

Movement-Based Programs in U.S. and Canadian Public Libraries: Evidence of Impacts from an Exploratory Survey

Noah Lenstra

Volume 12, numéro 4, 2017

URI : <https://id.erudit.org/iderudit/1104286ar>

DOI : <https://doi.org/10.18438/B8166D>

[Aller au sommaire du numéro](#)

Éditeur(s)

University of Alberta Library

ISSN

1715-720X (numérique)

[Découvrir la revue](#)

Citer cet article

Lenstra, N. (2017). Movement-Based Programs in U.S. and Canadian Public Libraries: Evidence of Impacts from an Exploratory Survey. *Evidence Based Library and Information Practice*, 12(4), 214–232.
<https://doi.org/10.18438/B8166D>

Résumé de l'article

Objective – Past research suggests that approximately 20-30% of public libraries in the United States offer movement-based programs, that is programs that encourage, enable, or foster physical activity and physical fitness. Little is currently known about the impacts of these programs, in the U.S. or elsewhere. This study addresses the questions: what impacts do movement-based programs in public libraries have and what variations exist between urban and rural libraries.

Methods – The researcher aimed to explore these questions through an exploratory survey of U.S. and Canadian public libraries that have offered movement-based programs. The survey was completed by self-selecting staff from 1,157 public libraries in the U.S. and Canada during spring 2017. Analysis focuses on those portions of the survey that address the impacts of movement-based programs.

Results – Results show that throughout North America, public libraries provide movement-based programs for all age groups. The most consistently reported impact of these programs is new library users. Furthermore, on average respondents report that participation in these programs slightly exceeding their expectations. These facts may account for the finding that 95% of respondents report that they intend to continue offering movement-based programs at their libraries.

Conclusion – More research using a randomized survey design is needed to better assess this emerging programming area in a more comprehensive manner. Nonetheless, this study provides needed evidence on the impacts of movement-based programs in many North American public libraries. Hopefully this evidence will contribute to more conversations and research on the roles of public libraries in public health and wellness.

© Noah Lenstra, 2017



Ce document est protégé par la loi sur le droit d'auteur. L'utilisation des services d'Érudit (y compris la reproduction) est assujettie à sa politique d'utilisation que vous pouvez consulter en ligne.

<https://apropos.erudit.org/fr/usagers/politique-dutilisation/>

érudit

Cet article est diffusé et préservé par Érudit.

Érudit est un consortium interuniversitaire sans but lucratif composé de l'Université de Montréal, l'Université Laval et l'Université du Québec à Montréal. Il a pour mission la promotion et la valorisation de la recherche.

<https://www.erudit.org/fr/>



Research Article

Movement-Based Programs in U.S. and Canadian Public Libraries: Evidence of Impacts from an Exploratory Survey

Noah Lenstra
Assistant Professor
Library and Information Studies
School of Education
University of North Carolina at Greensboro
Greensboro, North Carolina, United States of America
Email: lenstra@uncg.edu

Received: 18 Apr. 2017

Accepted: 25 Oct. 2017

© 2017 Lenstra. This is an Open Access article distributed under the terms of the Creative Commons-Attribution-Noncommercial-Share Alike License 4.0 International (<http://creativecommons.org/licenses/by-nc-sa/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly attributed, not used for commercial purposes, and, if transformed, the resulting work is redistributed under the same or similar license to this one.

Abstract

Objective – Past research suggests that approximately 20-30% of public libraries in the United States offer movement-based programs, that is programs that encourage, enable, or foster physical activity and physical fitness. Little is currently known about the impacts of these programs, in the U.S. or elsewhere. This study addresses the questions: what impacts do movement-based programs in public libraries have and what variations exist between urban and rural libraries.

Methods – The researcher aimed to explore these questions through an exploratory survey of U.S. and Canadian public libraries that have offered movement-based programs. The survey was completed by self-selecting staff from 1,157 public libraries in the U.S. and Canada during spring 2017. Analysis focuses on those portions of the survey that address the impacts of movement-based programs.

Results – Results show that throughout North America, public libraries provide movement-based programs for all age groups. The most consistently reported impact of these programs is new library users. Furthermore, on average respondents report that participation in these programs slightly exceeding their expectations. These facts may account for the finding that 95%

of respondents report that they intend to continue offering movement-based programs at their libraries.

Conclusion – More research using a randomized survey design is needed to better assess this emerging programming area in a more comprehensive manner. Nonetheless, this study provides needed evidence on the impacts of movement-based programs in many North American public libraries. Hopefully this evidence will contribute to more conversations and research on the roles of public libraries in public health and wellness.

Introduction

This article analyzes an emerging type of public library program: movement-based programs. These are programs that encourage, enable, and foster physical activity and physical fitness (Lenstra, 2017). The literature review below shows that although there is both research-based evidence that approximately 20-30% of public libraries in the United States offer movement-based programs and anecdotal evidence that these programs are offered by public libraries elsewhere in the world, the impacts and outcomes of these programs have received little attention. This paper addresses this gap by presenting the results from a survey of North American public libraries that have offered movement-based programs.

Since little was known about the impacts of movement-based programs in public libraries, an exploratory survey design was used to address the following research questions: what impacts do movement-based programs in public libraries have and what variations exist between urban and rural libraries. Results show that these programs tend to bring new users into libraries, contribute to community building as well as to health and wellness. Most respondents (95%) state that they intend to continue offering movement-based programs at their public libraries. The article concludes by discussing how these results can productively inform our understanding of the evolving roles of public libraries in relation to public health and wellness.

Literature Review

The literature on movement-based programs in public libraries consists of three types: 1) the inclusion of questions about movement-based programs in surveys that focus on other facets of public librarianship, 2) case studies in which researchers were participants in the experimental cases analyzed, and 3) short, journalistic program reports shared in channels without peer-review or expectations of adherence to research frameworks. This literature shows that approximately 20-30% of U.S. public libraries have offered some form of movement-based programming. Furthermore, the case studies and journalistic reports suggest that these programs are also offered elsewhere around the globe. Although this literature suggests that movement-based programs tend to resonate with the populations served, no research has yet analyzed in detail what impacts movement-based programs have. As a result, the profession has yet to develop the means to communicate about physical activity in public libraries to policy makers, to broader stakeholders, or even to itself.

