Navigating the Literature

Step 2: Key Concepts & Keywords
Identify key concepts in your research question

Use relevant subject- and discipline-related terminology
Research literature is a documented conversation
Meaning is contextual
Dissect your research question into who, what, when, where, how, why?
Breaking it down

Identify the primary concept – what is the core idea of your topic?

Identify secondary concepts – what ideas focus or narrow your primary concept to a specific group, situation, time, or place?
What factors of a built environment have an impact on the activity levels of residents?
Concept Map

- built environment
  - aesthetics
  - parks
  - walkability
  - recreation facilities
  - grocery stores
  - walking/cycling facilities
  - convenience stores
  - restaurants

- activity levels
  - walking
  - cycling
  - other recreation
  - running
  - other
Where can I find the expert terminology?
In search of causality: a systematic review of the relationship between the built environment and physical activity among adults

Gavin R McCormack* and Alan Shiell

Abstract

Background: Empirical evidence suggests that an association between the built environment and physical activity exists. This evidence is mostly derived from cross-sectional studies that do not account for other causal explanations such as neighborhood self-selection. Experimental and quasi-experimental designs can be used to isolate the effect of the built environment on physical activity, but in their absence, statistical techniques that adjust for neighborhood self-selection can be used with cross-sectional data. Previous reviews examining the built environment-physical activity relationship have not differentiated among findings based on study design. To deal with self-selection, we synthesized evidence regarding the relationship between objective measures of the built environment and physical activity by including in our review: 1) cross-sectional studies that adjust for neighborhood self-selection and 2) quasi-experiments.

Method: In September 2010, we searched for English-language studies on built environments and physical activity from all available years in health, leisure, transportation, social sciences, and geographical databases. Twenty cross-sectional and 13 quasi-experimental studies published between 1996 and 2010 were included in the review.

Results: Most associations between the built environment and physical activity were in the expected direction or null. Land use mix, connectivity and population density and overall neighborhood design were however, important determinants of physical activity. The built environment was more likely to be associated with transportation walking compared with other types of physical activity including recreational walking. Three studies found an attenuation in associations between built environment characteristics and physical activity after accounting for neighborhood self-selection.

Conclusion: More quasi-experiments that examine a broader range of environmental attributes in relation to context-specific physical activity and that measure changes in the built environment, neighborhood preferences and their effect on physical activity are needed.

Keywords: urban form, causation, neighborhood self-selection, walkability, physical activity.
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and the extent of the environmental modification undertaken and the type of physical activity behavior evaluated.

**Neighborhood parks and open space**

Meurs and Haaijer[31] examined changes in the neighborhood environment among movers and non-movers during a nine year period and found that increases in the quantity of parks, green strips, and playgrounds to built environment positively associated walking, but not cycling, trips among movers. Cohen et al. [38] studied the impact of neighborhood park upgrades on park use among elderly. They found that park use and exercise increased as a result of the upgrades (i.e., new benches, field improvements, landscape, and picnic areas, playgrounds) although time park users did increase.

**Traffic-related characteristics**

Cao et al. [48] found a cross-sectional association between reductions in traffic volume and monthly frequency of walking to the store, but not strolling, in the neighborhood; however, no association was found in another study examining changes in weekly walking and cycling trips after participants moved to a street with traffic calming and 30 km/h zones [31].

**Associations between the built environment and physical activity**

**Street and pedestrian connectivity**

Three studies found positive associations between connectivity and physical activity. Cao et al. [48] found that walking to the store inside the neighborhood during the past month was positively associated with pedestrian connections between the street and stores in a commercial street (i.e., pedestrian entrances). Similarly, Boarnet et al. [58] found that the number of intersections within a census block was positively associated with distance...
Conclusions

LHD delivery of family planning and prenatal care by LHDs appears related to reductions in Black–White mortality disparities. The focusing of these services on specific populations of need and through ongoing assessment and comprehensive community services may, at least in part, be the mechanisms that underlie these disparity reductions. Targeted MCH programs are needed that specifically focus on Black mortality rates and that can assure a reduction in disparities and not just overall mortality [35, 36].

Implications of this study suggest the importance of certain MCH services for reducing Black–White mortality disparities. As particularly significant cuts are being made to MCH programs and service delivery by LHDs [12], our findings underscore the need for research with a long-term trajectory to effectively measure more specific outcomes of these services and to determine what mechanisms in the provision of these MCH services provided by LHDs are the elements that appear to have the greatest relationship to disparities. In addition, more detailed information regarding the provision of service, besides presence or absence, will help further understand the relation of these mechanisms to desired outcomes. Sweeping changes to MCH services that impact these services without preserving or transitioning these seemingly important elements of service could further negatively impact disparities.

