PAMUKKALE JOURNAL OF SPORT SCIENCES

dergipark.org.tr/en/pub/psbd

ISSN: 1309-0356
Year: 2022 Volume: 13 Number: 3
Pamukkale University
Faculty of Sport Sciences
Turkey

PAMUKKALE JOURNAL OF SPORT SCIENCES
Pamukkale Spor Bilimleri Dergisi

Volume: 13 Issue: 3 Year: 2022
ISSN: 1309-0356

INDEXING
DOAJ
EBSCO - SPORTDiscus Full Text
Index Copernicus Master List
Scopus, Türkiye Atıf Dizini

Corresponding Address
Pamukkale Üniversitesi Spor Bilimleri Fakültesi Dekanlığı
Kınıklı Kampüsü 20700, Denizli/Türkiye
Phone: +90 258 296 12 77
E-mail: pjss.online@gmail.com

PAMUKKALE JOURNAL OF SPORT SCIENCES
ISSN: 1309-0356
dergipark.org.tr/en/pub/psbd

CONTENTS

Research Articles

doi.org/10.54141/psbd.1169269

PAMUKKALE JOURNAL OF SPORT SCIENCES
ISSN: 1309-0356 dergipark.org.tr/en/pub/psbd

Pamukkale J Sport Sci, 13(3), 101-130, 2022 Research Article

Online Media: Why Use It? To What Benefit? An Examination of Online Communication Within National Olympic Committees

Mehdi REZZAG HEBLA[*1] **Farah RAHAL**[2]

[1]*Ph.D. Candidate, MarkeTic Laboratory, Ecole des Hautes Etudes Commerciales d'Alger, Algeria.*
[2]*Ecole des Hautes Etudes Commerciales d'Alger, Department of International Affairs, Algeria.*

ABSTRACT

Keywords
National Olympic Committees,
Organizational Website,
Online Communication Outcomes,
Social Media,
Usage Purposes

Article History
Received 31 August 2022
Revised 09 October 2022
Accepted 08 November 2022
Available Online 20 December 2022

[*] **Corresponding Author**:
Mehdi Rezzag Hebla
E-mail Address:
mehdi_rezzaghebla@protonmail.com

Relationship development is indispensable to sports organizations that are now using online media with increasing interest in building and maintaining relationships with the online publics. Most studies examining online communication are based on content analyses of organizations' social media profiles. At the same time, only scarce literature approaches the phenomenon from an organizational perspective in that scholars try to assess the degree of online media adoption, these studies are limited by the sample typology thus limiting the generality of their findings. This study investigates online media usage purposes in 17 National Olympic Committees (NOCs) and their perceived outcomes through a qualitative approach. Respondents identified various usage purposes like information dissemination, centrality, and control over the narrative, organization, and stakeholder promotion. The most prominent outcomes of such usage are constituency knowledge, stakeholder relations, engagement enhancement and raising awareness of issues. Implications for practitioners and research recommendations were also discussed.

Citation: Rezzag-Hebla, M. and Rahal, F. (2022). Online Media: Why Use It? To What Benefit? An Examination of Online Communication Within National Olympic Committees. *Pamukkale Journal of Sport Sciences*, 13(3), 101-130. doi.org/10.54141/psbd.1169269

INTRODUCTION

Regardless of the sports industry ever-growing presence on the web and especially social media (Billings et al., 2019), abundant research on how national sports organizations (NSOs) use available online media (e.g., Abeza et al., 2019; Naraine & Parent, 2017), but little does it tell us about why these organizations use online media and the outcomes of such usage. Online media is touted to be the ideal tool for its potential to foster dialogue with stakeholders (Gao, 2016; Hia et al., 2020) it enables a reciprocal relationship where both parties receive added value and are loyal to one another, ensuring nonprofits' continuing existence (Falkheimer & Heide, 2014; McCambridge, 2015).

With the establishment of Web 2.0-based online platforms as the stage where every user can gain a following by informing and interacting with other users, practitioners are presented with the opportunity to target and instantaneously interact with various stakeholders (Greenwood et al., 2016). With that considered, the majority of nonprofit organizations rushed to have an online presence. Similarly, nonprofits identified various outcomes of online media usage, e.g., establishing a public presence for the organization, facilitating communication with the publics, enabling faster and enhanced service delivery, and resulting in cost savings in meeting stakeholder needs, to name a few (Geller et al., 2010).