Survey-based research

Surveys conducted during the last decade find that movement-based programs have been offered in many public libraries throughout the United States. A randomized survey of gaming programs in public libraries (Nicholson, 2009, p. 206) found that “physical games” that require moving the body were the fourth most common type of gaming program offered in public

libraries. A follow-up study using convenience sampling that included school and academic libraries found that “the most popular game activity reported in 2006 gaming programs in libraries was the *Dance Dance Revolution* series, with 44% of library programs [reported] using this game” (Nicholson, 2009, p. 209).

More recently, two surveys conducted in 2014 attest to the presence of yoga and other fitness classes among the regular offerings of U.S. public libraries. Among other questions, the 2014 *Digital Inclusion Survey*, conducted by the Information Policy and Access Center at the University of Maryland, asked a random sample of public libraries a series of questions related to health programs and services they provided. One question asked respondents to state whether or not their libraries had during the past year offered “fitness classes (e.g., Zumba, Yoga, Tai Chi, other).” The survey found that approximately 22.7% of U.S. public libraries had offered some sort of fitness class (Bertot, Real, Lee, McDermott, & Jaeger, 2015, p. 62), with these types of programs most common in suburban libraries (33.9%) and least common in rural libraries (12.6%).

Another survey conducted in 2014 came to similar conclusions. The *Library Journal Programming Survey* asked a convenience sample of *Library Journal* subscribers working in public libraries to answer questions about yoga programs offered by their libraries. The survey found that 33% of respondents had offered yoga programs during the last twelve months (Library Journal, 2014). Of those public libraries that had offered yoga, 77% said they offered it for adults, 27% for teenagers, and 40% for children. Of these three surveys, only *Library Journal's* produced evidence on the impacts of movement-based programs: 23% of libraries with yoga programs said they had been very popular, 43% said popular, 28% said somewhat popular, and only 6% said not at all popular.

Case study research

The earliest research-based case study of movement-based programs in public libraries was conducted by two public librarians in the early 1990s. Public librarians in Connecticut collaborated with a local aerobics instructor to develop a series for teenaged girls that included fitness classes. Interviews with the teenaged participants revealed that the fitness components of the program led to increased self-esteem and increased interest in regular physical activity (Quatrella & Blossverren, 1994). It is unclear if the program continued after the trial study. In any case, approximately 15 years later a group of librarians from the Louisiana State University Health Sciences Center launched a series of programs for youth in local public libraries that included exercise instruction (Woodson, Timm, & Jones, 2011). By tracking the participants in these programs, the authors determined that the programs were successful in that the children who participated had fun while learning about health and wellness.

More recently, three research-based case studies on movement-based programs in public libraries were published in 2015 and 2016. Health science librarians from Washington University in St. Louis, Missouri partnered with the local public library system to administer a community survey on health information needs. The survey found that “exercise” was the topic the public most wanted to see more of at the library (Engeszer et al., 2016, p. 64). In response, the partners developed a series of programs that included yoga, beginning exercise, and Zumba that was subsequently offered throughout the St. Louis Public Library system.

A similar study took place in the small town of Farmville, North Carolina, where the public library partnered with a nearby library and information science professor to develop programs and services that promote healthy lifestyles (Flaherty & Miller, 2016). The library loaned pedometers to patrons and the researcher interviewed those who participated. Participants

reported liking the program and asked for more movement-based programs at the library. In response, the library organized a 5K race and a mile fun walk/run in Spring 2015, which has since become an annual library-sponsored program. Based on the success of these initiatives, the public librarian became the wellness coordinator for the town.

In Lethbridge, Alberta, public librarians collaborated with local and provincial partners to develop a "library of things" initiative that involved checking out supplies that could be used in physical activities (Cofell, Longair, & Weekes, 2015; Weekes & Longair, 2016). The librarians assessed the program by monitoring circulation trends and collecting feedback from participants. They found that the circulating materials contributed to increasing physical literacy and physical activity among participants.

Collectively these studies show that diverse types of movement-based programs tend to be popular with public library patrons. Nonetheless, these case studies are based in particular places. Without analysis of libraries outside of those locations it is difficult to make generalizations about the impacts of these types of programs beyond the particular cases presented.

Short reports of programs authored by public librarians

In addition to the peer-reviewed research literature discussed above, short reports concerning programs in public libraries have been published outside peer-reviewed channels. These reports illustrate other types of movement-based programs offered in libraries. In addition to the types of programs discussed above, this literature reports on movement-based programs for early literacy (e.g. Music and Movement) (Dietzel-Glair, 2013; Kaplan, 2014; Prato, 2014), library-based community gardens (Peterson, 2017), dancing (Green, 2013; St. Louis Public Library, 2014), StoryWalks®

(Maddigan & Bloos, 2013), outdoor activities like walking and bicycling (Hill, 2017; Richmond, 2012), and fitness challenges (Hanson, 2012).¹ Furthermore, these reports illustrate that movement-based programs are being offered in public libraries in Canada (Maddigan & Bloos, 2013), the United Kingdom (Vincent, 2014), Romania (EIFL, 2016), Namibia (Hamwaalwa, Teasdale, McGuire, & Shuumbili, 2016), China (Zhu, 2017), and Singapore (National Library Board of Singapore, 2017).

A lack of evidence on the impacts of innovations in public library programs

One would perhaps expect that the growth of movement-based programs in public libraries would naturally lead to a growth of data collection on the spread and impacts of these programs. However, the continued lack of evidence based research on innovations in public library programs and services complicates matters. In a guest editorial to a special issue of *EBLIP* focused on public libraries, Ryan (2012) writes that

Despite this welcome inclusion in *EBLIP*, public librarian participation is notably low. This mirrors the grim reality of low public librarian research and publication rates, as well as the small overall percentage of LIS research articles about public library practice. (p. 5)

In a recent follow-up to this special issue, Cole and Ryan (2016) note that "the current state of evidence based practice and research on, and to inform, public library practice lags significantly behind that of other library sectors" (p. 120). As a result of this state of affairs, there continues to be a great need for research both on how public libraries are innovating, as well as on the impacts of these innovations.