Acknowledgments Funding support was provided from Pfizer Inc., AstraZeneca, and the National Institutes of Health.

References


<table>
<thead>
<tr>
<th>Concepts</th>
<th>Primary Concept</th>
<th>Secondary Concepts</th>
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<tbody>
<tr>
<td></td>
<td>Built environment</td>
<td>Physical activity</td>
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<td></td>
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<td>Recreation</td>
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<td></td>
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<td>Physical health</td>
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<tr>
<td>Keywords + Synonyms</td>
<td>sidewalks, walkability, grocery stores, parks, retail, safety, urban/rural, neighborhood, land use</td>
<td>destination walking, recreational activities, recreational walking, cycling, running, jogging</td>
</tr>
<tr>
<td>Subject Terms + Synonyms</td>
<td>(covered in the next tutorial)</td>
<td></td>
</tr>
<tr>
<td>Related Terms</td>
<td>traffic, traffic accidents, public transportation, connectivity, income, education</td>
<td>frequency, distance, weather</td>
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Research literature is a documented conversation
You should know...

1. Access to databases & collections
   • University Library (ulib.iupui.edu)
   • Medical Library (library.medicine.iu.edu)

2. Interlibrary Loan
   • Never pay for access to full-text!

3. Your librarians
   • Heather Coates @ University Library
   • Beth Whipple @ Ruth Lilly Medical Library

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Slide 1: Welcome to the second tutorial in this series. Once you have an initial research question, the next step is to identify the key concepts and keywords to use in your literature search.

Slide 2: After watching this tutorial, you should be able to identify the key concepts in your research question and find relevant public health terminology.

Slide 3: There are a couple of things you should know before you start translating your research question into a search strategy. First, it might be helpful to think about the research literature as a documented conversation, similar to a texting transcript. The research literature is mostly made up of journal articles and books, but also includes white papers, reports, blogs, and other information distributed on the web. As you know, not all information on the web is created equally; we’ll go through evaluating the quality of information in another tutorial.

Slide 4: The second thing to remember is that meaning is contextual. The terminology used in the literature to describe ideas differs depending on the discipline. One of the things you will need to learn to be successful is that terminology, along with how to identify new concepts as they come up.

Slide 5: Identifying key concepts for your search means that you need to dissect your research question. Try breaking the question down into the who, what, when, where, how, and why.

Slide 6: Next, identify which of the answers to the “w” questions is most important. That’s your main topic. The others are secondary concepts to help you focus your research question into one that is answerable.

Slide 7: Let’s try an example. Say your research question is about the factors of a built environment that impact the activity levels of residents. Take a minute to identify the main topic and secondary topics of this question. Your answer might be different than mine, which is ok.

Slide 8: This slide shows two concepts and related terminology that I came up with. As I dissected the question, I chose built environment as the main topic, and activity levels as secondary. Because built environment is fairly broad, I wrote down specific aspects of the built environment that I think would impact activity levels. Similarly, since activity levels could be defined in several ways, I came up with a few types of activities that might be relevant. This is not comprehensive, but it’s a good place to start.

Slide 9: Now that we have a better feel for our research question, it’s time to start finding the expert terminology. The language used by the practitioners and researchers who study these areas.
Slide 10: Within a journal article, there are several good places to look that don’t require you to read the entire article. Typically on the first page are the title and abstract. See if you can find terms in this example that are relevant to our research question.

Slide 11: Some journals ask authors to supply keywords. If these are provided, they are typically in the abstract or just before the introduction.

Slide 12: Other good places to look within the body of the article are the section headings. If those aren’t helpful or there aren’t very many of them, try skimming the first and last sentences of paragraphs.

Slide 13: Finally, the conclusion is supposed to provide a concise summary of the evidence and findings. This is another excellent place to look for terminology.

Slide 14: Skimming through 5-7 articles is usually enough to identify commonly used terminology and see where there are differences. This isn’t always true, so be prepared to look at 10-15 if necessary. Once you have a list of terminology gathered, the next step is to map out the key concepts for your question and the related terms. A sample table based on the question I dissected earlier is provided here. Now it’s your turn to try this out.

Slide 15: As we wrap up, just remember, research literature is just a documented conversation, even though it has very specific practices and standards. The more you search and read it, the more familiar it will become.

Slide 16: Research in higher ed has shown us that the most successful students tend to use the library more, not because they’re smarter, but because they ask for help when they need it. So, as always, we’re here to help!