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Peer-Reviewed Physical Education Journals from Arabic-Speaking Countries: A Regional Assessment

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Introduction

The Arabic-speaking region, characterized by the 22 member countries of the League of Arab States (Blair *et al.*, 2014), is undergoing a historic transitional period across political, economic, and health systems (Jabbour, 2013; Jabbour *et al.*, 2012) that affects individual and community health and wellness. Lack of proactive political commitment, deficiency in government-sponsored programming, limited resources, a central focus on disease treatment over disease prevention or health promotion, and the inconsistency of health and wellness policies between Arabic-speaking countries has contributed to a culture of complacency (Abdul Rahim *et al.*, 2014; Musaiger *et al.*, 2011). Under these conditions, prevention behaviors at the individual level, sponsored actions at the community level, and policies at the regional or national level can weaken or decline. Physical education (PE) and physical activity represent a foundational cornerstone for prevention behaviors (Titze and Oja, 2013). However, PE is adversely affected by a variety of factors such as culture, availability of sponsored or structured programs, built environments such as parks, exercise facilities, and outdoor exercise opportunities, and regional or national policy (Dagkas and Stathi, 2007). Lack of regionally-specific and culturally congruent PE research underscores these issues and might explain the decline or lack of progress in regionally-specific physical education promotion.

Non-communicable diseases (NCD) such as heart disease, diabetes, and being overweight or dealing with obesity represent the leading cause of death globally and are associated with more premature deaths each year than all other causes combined (World Health Organization, 2017). Worldwide, over 30% of adults (≥ 15 years old) are considered physically inactive, with ranges from 17% in Southeast Asia to 43% in the Eastern Mediterranean region and the Americas (Hallal *et al.*, 2012). In the Arabic-speaking region, NCD is associated with more than

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3 2.3 million deaths annually with increases expected in the next 10 years (World Health
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5 Organization, 2014). While the epidemiologic profile in the Arabic-speaking region includes
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7 significant variation, NCD have emerged as the primary cause of mortality and account for more
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9 than 50% of deaths before age 70 (International Diabetes Foundation, 2015). Globally, lack of
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11 PE has led to an estimated 30% of heart disease, 27% of diabetes, up to 25% of some cancers
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13 such as breast and colon, and approximately 1 in 5 deaths due to NCD (World Health
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15 Organization Eastern Mediterranean Regional Office, 2017). Recently, the 66th World Health
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17 Assembly ratified an action plan for the prevention and control of NCD. Among global and
18
19 regionally specific target goals, a 10% reduction in inadequate physical activity prevalence
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21 across the lifespan was proposed and accepted (World Health Organization, 2013).
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26 Similar national responses to recognized decreases in PE at the population level show
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28 common themes. Finland incorporated action recommendations that were developed and
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30 reported following evidence-based evaluations and regional research (Pratt *et al.*, 2015). Brazil
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32 established monitoring efforts to assess PE in real time using national program evaluations,
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34 systems evaluations, and local partnerships between non-government organizations including
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36 universities and the private research sector (Pratt *et al.*, 2015). The United States developed a
37
38 national plan that included PE as a primary objective using ongoing and contemporary research-
39
40 based guidelines (Pratt *et al.*, 2015). These efforts share research, publication, and dissemination
41
42 as foundational elements to address decline in PE prevalence (World Health Organization
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44 Eastern Mediterranean Regional Office, 2014b). In the last 10 years, the Arabic-speaking region
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46 has experienced a significant shift away from culturally traditional dietary patterns and health
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48 behaviors and towards a westernized model that could affect social, dietary, and physical
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50 wellbeing (Aboul-Enein *et al.*, 2016).
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3 Within a socio-ecological model for physical activity (World Health Organization
4 Eastern Mediterranean Regional Office, 2014a), public health policy and infrastructure precedes
5 all factors that influence lifestyle-related physical activity such as community assets,
6 organizational interest and support, interpersonal relationships, and individual behavior. Current
7 and regionally specific research and reporting provides a way to test current policies and
8 infrastructure, and suggest new directions. Systematic analyses of PE prevalence among Arabic-
9 speaking countries are scarce (Kahan, 2015) and there are no current evaluations of peer-
10 reviewed publications addressing PE within the Arabic-speaking region. Previous studies have
11 assessed the status of medical, biomedical, public health, health education, and nutrition journals
12 in the Arabic-speaking region (Aboul-Enein *et al.*, 2017a; Aboul-Enein *et al.*, 2017b; Tadmouri,
13 2004; Habibzadeh, 2006; Aly, 2004) as well as in non-Arabic speaking countries (Molina *et al.*,
14 2016; Yu *et al.*, 2013; Miranda and Mongeau, 1991; Aminpour and Kabiri, 2009; O'Connor *et*
15 *al.*, 2001; Siegfried *et al.*, 2006). Assessment of local and regional PE journals of the Arabic-
16 speaking region are not represented in the literature. Therefore, we investigated the availability
17 of local and regionally active peer-reviewed PE journals in the Arab-speaking region to highlight
18 the disparity in PE research within this region. The purpose of this assessment is to describe the
19 difference between the need for PE journals and publications and current availability in the
20 Arabic-speaking countries by examining the current state of PE research.
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47 **Methods**