¹ For more information on the diverse types of movement-based programs offered in libraries, consult the website <http://www.letsmoveinlibraries.org/>.

Within the U.S. public library profession, one means of enabling librarians to integrate evidence into their evolving practices has been the development of the *Project Outcome* toolkit. The U.S. Public Library Association's *Project Outcome* seeks to create standardized evaluation tools that public librarians can use to assess the impacts of their services and programs (Anthony, 2016; Oehlke, 2016). Nonetheless, despite this laudable goal there are significant gaps in the coverage of *Project Outcome*. In particular, the toolkit provides no means of assessing how libraries contribute to health and wellness. *Project Outcome* focuses on assessing what it calls "seven essential library service areas," including: "civic/community engagement, early childhood literacy, education/lifelong learning, summer reading, digital learning, economic development, and job skills" (Public Library Association, 2017, n.p.). Despite a plethora of studies showing that public libraries impact population health and wellness (e.g. Gillaspy, 2005; Morgan, Dupuis, Whiteman, D'Alonzo, & Cannuscio, 2017; Rubenstein, 2016), *Project Outcome* does not include any tools to assess these outcomes. As a result, more work is needed to understand how public libraries impact health as well as to prepare public librarians to incorporate evidence into this service area. According to public health scholars and policy-makers, regular physical activity is one of the best things for good health (Kohl et al., 2012). The researcher aimed to investigate the impacts of movement-based programs in public libraries to better understand the impacts of physical activity in public libraries.

Aims and Methods

Study design

Since little was known about the general impacts of movement-based programs in public libraries an exploratory survey design was used to address the research questions:

What impacts do movement-based programs in public libraries have? What variations exist between urban and rural libraries?

The focus on disentangling differences between urban and rural libraries relates to a continued divide between these two types of public libraries in the U.S., with entire professional associations focused around the concerns of these two groups (i.e. *The Association for Rural & Small Libraries* and the *Urban Libraries Council*).

In any case, in creating the data collection instrument (Appendix A), the author looked to past surveys of public libraries (e.g. Bertot et al., 2015), as well as to past literature on movement-based programs. In addition, the survey was piloted with three public librarians, one each from Illinois, North Carolina, and New Brunswick. These librarians helped inform the language used in the final survey.

Data Collection

Public libraries throughout North American were invited to self-select for participation in the survey. The researcher hopes that in the future this self-selecting sample can be supplemented by a randomized sample of public libraries. Data collection was carried out via an online questionnaire using Qualtrics. The URL to the questionnaire was sent to public librarians in the U.S. and Canada through state and provincial library electronic mailing lists, as well as through announcements from state and provincial libraries to public libraries in their regions. In addition, the survey was disseminated through national electronic mailing lists used by public librarians (e.g. PUBLIB) and on the project's website. Between February 14 and March 23, 2017 a self-selecting sample of 1,828 public librarians began the "Let's Move in Libraries Survey".

Data Analysis

Respondents were invited to complete as much or as little of the survey as they wished. After removing partial responses (n=570) and

responses from libraries that had never offered any movement-based programs (n=101), a sample of 1,157 libraries remained for analysis.

The data were integrated with data from the Institute of Museum and Library Services FY 2014 Public Libraries Survey (IMLS, 2016) to sort the respondents into “urban,” “suburban,” “town,” and “rural” libraries, as well as to sort the respondents by region. According to IMLS (2016) the major distinction between urban/suburban and town/rural libraries is that the former are libraries located within urban metropolitan areas and the latter are libraries located outside those metro areas. All Canadian respondents (n=62), as well as 49 U.S. respondents could not be integrated with the IMLS dataset. These 101 respondents were sorted by hand, using the methods of the IMLS, into these 4 geospatial divisions.

To transform the data in ways that would allow for quantitative comparisons between urban and rural libraries, the verbal options from which respondents selected were translated into numbers. See Table 1 below for an example of how this process was carried out. The number in the “average across all programs” column on the right side of the table illustrates how comparisons were made among libraries. For instance, in the example below Library 1 reported the most satisfaction with program participation. The fact that program participation “fell below expectations” in one of the movement-based programs offered at Library 3 led to its composite measure being lower. Similar techniques enabled comparisons among libraries in terms of the extent to which movement-based programs had brought new users into libraries, and the extent to which the media had reported on movement-based programs in libraries.

Findings

Description of Sample

Figure 1 shows respondents’ physical locations. Although respondents are located in many parts of North America, this self-selecting sample does not constitute a statistically representative sampling of all public libraries that offer movement-based programs. Nonetheless, as Table 2 shows, the respondents do represent many types of communities, with a nearly even split between libraries located within urban metro areas (54%) and libraries located outside metro areas (46%).

Overall, respondents reported that their libraries had offered a wide variety of movement-based programs for a wide array of age groups. Yoga programs were the most commonly reported type of program, offered in 65% of the responding libraries (Figure 2), followed by movement-based early literacy programs (55%), gardening (41%), dancing (36%), and StoryWalks® (29%). Most of the more frequently offered types of movement-based programs were reported more frequently in urban and suburban libraries than in town and rural libraries. However, other programs, including StoryWalks®, “Other,” Outdoor activities, Fitness challenges, and Library of Things initiatives were slightly more likely to be reported in town and rural than in urban and suburban libraries.

Respondents reported offering movement-based programs for all age groups. Among respondents, 73% had offered programs for Pre-K audiences, 52% for school-aged youth, 39% for tweens and teenagers, 65% for adults, and 42% for senior citizens. In addition, 38% reported movement-based programs for all ages and 37% reported programs for families (see Figure 3). Urban and suburban libraries were more likely to have offered movement-based programs for all of the groups asked about except for “all ages” programs, which were slightly more common in town and rural libraries.

Table 1
Example of Data Analysis^a.

