed)* has my permission to participate in the study on Independent Play conducted through the University of Oklahoma. I understand that his/her participation is voluntary and that he/she can discontinue participation at any time. I also understand that his/her participation, or lack of participation, in this study will not affect his/her standing or grade as a student at Holland Hall School.

_____
Parent/Guardian Name - Printed

_____ _____
Parent/Guardian Name - Signature Date

PLEASE PLACE THIS PERMISSION SLIP INSIDE THE LARGE ENVELOPE WITH THE PARENT SURVEY, CONSENT FORM, DATA SHEET AND COMPLETED PARENT SURVEY

APPENDIX - A

Parent Consent Form

701-A-1

University of Oklahoma
Institutional Review Board
Informed Consent to Participate in a Research Study

Project Title: Independent Play and the Urban Environment
Principal Investigator: Chris Cook
Department: College of Architecture - Graduate Urban Studies @ OU Tulsa

You are being asked to volunteer for this research study. This study is being conducted at OU - Tulsa. You were selected as a possible participant because you are the parent of a fifth grade child at Holland Hall School.

Please read this form and ask any questions that you may have before agreeing to take part in this study.

Purpose of the Research Study
The purpose of this study is:

To evaluate how children spend their unstructured, or free, time. Some of the variables we will be looking at include: time spent using technology, extracurricular activities, and the attitudes of the parents regarding supervision. Further, the study seeks to gather information on the "range" of children. In other words, how far are children allowed to roam without direct adult supervision?

Number of Participants
Up to 50 children will take part in this study. The parents of the children involved in the study will also be asked to participate.

Procedures
If you agree to be in this study, you will be asked to do the following:

Give permission for child to participate in this study and consent for your participation in the study. Complete a written survey that will take less than 30 minutes and monitor the completion of a mapping survey that will be completed by your child over the course of one week. You will also be asked to send the results of this survey to the primary investigator by mail.

Length of Participation
The written survey you will complete should take no more than 10-15 minutes. Your child will work on the mapping section of the survey over the course of one week, but the time needed to complete the map should be less than 30 minutes over the course of the week.

Revised 01/09/2009 Page 1 of 3

Parent Consent Form - continued

701-A-1

This study has the following risks:
The parent and child survey presents a risk to the privacy of the individuals involved if the data were to be misused or if it were to fall into the hands of unauthorized persons. Further, children will not be asked to alter their routine in any way. All of the personal data obtained in this study such as the physical address of your child and any other data obtained that may be used to specifically identify you or your child will not be a part of any publicly presented material. Further, any material that could be used to specifically identify you or your child will be destroyed either electronically or by shredding paper copies immediately after the data has been translated into its final presentation format.

Benefits of being in the study are
None

Confidentiality
In published reports, there will be no information included that will make it possible to identify you or your child. Research records will be stored securely and only approved researchers will have access to the records.

There are organizations that may inspect and/or copy your research records for quality assurance and data analysis. These organizations include the OU Institutional Review Board.

Compensation
You will not be reimbursed for you time and participation in this study

Voluntary Nature of the Study
Participation in this study is voluntary. If you withdraw or decline participation, you will not be penalized or lose benefits or services unrelated to the study. If you decide to participate, you may decline to answer any question and may choose to withdraw at any time.

Contacts and Questions
If you have concerns or complaints about the research, the researcher(s) conducting this study can be contacted at:

Chris Cook (principal investigator)
918 - 743-8024
cook4381@ou.edu

Shawn Schaefer (faculty sponsor @ OU-Tulsa)
918-660-3493
sschaefer@ou.edu

Contact the researcher(s) if you have questions or if you have experienced a researchrelated injury.

Revised 01/09/2009 Page 2 of 3

APPENDIX - A

Parent Consent Form - continued

701-A-1

If you have any questions about your rights as a research participant, concerns, or complaints about the research and wish to talk to someone other than individuals on the research team or if you cannot reach the research team, you may contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405-325-8110 or irb@ou.edu.

You will be given a copy of this information to keep for your records. If you are not given a copy of this consent form, please request one.