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49 For this assessment, the authors followed the definitions, search parameters, and terms
50 outlined in previous studies (Blair *et al.*, 2014; Aboul-Enein *et al.*, 2017b; Aboul-Enein *et al.*,
51 2017a) as it relates to public health research in the Arabic-speaking region. An electronic search
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3 was conducted using 1) PubMed NLM Catalog Journals referenced in the NCBI Database
4 records, 1) Scopus, 2) Google Scholar, 3) Science Direct, and 4) the Index Medicus for the
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6 Eastern Mediterranean Regional Office Database Journals Directory (IMEMR) and 5) the Iraqi
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8 Academic Scientific Journals database to identify relevant journals published in Arabic-speaking
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10 countries. An integrative search was carried out using a combination of search terms “Physical
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12 Education; Activity; Sports; Exercise; Training; Athletic, Kinesiology; Fitness; Human
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14 Movement; Recreation; journal AND Algeria; Bahrain; Comoros; Djibouti; Egypt; Iraq; Jordan;
15
16 Kuwait; Lebanon; Libya; Mauritania; Morocco; Oman; Qatar; Saudi Arabia; Somalia; Sudan;
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18 Syria; Tunisia; United Arab Emirates; Yemen; Palestinian Territories” to identify each respective
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20 journal listed. Search results identified the corresponding journal’s website which were reviewed
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22 to identify country of origin, activity status, publication period, available formats, and impact
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24 factor. Results of the electronic survey were compiled and tabulated (Table 1). For the purpose
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26 of this search, PE-affiliated journals were defined as a peer-reviewed journal with a primary
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28 focus on PE, training, exercise, sports sciences, recreation sciences, or closely-related disciplines
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30 of PE. Given the nature of this study, ethical approval and clearance was not necessary and,
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32 therefore, not obtained.
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42 ***Inclusion/Exclusion Criteria***

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44 Journals that explicitly stated PE, physical training, sports sciences, recreation sciences,
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46 or closely-related disciplines of PE within the journal’s respective aim and scope were included
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48 in this survey. Also, only journals that were peer-reviewed were included in this survey. Journals
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50 with a stated primary aim and scope focusing on nutrition, public health, health sciences, health
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52 education, health promotion, human medicine, veterinary medicine, nursing, and other
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3 discipline-specific health professions were excluded. Given the predominant languages used in
4 this region—Arabic, English, and French—we used search terms for each. The authors
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6 acknowledge that valuable and applicable data may have been excluded as a result of this
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8 delimitation.
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11 12 13 14 **Results**

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16 Our electronic search generated 14 PE-affiliated journals in Arabic-speaking countries.
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18 A total of six journals preserved an active publication status into 2017 while eight journals were
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20 either interrupted or terminated (Table 1). Among the six active publications, a total of four have
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22 a publication history of 12 years or longer, two have a 4-year history, and one has been active for
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24 2 years. Among all journals identified in this search, Iraq was represented 12 times and Saudi
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26 Arabia and Egypt were represented only once. Seven journals were accessible in both English
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28 and Arabic (*Saudi Journal of Sports Medicine, Scientific Journal of Physical Education, Misan*
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30 *Journal for Physical Education Sciences, Karbala Journal of Physical Education Sciences,*
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32 *Modern Sport Journal, Al-Rafidain Journal for Sport Sciences, and Journal of studies and*
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34 *research of sport education*), six were accessible in Arabic only (*Sciences Journal of Physical*
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36 *Education, University of Anbar Sport and Physical Education Sciences, Journal of Physical*
37
38 *Education, Al Qadisiya Journal for the Sciences of Physical Education, Journal of Sport*
39
40 *Sciences, and Sport Culture*), and one was accessible in English only (*The International*
41
42 *Scientific Journal of Physical Education and Sport Science*). All journals in the sample offer
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44 open access for review, 13 offer electronic format only, and one offers both print and electronic
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46 format (*The International Scientific Journal of Physical Education and Sport Science*). With
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48 respect to the impact factor (IF), all 14 journals were unrated during 2015 and 2016.
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Discussion

