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The technical quality of online leisure time physical activity resources for people with physical disabilities

Robert B. Shaw, B.P.H.E.[a,*], Kylie D. Mallory, B.Sc.[a], Jane Arkell[b,c], and Kathleen A. Martin Ginis, Ph.D.[a]

[a]*Department of Kinesiology, McMaster University, 1280 Main St. West, Hamilton, Ontario L8S 4L8, Canada*
[b]*Active Living Alliance for Canadians with a Disability, Canada*

Abstract

Background: The internet is an important information source for people with disabilities. Unfortunately, little is known about the quality of online leisure time physical activity resources provided for people with physical disabilities.

Objective: To assess the quality of leisure time physical activity resources available online for people with physical disabilities.

Methods: A purposive internet search was conducted to locate Canadian-developed resources that promoted leisure time physical activity for people with physical disabilities. Community disability organizations across Canada were also contacted to obtain additional resources. Resource quality was evaluated using a modified version of the Journal of the American Medical Association benchmarks to assess technical quality of health information. Other pertinent information (i.e., descriptive characteristics, targeting strategies) were also assessed.

Results: None of the resources satisfied all seven technical quality benchmarks, with 4 benchmarks being the median number achieved. Resources were easily accessed from their respective websites and the majority (76.1%) provided links to additional resources related to leisure time physical activity. A limited number of resources tailored their information for a specific disability (28.4%) or age demographic (36.4%), while no resources targeted their information to individuals based on their time since disablement.

Conclusion: This study highlights the concerning state of leisure time physical activity resources available online for people with physical disabilities. Based on the results of this study, recommendations are provided for resource developers to ensure newly developed resources are of higher technical quality.   © 2016 Elsevier Inc. All rights reserved.

Keywords: Physical disabilities; Physical activity; Active living; Internet; Resources

The physical, psychological, and psychosocial benefits of an active lifestyle have been well documented for people with various disabilities.[1–3] Despite the known benefits of being physically active, people with physical disabilities are still less active compared to the general population.[4] Promoting an active lifestyle is of great importance in this population as people with physical disabilities are already at greater risk for developing secondary health conditions because of their disability.[4,5]

Leisure time physical activity (LTPA) refers to physical activity that one chooses to do during free time, such as walking/wheeling, playing sports, or exercising at a gym.[6] Web-based LTPA resources have the potential to be beneficial for people with physical disabilities as research has shown that individuals living with disabilities often use the internet to seek physical activity information.[7–9] Ensuring that LTPA resources on the internet can be easily accessed and are of high quality is important as consumers often lack the skills necessary to critically evaluate information provided online.[10] To address questions and concerns about the quality of online resources, recent studies have evaluated websites that provide physical activity information for people with physical disabilities.[11–13]

Jetha et al[11] for instance, evaluated the technical quality and accuracy of websites designed to promote physical activity for people with spinal cord injuries. A sample of 30 websites were analyzed. Overall, technical quality of

websites was found to be high while accuracy scores were low. Similar results were found by Shirazipour et al[13] who reported the quality of website characteristics (e.g., updating of information, accountability, authority) to be variable across a sample of 20 websites that promoted LTPA for people with multiple sclerosis. Although several studies have evaluated the quality of disability-focused websites, we are unaware of any published studies that have evaluated specific, stand-alone, online resources (e.g., downloadable guides, manuals, brochures, checklists) that promote LTPA for people with physical disabilities. The present study was undertaken to address this knowledge gap.

Although several guidelines and processes have been developed to assess the quality of online health-related information, no guidelines have been developed specifically to evaluate online *physical activity*-related information. The Journal of the American Medical Association (JAMA) benchmarks[14] represent one of the more popular methods for assessing the technical quality of health-related information.[15] The JAMA benchmarks are used to evaluate the technical quality of health-related information based on the presence of authorship, attribution or references, disclosure, publishing and upload date, endorsement by a major institution, and contact information. Although the JAMA benchmarks have been used predominantly for the quality assessment of websites in their entirety,[11,12] the developers of the benchmarks also recommend for their use to assess the quality of individual online, stand-alone resources that may be embedded in websites. As assessment of these types of resources was the focus of the present investigation, and as no physical activity-specific resources are available for evaluating them, the JAMA benchmarks provided the basis for our investigation.

Assessing the technical quality of individual resources (e.g., downloadable guides, manuals, brochures, checklists) on the internet as opposed to entire websites could allow for a more accurate evaluation of the LTPA information available to people with physical disabilities because the quality of a website does not necessarily indicate the quality of the resources a website provides. This potential discrepancy between website and resource quality could be due to the difficulty in monitoring, and controlling, what is published on the internet, given that website developers can post resources that they themselves did not create or publish. Evaluating the technical quality of online resources would allow for a better understanding of the quality of LTPA information available to people with physical disabilities, as technical quality has been linked to content accuracy of online information.[16] Evaluating online resources would also help to identify the greatest strengths and weaknesses in terms of quality, and could help inform organizations and resource developers about the elements that constitute a quality resource. Therefore, the primary purpose of this study was to extend previous literature on the quality of online LTPA information by evaluating the technical quality of LTPA resources available on the internet for people with physical disabilities. Drawing on the results of this evaluation, a secondary purpose was to provide a set of recommendations to guide resource development based on the findings.

Methods

Search strategy and resource inclusion/exclusion criteria

A comprehensive online search was performed to identify educational resources that promoted LTPA for people with physical disabilities. Resources had to be: (1) educational and promote or inform individuals how to get started, how to overcome challenges, how to participate, or how to modify traditional sports, physical activity/exercise equipment, or facilities, (2) developed specifically for individuals with a physical disability, their caregivers, family members, or others (e.g., policy makers, coaches, teachers, organizations) who impact their participation in LTPA, (3) created by a Canadian source and published in English, (4) free to access, and (5) print- or text-based. The study was limited to Canadian resources in order to keep the size of the project manageable. Resources were excluded if they (1) promoted a specific community or club-based program (e.g., local swimming lessons, community dance classes), (2) involved recruiting for a research project, and (3) advertised specific sport teams (e.g., a brochure advertising sledge hockey tryouts).

Two methods were used to obtain the resources used in the analyses. First, an email was sent out by the third author's organization (a national non-profit organization that promotes, supports and enables Canadians with disabilities to lead active, healthy lives) to their partners, stakeholders, and board members asking for online resources that pertained to the project's objectives. Second, resources were collected from the internet using a search engine method which involved simulating the process a "typical" person may use.[17—19] This process involved entering keywords (e.g., "physical activity + disability", "active living + disability", and sports + disability") along with commonly known organization names (e.g., physical activity + Parkinson's society of Canada) into the most commonly used search engine, Google.[20] All relevant websites from the first two pages of results were accessed and searched for resources that met the study inclusion criteria. Only the first two pages of links were examined to simulate the point when an average individual may give up their search.[21,22] At this point, a new keyword or organization was entered into the search engine and the process repeated. A total of 119 websites were searched with 46 yielding relevant resources. A total of 15 email responses were received from the 222 emails that were sent to community organizations. Of the 15 emails only three contained relevant resources. Overall, 110 resources were acquired with 88 meeting the inclusion criteria. Fig. 1