Library	Early Literacy	Yoga	Tai Chi	Zumba	Dancing	Outdoor activities	StoryWalks	Gardening	Fitness challenges	Library of Things	Other	Average across all programs
Library 1	Exceeded expectations	Exceeded expectations	Exceeded expectations	Exceeded expectations		Exceeded expectations		Exceeded expectations				N/A
Library 2	Exceeded expectations	Exceeded expectations			Exceeded expectations	Met expectations		Met expectations				N/A
Library 3	Exceeded expectations	Exceeded expectations		Exceeded expectations							Fell below expectations	N/A
L1	3	3	3	3		3		3				3
L2	3	3			3	2		2				2.6
L3	3	3		3						1		2.5

^aBased on three libraries' responses to the question "How would you characterize participation levels in programs?" (Appendix A)

Table 2
Survey Respondents by Type, Compared to U.S. Population of Public Libraries (Bertot et al., 2015).

	Location of respondents	U.S. library locations
Urban	18% (n=204)	17% (n=2779)
Suburban	36% (n=419)	26% (n=4369)
Town	28% (n=327)	20% (n=3298)
Rural	18% (n=207)	37% (n=6249)
All	100% (n=1157)	100% (n=16695)

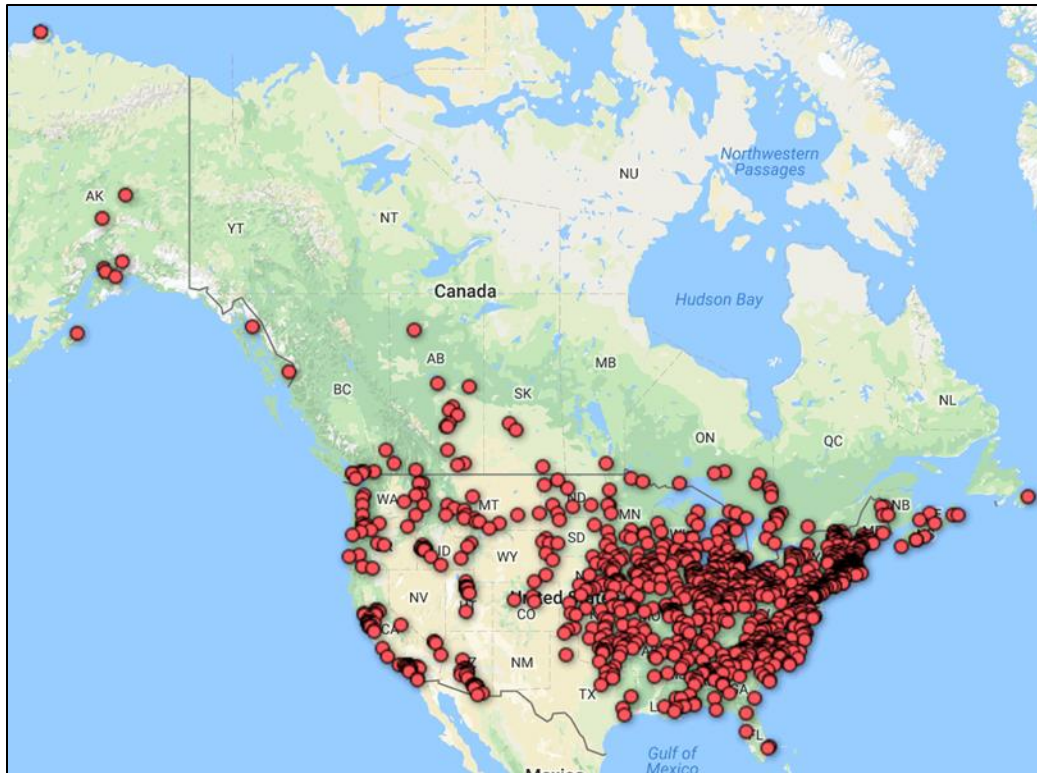


Figure 1
Visualization of where respondents are physically located in North America, n=1157.

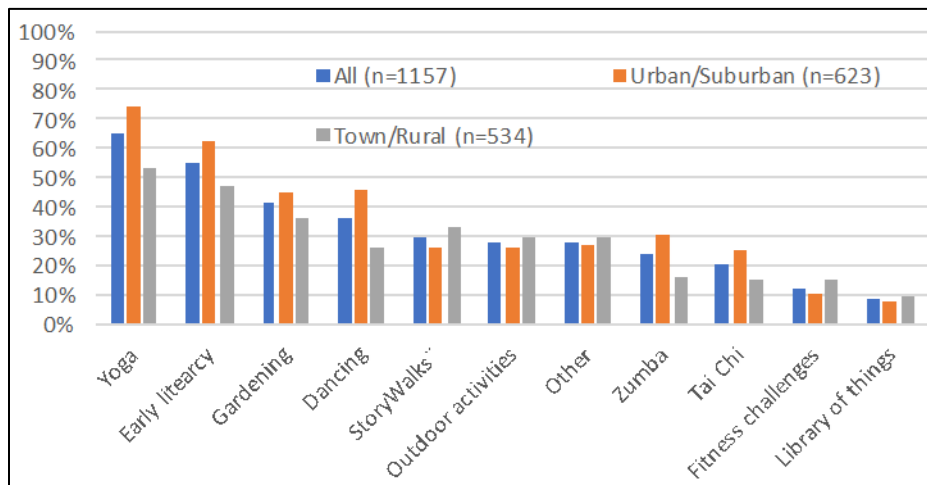


Figure 2
Percentage of respondents that have offered movement-based programs.

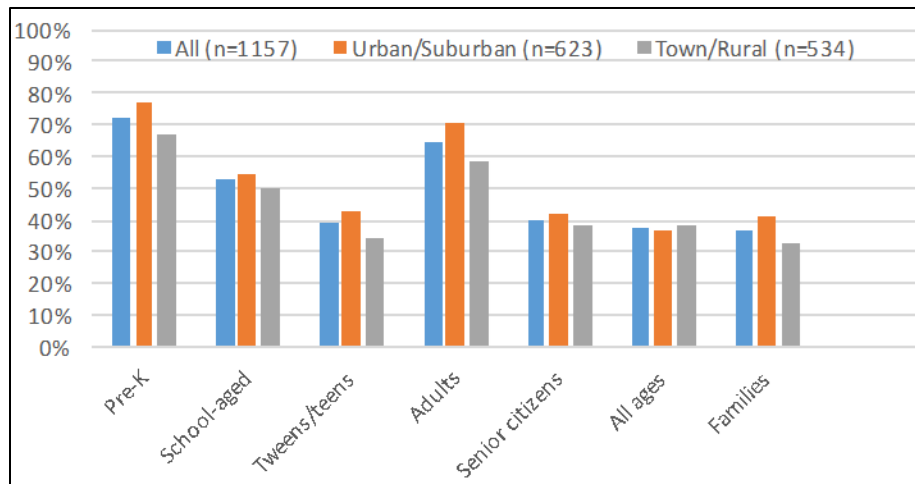


Figure 3
The audiences of movement-based programs in public libraries.