Statement of Consent

I have read the above information. If I have questions, I have asked them and have received satisfactory answers. I consent to participate in the study.

Signature Date

Revised 01/09/2009 Page 3 of 3

APPENDIX - A

Child Assent Form

University of Oklahoma
Institutional Review Board
Assent to Participate in a Research Study

Project Title: Independent Play and the Urban Environment
Principal Investigator: Chris Cook
Department: College of Architecture - Urban Studies Graduate Program @ OU Tulsa

For children 7-12 years old

Why are we meeting with you?

We want to tell you about something we are doing called a research study. A research study is when researchers collect a lot of information to learn more about something. Researchers will ask you some questions. After we tell you more about it, we will ask if you'd like to be in this study or not.

Why are we doing this study?

This study is being done so we can learn more about how you spend your free time. We also want to see where you are able to go without your parents and without being driven by an adult.

There will be up to fifty other children in this study.

What will happen to you if you are in this study?

If you agree to be in this study:

You will complete a map that describes where you travel to without parents and without being driven. You may also have to help your parents complete their part of the study.

How long will you be in the study?

You will be collecting data for this study for about 1 week. Other than filling out the required map, nothing about your daily routine will change

What bad things might happen to you if you are in the study?

Child Assent Form - continued

You will not be asked to do anything different than you normally do on a normal day. The only thing you will have to do is mark on a map where you go without your parents and without being driven. It is possible that if someone other than the researchers were to get this information that your privacy might be in danger, but we will do lots of things to make sure this does not happen.

What good things might happen to you if you are in the study?

You won't get anything for doing this study, but you may learn more about yourself and your habits. You will also be helping researchers understand children and what they do a little better.

Do you have any questions?

You can ask questions any time. You can ask now. You can ask later. You can talk to me or you can talk to someone else.

Do you have to be in this study?

No, you don't. No one will be mad at you if you don't want to do this. If you don't want to be in this study, just tell us. Or if you do want to be in the study, tell us that. And, remember, you can say yes now and change your mind later. It's up to you.

None of these decisions will affect your grade in class in any way.

Your Mom, Dad, or guardian will also have to give permission for you to be in this study.

If you don't want to be in this study, just tell us.
If you want to be in this study, just tell us.
The person who talks to you will give you a copy of this form to keep.

SIGNATURE OF PERSON CONDUCTING ASSENT DISCUSSION
I have explained the study to _____(*print name of child here*) in language he/she can understand, and the child has agreed to be in the study.

_____ _____
Signature of Child Date

_____ _____
Signature of Person Conducting Assent Discussion Date

_____
Name of Person Conducting Assent Discussion (*print*)

APPENDIX - B

Statisitcal Analysis of Parental Attitudes

MOBILITY GROUP	CRIME	RANK	INFRA	RANK	MATURITY	RANK
HIGH	1	1.5	1	4	3	12
HIGH	2	7	1	4	3	12
HIGH	2	7	1	4	3	12
HIGH	3	15	1	4	2	2.5
HIGH	3	15	1	4	3	12
HIGH	3	15	1	4	3	12
HIGH	1	1.5	2	8	2	2.5
HIGH	2	7	3	10.5	4	18.5
HIGH	5	21.5	3	10.5	3	12
HIGH	2	7	4	13.5	2	2.5
HIGH	2	7	5	19	3	12
HIGH	4	19	5	19	3	12
HIGH	5	21.5	5	19	3	12
LOW	3	15	1	4	4	18.5
LOW	2	7	3	10.5	4	18.5
LOW	3	15	3	10.5	3	12
LOW	3	15	4	13.5	5	22
LOW	2	7	5	19	2	2.5
LOW	2	7	5	19	4	18.5
LOW	2	7	5	19	5	22
LOW	3	15	5	19	5	22
LOW	5	21.5	5	19	3	12
LOW	5	21.5	5	19	3	12
Mean Rank	u=	120		120		120
P-Value	p=	0.25		0.0219		0.0138
Sd of Ranks	sd=	16.124		16.124515		16.12
Sum of Ranks	R=	97.5		152.5		155.5
Z-score of R1	z=	-1.395		2.0155644		2.202233250