Among the entire sample, no publication, current or interrupted/ceased, predates 2005 within the Arabic-speaking region. Four of the six active journals within the sample have a continuous publication history from 2005 and two are new within the last five years. Examining these findings in contrast, the United States has produced PE journals as early as 1931 (*The Journal of Health and Physical Education*) and Europe as early as the 1950s (professional publications in Germany, Sweden, and the United Kingdom). The link between regular physical activity as a protective factor and NCDs is established and significant. As the importance of physical activity to overall health and wellbeing grows in understanding and importance, so have the availability of PE journals within developed countries. It is unknown why this trend is conspicuously absent in the Arabic-speaking region. Given the total number of PE journals in our sample is considerably smaller than U.S and European publications, it is unknown how many (if any) PE journals existed and ceased prior to electronic archiving.

Print options and open access promotes consistent accessibility and long-term delivery of information in academic research. All 14 journals within the sample offer both electronic and open access with only one providing both print and electronic versions. Lack of reliable internet access within some Arabic-speaking countries, and comparatively low levels of e-literacy, presents a challenge within the sample. Disparities in internet access are lower in the Arabic-speaking region (56.7%) compared to English speaking regions (88.1%) (Internet World Stats, 2017). With reduced internet access in low income Arabic-speaking countries such as Somalia and Yemen, communicating current PE research on the regional scene and providing guidelines for PE researchers to develop and share their work in native languages may be limited or

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3 unavailable. Professional journals providing comprehensive access via electronic, open-access,
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5 and print versions should be reflected in Arabic-speaking region and native languages to increase
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7 information distribution, access, and understanding. From the public health perspective, this was
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9 addressed through the establishment of the *Eastern Mediterranean Health Journal* in 1995
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11 (World Health Organization Eastern Mediterranean Regional Office, 2016; Aly, 2004).

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14 However, from the PE perspective, no similar journal has been established. A significant lack of
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16 print options in a region with reduced internet access and literacy presents as a significant
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18 obstacle.
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21 Among the 14 PE-affiliated journals in Arabic-speaking countries, Iraq was represented
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23 12 times and Saudi Arabia and Egypt were represented once. It may stand to reason that one
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25 factor influencing the number of interrupted or ceased journals in Iraq may be the growing
26
27 political volatility and instability currently facing this country since the Iraq war in 2003. These
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29 factors could be indirectly related to or influenced by post-war reconstruction activity,
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31 democratization, and a rapidly changing institutional infrastructure. While Iraq and the Arabic-
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33 speaking countries saw a minimal increase in research publication following the Iraq war, this
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35 output remained well behind Africa, Europe, and the United States (Maziak, 2011). There are
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37 multiple countries that are not represented within the Arabic-speaking region, which include
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39 Algeria; Bahrain; Comoros; Djibouti; Jordan; Kuwait; Lebanon; Libya; Mauritania; Morocco;
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41 Oman; Qatar; Somalia; Sudan; Syria; Tunisia; United Arab Emirates; Yemen; the Palestinian
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43 Territories. These include significant population centers that rely on siloed sources of
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45 information when looking for regionally produced and culturally congruent PE research.
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51 The full sample provided languages only offered in English, Arabic, or a combination of
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53 both languages. It is noted that in other disciplines, specifically public health and nutrition
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3 journals published in Arabic-speaking region, French is relevant and available to accommodate a
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5 significant readership, particularly in French-speaking North Africa. Providing PE-related
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7 research publications in native languages could offer native professionals with research
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9 information and resources to address the challenges Arabic-speaking countries currently face.
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11 The International Scientific Journal of Physical Education and Sport Science, which originates in
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13 Egypt, offers a single language option: English. For health and PE practitioners to reach and
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15 serve their target populations in Arabic-speaking region, it would be important for journals to
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17 deliver written research in languages tailored to the target populations.
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24 **Conclusions**