Part 2: The impacts of movement-based programs in public libraries

To understand the impacts these programs have had, this section first analyzes the different ways libraries have assessed their movement-based programs. It then analyzes the satisfaction of library staff with participation levels, before looking at to what extent programs have brought new users to libraries and to what extent programs have received attention from local media. This section concludes by analyzing the outcomes to which these programs have contributed.

1. Assessment techniques

The principal technique libraries use to assess the impacts of movement-based programs has been to count the number of participants. Approximately 90% of respondents said that they use this method. The remaining 10% reported doing no assessment. Surveys and interviews were supplementary assessment techniques sometimes used by approximately 30% and 20% of respondents, respectively.

2. Participation Levels

Based on these assessment techniques, libraries generally reported satisfaction with how many people had participated in their movement-based programs. Based on the analytical techniques discussed above (see Methods), on average libraries reported participation levels that slightly exceeded their expectations. Respondents were asked for each type of movement-based program they had offered whether participation fell below (coded to "1"), met ("2"), or exceeded ("3") expectations. The average satisfaction level across all respondents was 2.2, with statistically significant differences between urban/suburban ($M=2.240$, $SD=0.474$) and town/rural ($M=2.145$, $SD=0.481$) libraries, conditions: $t(1110)=3.3414$, $p=0.0009$. In other words, although on average all libraries reported participation levels that slightly exceeded expectations, urban and suburban libraries were more likely than rural and town libraries to report participation levels meeting and exceeding expectations.

3. Users

The most consistently reported impact of movement-based programs was that these programs brought new users into libraries. For

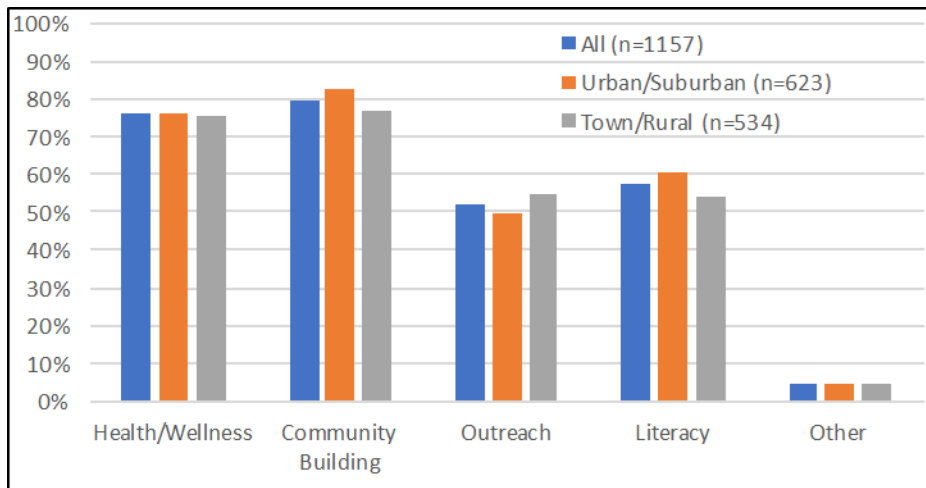


Figure 4.
Outcomes to which movement-based programs in public libraries contributed.

each type of movement-based program offered, respondents were asked whether the program had (coded to "2") or had not ("1") brought new users to their libraries. A significant number of respondents (n=183, or 16% of the sample) did not know the answer to this question.

Nonetheless, among those libraries that did know, the vast majority reported new users coming to libraries because of their participation in movement-based programs. The overall average was 1.86. There was a significant difference between urban/suburban (M=1.904, SD=0.228) and town/rural (M=1.817, SD=0.317) libraries, conditions: $t(972)=4.942$ $p=0.0001$. In other words, the tendency for movement-based programs to bring new users to libraries was more accentuated in urban libraries.

4. Media

Even more respondents (n=242, or 21% of the sample) did not know whether or not the media had reported on their libraries' movement-based programs. Nonetheless, among those who did know the answer to this question, the composite average was 1.55 ("2"=Yes, "1"=No). Furthermore, there was a statistically significant difference between urban/suburban (M=1.505, SD=0.442) and town/rural (M=1.591, SD=0.446) libraries, conditions: $t(912)=2.958$, $p=0.0032$. In

other words, movement-based programs tended to receive slightly more media coverage in more rural libraries.

5. Outcomes

Finally, respondents were asked, based on any feedback and evidence they may have collected, if their movement-based programs had contributed to health or wellness, community building, outreach, literacy, or other outcomes. Overall, only slight variation existed between urban/suburban and town/rural respondents (see Figure 4). Interestingly, the most commonly reported outcome was not health or wellness (76%), but rather community building (80%). In addition, over 50% of respondents said that at least one of their movement-based programs had contributed to outreach (52%) or to literacy (58%), suggesting that movement-based programs contribute to multiple outcomes in the public libraries that offer them.

The final measure of the impact of movement-based programs in public libraries comes from the answer to the question: Will libraries continue to provide these types of programs in the future? Nearly 95% of respondents (n=1094) said their libraries plan to continue offering movement-based programs.

Discussion

Similar to the *Library Journal* survey (2014) that asked about yoga programs in U.S., this study found that movement-based programs have been offered for multiple age groups. There does not appear to be any one primary age group for these types of programs. Nevertheless, the high percentage of respondents that reported programs for Pre-K youth suggests that movement may be most integrated into library programs for this age group, an assertion bolstered by the many program development tools that discuss how to incorporate movement into programs for Pre-K audiences in public libraries (e.g. Dietzel-Glair, 2013; Kaplan, 2014; Prato, 2014). The extent to which movement has been integrated into library programs for other age groups is less clear. However, in at least some libraries it does appear that movement-based programs for diverse age groups has become a normal part of library programming.

In any case, the results from this survey also suggest that urban and suburban libraries may be offering slightly different types of programs than their rural and town counterparts. In particular, the survey found that programs that do not require the use of an indoor meeting space, or that take place outside the library (such as StoryWalks®, Outdoor activities, Library of things initiatives, and Fitness challenges) were offered more often in town and rural libraries than in urban and suburban libraries. On the other hand, the differences reported were slight. More research will be needed to determine if the types of movement-based programs offered in public libraries differ by the types of communities served.

The evidence on the impacts of movement-based programs adds to our understanding of how public libraries impact health and wellness. Past research has investigated how public libraries impact health through consumer health information services (e.g. Rubenstein, 2016), but has not focused directly on the question of how public libraries impact health by fostering active

lifestyles. Being physically active throughout all stages of life is one of the most important things people can do to be healthy (Kohl et al., 2012). Better understanding the impacts of this emerging programming area could potentially contribute to the development of tools to assess how public libraries impact health and wellness, which could potentially be included in the U.S.-based *Project Outcome* toolkit (Public Library Association, 2017), as well as in other assessment tools being developed elsewhere (Cole & Ryan, 2016). Although more research is needed, the findings from this exploratory study suggest that movement-based programs contribute both to health and wellness as well as to community building. Furthermore, the fact that so many libraries reported new users being brought to libraries because of these types of programs suggests that these programs also contribute to community engagement in libraries.

Limitations

The principal limitation of this work derives from its exploratory nature. Rather than survey a randomized sample of all public libraries in the U.S. and Canada, the researcher instead recruited a self-selecting sample of public libraries, relying primarily on state and provincial mediators to disseminate this survey to public librarians in their regions. Future work should more rigorously test and refine these exploratory results by using a randomized study design to enhance our knowledge and understanding of how widespread these types of programs have become and what impacts these types of programs have.

Despite this limitation, this study shows that many public libraries throughout North America do offer a wide variety of movement-based programs and most plan to continue offering these programs. Based on these facts, more research is needed to understand why this programming area has emerged, how it works, and what impacts it is having. In addition to more quantitative data, we also need qualitative studies that look in depth at the evolution and

impacts of movement-based programs as they have emerged and evolved in particular public libraries.

Conclusion

Past surveys of public libraries show that movement-based programs have been offered in 20-30% of U.S. public libraries (Bertot et al., 2015). Furthermore, case studies and journalistic reports show that movement-based programs also occur elsewhere. Nonetheless, despite this evidence little was known about the impacts these programs have had beyond the particular cases discussed in past case studies and reports. This study added to this literature by reporting data from a self-selecting sample of 1,157 U.S. and Canadian public libraries that have offered movement-based programs. The most consistently reported impact of movement-based programs in libraries is that they bring new users into public libraries. Complicating assessment of the impacts of these programs is the fact that a majority of respondents did no assessment of their programs beyond counting the numbers of participants. The need for more research on this topic is great; this article has sought to provide needed evidence on this emerging programming area in order to support future conversations and studies.

References

- Anthony, C. (2016). Project Outcome: Looking back, looking forward. *Public Libraries Online*, <http://publiclibrariesonline.org/2016/01/project-outcome-looking-back-looking-forward/>.
- Bertot, J. C., Real, B., Lee, J., McDermott, A. J., & Jaeger, P. T. (2015). *2014 Digital Inclusion Survey: Survey Findings and Results*. University of Maryland, College Park: Information Policy & Access Center (iPAC). <http://digitalinclusion.umd.edu/sites/default/files/uploads/2014DigitalInclusionSurveyFinalRelease.pdf>.
- Cofell, J., Longair, B., & Weekes, L. (2015). Physical literacy in the library or, how we ended up loaning out rubber chickens. *PNLA Quarterly*, 80(1), 34-36. <https://arc.lib.montana.edu/ojs/index.php/pnla/article/view/295/218>
- Cole, B., & Ryan, P. (2016). Public libraries. In D. Koufogiannakis & A. Brettell (Eds.), *Being Evidence Based in Library and Information Practice* (pp. 105-120). London: Facet.
- Dietzel-Glair, J. (2013). *Books in Motion: Connecting Preschoolers with Books through Art, Games, Movement, Music, Playacting, and Props*. Chicago: American Library Association.
- EIFL. (2016). *Keeping Fit in Romania: Pietrari Local Public Library Helps the Community Get Back into Shape*. <http://www.eifl.net/eifl-in-action/creative-use-ict-innovation-award>.
- Engeszer, R. J., Olmstadt, W., Daley, J., Norfolk, M., Krekeler, K., Rogers, M., Colditz, G., Anwuri, V.V., Morris, S., Voorhees, M., & McDonald, B. (2016). Evolution of an academic-public library partnership. *Journal of the Medical Library Association: JMLA*, 104(1), 62-66. doi: [10.3163/1536-5050.104.1.010](https://doi.org/10.3163/1536-5050.104.1.010)