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26 Globally, physical inactivity is one of the leading modifiable risk factors contributing to
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28 adverse health outcomes and mortality rates (Titze and Oja, 2013; Hallal *et al.*, 2012; Kohl *et al.*,
29
30 2012). The prevalence of physical inactivity and sedentary behaviors have been widely observed
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32 across the Arabic-speaking region (Mabry *et al.*, 2016; Al-Hazzaa *et al.*, 2010; Kahan, 2015;
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34 Mabry *et al.*, 2010; Mehio Sibai *et al.*, 2010; Hamrani *et al.*, 2015). This contributes to the
35
36 growing global public health challenge with regards to the development and endorsement of
37
38 culturally congruent interventions founded on PE research produced in this region. PE journals
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40 serve as important tools and resources in the dissemination of knowledge and professional
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42 networking from evidence to practice. The disparity in the number of current PE journals as well
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44 the observed language barriers vary in the Arabic-speaking region from their American and
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46 European English counterparts. Global and regional capacity building (Ghannem, 2011) and
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48 collaborative relationships (Dean *et al.*, 2015; Chetwood *et al.*, 2015) are needed to advocate,
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3 develop, and maintain PE and physical activity research, education, and policy within this
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5 region.
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8 For research librarians and practitioners operating in the Arabic-speaking countries, this
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10 review provides a ‘snapshot’ of PE journals that are culturally congruent and applicable. Stability
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12 within the research community could be realized in the form of collaborative cooperation,
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14 particularly between low-income Arab countries such as Somalia and Yemen, where native
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16 Arabic-speaking PE researchers may not have the wide-reaching access and availability of PE
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18 journals, and their middle to high income counterparts. Benefits of sustainable collaborative
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20 institutional and international partnerships between librarians, academic libraries, and research
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22 institutes can be extended between the Arab countries as well as non-Arab countries with a focus
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24 and aim in international and regional PE studies. This collaborative approach to PE research,
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26 beyond the reliance of English-based PE journals outside this region, can be coordinated between
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28 academic research institutions in high income Arab countries with their low-income
29
30 counterparts. The building and sustaining of intersectoral relationships is particularly needed in
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32 Arab countries with low-to-middle incomes to help foster the case for improved regional PE
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34 research organization and could be part of an effective solution to physical inactivity at the
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36 regional level. Further development and continuity of PE journals specific to the Arabic-
37
38 speaking region would help identify and promote culturally relevant policy and programmatic
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40 interventions for this region.
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49 **Limitations**

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51 There are some limitations that should be mentioned within this brief report. While the authors
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53 searched several available electronic resources and databases using various key search terms and
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3 phrases, some journals might have been missed. Additionally, some journals not indexed in
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5 electronic databases may have been missed in the search. It is important to note that this brief
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7 report was intended mainly to present a current status of available PE-affiliated journals in the
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9 Arabic-speaking region.
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Table 1. Physical Education-affiliated Journals in Arabic-speaking Countries

Journal Name	Publication Period^a	Activity Status	Country Origin	Language^b	Print Format^{c, d}	Open Access^d	I.F^e
Saudi Journal of Sports Medicine	2013-present	Current	Saudi Arabia	Eng; Ara	Electronic	Yes	N/A
The International Scientific Journal of Physical Education & Sport Science	2015-present	Current	Egypt	Eng	Both	Yes	N/A
Sciences Journal Of Physical Education	2005-2015	Interrupted/ceased	Iraq	Ara	Electronic	Yes	N/A
University of Anbar Sport and Physical Education Sciences	2009-2013	Interrupted/ceased	Iraq	Ara	Electronic	Yes	N/A
Journal of Physical Education	2005-present	Current	Iraq	Ara	Electronic	Yes	N/A
Scientific Journal Of Physical Education	2012-2013	Interrupted/ceased	Iraq	Eng; Ara	Electronic	Yes	N/A
Misan Journal for Physical Education Sciences	2009-2015	Interrupted/ceased	Iraq	Eng; Ara	Electronic	Yes	N/A
Al Qadisiya Journal for the Sciences of Physical Education	2005-present	Current	Iraq	Ara	Electronic	Yes	N/A
Karbala Journal of Physical Education Sciences	2012-2015	Interrupted/ceased	Iraq	Eng; Ara	Electronic	Yes	N/A
Journal of Sport Sciences	2009-2015	Interrupted/ceased	Iraq	Ara	Electronic	Yes	N/A
Modern Sport Journal	2005-current	Current	Iraq	Eng; Ara	Electronic	Yes	N/A
Al-Rafidain Journal For Sport Sciences	2005-2014	Interrupted/ceased	Iraq	Eng; Ara	Electronic	Yes	N/A
Sport Culture	2009-2013	Interrupted/ceased	Iraq	Ara	Electronic	Yes	N/A
Journal of studies and researches of sport education	2005-present	Current	Iraq	Eng; Ara	Electronic	Yes	N/A

^a Information obtained from PubMed or IMEMR database

^b Eng - English; Ara - Arabic; Fre - French

^c Paper; electronic; Both

^d N/A - Information not available

^e I.F - Impact Factor (2015-2016)