- Flaherty, M. G., & Miller, D. (2016). Rural public libraries as community change agents: Opportunities for health promotion. *Journal of Education for Library and Information Science*, 57(2), 143-150.
- Gillaspy, M. L. (2005). Factors affecting the provision of consumer health information in public libraries: The last five years. *Library Trends*, 53(3), 480-495. <http://hdl.handle.net/2142/1738>
- Green, J. (2013). Thoughts on the power of arts with older adults. *Creative Aging Toolkit for Public Libraries*, <http://creativeagingtoolkit.org/power-of-the-arts-with-older-adults/>.
- Hamwaalwa, N., Teasdale, R. M., McGuire, R., & Shuumbili, T. (2016). Promoting innovation in Namibian libraries through leadership training. *Proceedings of IFLA 2016*, <http://library.ifla.org/1509/1/189-hamwaalwa-en.pdf>.
- Hanson, T. (2012). Featured: Estherville's Couch-to-5K. *The Association for Small and Rural Libraries Blog*, <http://arsl.info/esthervilles-couch-to-5k/>.
- Institute of Museum and Library Services. (2016). *Data File Documentation. Public Libraries Survey. Fiscal Year 2014*. Washington, D.C.: Institute of Museum and Library Services. https://www.imls.gov/sites/default/files/fy2014_pls_data_file_documentation.pdf.
- Hill, J. (2017). Book-a-Bike: Increasing access to physical activity with a library card. In M. Robison & L. Shedd (Eds.), *Audio Recorders to Zucchini Seeds: Building a Library of Things* (pp. 43-51). Santa Barbara: Libraries Unlimited.
- Kaplan, A. (2014). *Get Up and Move! Why Movement is Part of Early Literacy Skills Development*. University of Wisconsin Madison School of Library and Information Studies. <http://vanhise.lss.wisc.edu/slis/2014webinars.htm>.
- Kohl, H. W., Craig, C. L., Lambert, E. V., Inoue, S., Alkandari, J. R., Leetongin, G., Kahlmeier, S., & Lancet Physical Activity Series Working Group. (2012). The pandemic of physical inactivity: global action for public health. *The Lancet*, 380(9838), 294-305. [http://dx.doi.org/10.1016/S0140-6736\(12\)60898-8](http://dx.doi.org/10.1016/S0140-6736(12)60898-8)
- Lenstra, N. (2017). Let's Move! Fitness programming in public libraries. *Public Library Quarterly*, 36(4), 1-20. <http://dx.doi.org/10.1080/01616846.2017.1316150>.
- Library Journal. (2014). *Public Library Maker & Non-book Related Programming Report*. Unpublished manuscript, American Library Association.
- Maddigan, B. C. & Bloos, S. C. (2013). *Community library programs that work: Building Youth and Family Literacy*. Santa Barbara: Libraries Unlimited.
- Morgan, A. U., Dupuis, R., Whiteman, E. D., D'Alonzo, B., & Cannuscio, C. C. (2017). "Our doors are open to everybody": Public libraries as common ground for public health. *Journal of Urban Health*, 94(1), 1-3. <https://link.springer.com/article/10.1007/s11524-016-0118-x>
- National Library Board of Singapore. (2017). *Exercise Programs*. <https://www.nlb.gov.sg/golibrary2/c/30307529/result/term/exercise>.

- Nicholson, S. (2009). Go back to start: Gathering baseline data about gaming in libraries. *Library Review*, 58(3), 203-214.
<https://doi.org/10.1108/00242530910942054>
- Oehlke, V. (2016). *PLA President's Report, ALA 2016 Annual Conference*. Chicago: Public Library Association.
http://www.ala.org/pla/sites/ala.org/pla/files/content/about/board/vailey_oehlke_presidents_report.pdf.
- Peterson, J. (2017). *Growing library garden programs*. WebJunction.
<http://www.webjunction.org/news/webjunction/growing-library-garden-programs.html>.
- Prato, S. (2014). Music and movement at the library. *Association for Library Service to Children Blog*,
<http://www.alsc.ala.org/blog/2014/11/music-and-movement-at-the-library/>.
- Public Library Association. (2017). *Project Outcome: Measuring the True Impact of Public Libraries*.
<https://www.projectoutcome.org/>.
- Ryan, P. (2012). EBLIP and public libraries. *Evidence Based Library and Information Practice*, 7(1), 5-6.
<https://journals.library.ualberta.ca/ebliip/index.php/EBLIP/article/view/16557/13672>
- Quatrella, L., & Blossveren, B. (1994). Sweat and self-esteem: A public library supports young women. *Wilson Library Bulletin*, 68(7), 34-36
- Richmond, A. (2012). Running and reading at Rye public library. *Granite State Libraries*, 48(3), 12.
<http://fliphtml5.com/gjox/riia/basic>.
- Rubenstein, E. L. (2016). Breaking health barriers: How can public libraries contribute? *Public Library Quarterly*, 35(4), 331-337.
<https://doi.org/10.1080/01616846.2016.1245006>
- St. Louis County Library. (2014). *Bean Stalk Ballet*, 5.1.14. Flickr.
<https://www.flickr.com/photos/slclevents/sets/72157644064466020/>.
- Vincent, J. (2014). An overlooked resource? Public libraries' work with older people—an introduction. *Working with Older People*, 18(4): 214-222.
- Weekes, L. & Longair, B. (2016). Physical literacy in the library—Lethbridge Public Library, Lethbridge, Alberta, Canada. *International Information and Library Review*, 48(2), 152-154.
- Woodson, D. E., Timm, D. F., & Jones, D. (2011). Teaching kids about healthy lifestyles through stories and games: Partnering with public libraries to reach local children. *Journal of Hospital Librarianship*, 11(1), 59-69.
<https://doi.org/10.1080/15323269.2011.538619>
- Zhu, J. (2017). Perfect Combination of Reading and Sports. *Proceedings of IFLA 2017*,
<http://library.ifla.org/id/eprint/1869>.

Appendix A

Let's Move in Libraries Survey

Q1. These questions ask for some background information on your library. What is the zip code, or postal code, of your library's physical location?

Q2. If you would like to provide it, what is the name of your library?

Q3. Survey Part 1. This survey first asks about programs or services your library has offered in the past or currently offers in the present. At the end of the survey you will be given the opportunity to discuss programs or services your library is planning, but has not yet offered to the public. Has your library ever offered any programs or services that include (select all that apply)? [*Note: Responses to Q3 were carried forward for the remainder of the survey*]

- ☐ Movement-based programs for early literacy (e.g. Music and Movement)
- ☐ Yoga
- ☐ Tai Chi
- ☐ Zumba
- ☐ Dancing
- ☐ Walking, hiking, bicycling, or running
- ☐ StoryWalks
- ☐ Gardening
- ☐ Fitness challenges (e.g. pedometer challenge, biggest loser programs, Couch to 5K)
- ☐ Fitness equipment that can be checked out, including passes for gyms or aquatic centers
- ☐ Other programs or services
- ☐ No programs or services involving movement

Q3.B. [*If "other programs or services" selected than this question appears.*] What other movement-based programs or services has your library offered?

Q4. Survey Part 2. You are now invited to participate in the second part of this survey. This part of the survey consists of 16 questions that ask about the administration of the programs and services your library offers, or has offered in the past. It should take about 10 minutes to complete. Would you like to participate in the second part of this survey?

[*If respondents select "no" they skip to Q26.*]

Q5. These questions ask about the timing of programs and services your library offers, or has offered. [*Carried forward programs*] first offered by your library:

- ☐ After Jan. 1, 2016
- ☐ Before Jan. 1, 2016
- ☐ Don't know

Q6. Since your library started offering these programs and services, how regularly, on average, has your library offered them to the public? [*Carried forward programs*] offered:

- ☐ Only once
- ☐ More frequently than once a month
- ☐ Once a month
- ☐ Less frequently than once a month

- ☐ Not applicable
- ☐ Don't know

Q7. On which days and times has your library offered the following [*Carried forward programs*] (select all that apply)

- ☐ Weekday mornings
- ☐ Weekday afternoons
- ☐ Weekday evenings
- ☐ Weekend mornings
- ☐ Weekend afternoons
- ☐ Weekend evenings
- ☐ Not applicable
- ☐ Don't know

Q8. These questions ask about who these programs/services are for, and also who participates in them. For which audiences are these [*Carried forward programs*] targeted? (select all that apply)

- ☐ Youth, birth-5
- ☐ School-aged youth
- ☐ Tweens and teens
- ☐ Adults
- ☐ Senior Citizens
- ☐ Families
- ☐ All ages
- ☐ Don't know

Q9. How would you characterize participation levels in these programs? [*Carried forward programs*] participation:

- ☐ Exceeded expectations
- ☐ Met expectations
- ☐ Fell below expectations
- ☐ Don't know

Q10. This question asks about the reasons your library offers these programs. For each of the programs your library offers, please indicate which of the following are reasons for the program. If multiple reasons, please select multiple responses.

- ☐ Lifelong learning
- ☐ Literacy
- ☐ Health and/or wellness
- ☐ Community engagement
- ☐ Other
- ☐ Don't know

Q11. Please discuss other reasons, if any, your library offers these programs.

Q12. These questions ask about how programs and services in your library relate to other spaces and programs in your service area. Please answer to the best of your ability. Where are your library's programs and services physically located?

- ☐ Within a community room or auditorium located within the library

- ☐ Within another space in the library
- ☐ Outside the library
- ☐ Not applicable
- ☐ Don't know

Q13. If you have other information about the location of these programs and services, please record it here.

Q14. Who leads or directs these programs and services? (select all that apply). [*Carried forward programs*] led by:

- ☐ Librarians or library paraprofessionals
- ☐ Paid contractors
- ☐ Partner institutions or groups
- ☐ Individual volunteers
- ☐ Other
- ☐ Don't know

Q15. If your library developed these programs and services with partners (e.g. parks departments, public health departments, YMCAs, etc.), please specify who these partners are here.

Q16. These questions ask about the management and administration of these programs and services. Are these programs/services under the supervision of a particular division of your library? If so, which ones. (Select all that apply). [*Carried forward programs*] supervised by:

- ☐ The library as a whole
- ☐ Adult services
- ☐ Teen services
- ☐ Youth services
- ☐ Programming, outreach, or lifelong learning staff
- ☐ Other
- ☐ Don't know

Q17. If needed, please discuss here how these programs and services fit within your organizational hierarchy.

Q18. For the following programs and services, are any of the following ever required? (select all that apply). [*Carried forward programs*] sometimes or always require participants:

- ☐ Register in advance
- ☐ Sign a waiver of liability
- ☐ Pay a fee
- ☐ Do something else
- ☐ No requirements for participation
- ☐ Don't know

Q19. How are these programs and services funded? (select all that apply). [*Carried forward programs*] funded by:

- ☐ Regular library budget
- ☐ Programming budget
- ☐ Friends of the Library

- ☐ Donations
- ☐ Grants
- ☐ Other
- ☐ Don't know

Q20. How have programs been marketed? (select all that apply). [*Carried forward programs*] marketed through:

- ☐ Print flyers
- ☐ Newspaper advertisements or articles
- ☐ Website
- ☐ Online calendar
- ☐ Social media
- ☐ Word of mouth
- ☐ Other
- ☐ Don't know

Q21. How have the programs and services been assessed (select all that apply)? . [*Carried forward programs*] assessed through:

- ☐ Head counts of participants
- ☐ Surveys of participants
- ☐ Interviews with participants
- ☐ No assessment
- ☐ Other
- ☐ Don't know

Q22. What other administrative issues or challenges has your library had to address in organizing these programs and services?

Q23. These questions ask about the impacts of these programs and services. Has the media reported on the fact that your library is offering [*Carried forward programs*]?

- ☐ Yes
- ☐ No
- ☐ Don't know

Q24. This question asks about how these programs and services engage your community. Have these [*Carried forward programs*] brought new users into your library?

- ☐ Yes
- ☐ No
- ☐ Don't know

Q25. Based on feedback and evidence you have collected, have these [*Carried forward programs*] contributed to any of the following (select all that apply)?

- ☐ Health and/or wellness
- ☐ Literacy
- ☐ Community building
- ☐ Outreach
- ☐ Other
- ☐ Don't know

Q25.b. If "other impacts" selected, please discuss them here.

Q26. In the future, does your library plan to provide any programs or services that include (select all that apply)?

- ☐ Movement-based programs for early literacy (e.g. Music and Movement)
- ☐ Yoga
- ☐ Tai Chi
- ☐ Zumba
- ☐ Dancing
- ☐ Walking, hiking, bicycling, or running
- ☐ StoryWalks
- ☐ Gardening
- ☐ Fitness challenges (e.g. pedometer challenge, biggest loser programs, Couch to 5K)
- ☐ Fitness equipment that can be checked out, including passes for gyms or aquatic centers
- ☐ Other programs or services
- ☐ No programs or services involving movement

Q26.b. [*If "other programs or services" selected than this question appears.*] What other movement-based programs or services does your library plan to offer in the future?

Q27. Thank you for taking the time to fill out this survey. If you have additional comments about these programs or services, or about this survey, please record them here.

Q28. If you would like to be entered into the raffle for one of the ten (10) \$50 gift certificates from Amazon.com, please record your email address here.