Like practitioners, scholars have been paying attention to online relationship development with particular emphasis on social media (SM) as promising grounds for meeting organizational goals. In doing so, the role of the organizational website in sports communication remains rather overlooked, and research on why the latter is being used is scarce. And most of the existing research approaches the phenomenon through quantitative methods (Abdourazakou et al., 2020; Abeza et al., 2020).

Indeed, content analyses are among the most popular methods to investigate online media usage (Abeza et al., 2019) which offers insight into functionality and content that should be utilized to meet organizational goals. An instance of that is the comparison of two measurement instruments derived from distinct frameworks (i.e. the nonprofit website stage model and the automated testing services model; Kirk et al., 2016) where it was argued that while some models focus on serving the public informational needs (e.g., need for transparency) as well as organizational needs (e.g., the constitution of social capital); other models focus on enhancing user experience and facilitating interactions with an organization through its website. Such analyses further our understanding of how organizations tap into online media's potential to communicate with various publics. However, examining the

organization-public relational dynamic through this lens provides little insight into the organizational perspective and intent, which constitutes the impetus of the present research.

This research seeks to bridge the knowledge gap by uncovering the usage purposes of online media from the perspective of communication professionals within NSOs and the perceived outcomes thereof.

Of note, we seek to uncover the perceived outcomes of online media usage as opposed to actual outcomes, i.e., determining the outcomes from the perspective of practitioners within sports organizations rather than trying to measure the outcomes objectively. The rationale behind this decision is that it furthers our understanding of practitioner perspectives on the benefits of online media, thus offering novel approaches to enhance current communication practices in NSOs accounting for practitioners' attitudes.

The literature review mainly focuses on research addressing online media usage and adoption with an emphasis on sports organizations. Following the literature review, we provide a detailed description of how data was collected and analyzed, followed by key findings and a discussion of the latter. We conclude by highlighting the practical implications of the findings and by suggesting key areas to be explored in future research. In the following paragraphs, we provide a review of the literature relevant to the present research:

Historically traditional media such as radio, print, and television have established a boundary separating the producer from the consumer. Such venues enabled a unilateral communication paradigm in which organizations (producers) fill the role of the hegemon rendering publics to passive consumers (Mogensen, 2014), in doing so, traditional media confer almost complete authority on content producers as opposed to social media.

McFarland and Ployhart (2015) defined social media as any web 2.0 platform that enables user-generated content, either by a single individual or as a result of the collaboration across multiple users. These platforms encompass web- and mobile-based technologies that allow organization-user interactions and the formation of communities around predefined themes, people, and organizations through content sharing. By "content", it is referred to the information posted on these platforms under different formats – text, videos, pictures, or anything else that these platforms support.

While traditional media allow the public to interact to some extent (e.g. via phone calls on live broadcasts), online media platforms have magnified the interaction between an organization and its publics. Websites, on the other hand, allow users to voice their opinion as well as SM have enabled a change in the status quo by enabling individuals to include their voices in the conversation. This is not to say that all users take part in the conversation; a

significant portion of users are passive but still consider themselves part of the community and the conversation taking place (Dean, 2022; Williams et al., 2014).

The shift from traditional media to online media has opened a new field of research. Scholars have praised the potential of the web as a tool to enable two-way communication. Parveen et al. (2015) investigated how Malaysian companies use SM, i.e., for usage purposes and subsequent impacts on organizational performance. The researchers found that SM is used for various purposes, the most prominent being advertising and promoting products, branding, as well as in customer relationship management. Similarly, the authors found such usages benefitted the organization by enhancing the quality of its relationship with customers, and customer service; it was also found to be a cost-efficient means in marketing endeavors.

In the nonprofit sports arena, Naraine and Parent (2017) examined Canadian NSOs' SM adoption. Many hindering factors were identified, among which the lack of resources in that sport development expenditures take precedence over online communication. Additionally, considering the bilingual demographic within Canada, organizations struggled to create content for both communities, which caused some to refrain from using SM. Similarly, in a content analysis of Canadian NSOs conducted by Abeza and O'Reilly (2014) to investigate social media use to create dialogue, the authors found that contrary to supporting voices of SM's potential to create dialogue, SM platforms were mainly used for information dissemination. The authors also found that users did not engage in dialogue, they tended to "like" content instead of sharing opinions. Alike, NSOs were reported to be non-responsive to users' comments and questions, this finding is congruent with Hambrick and Svensson's (2015) findings where Gainline Africa staff members reported difficulty in creating interactivity with users, as interactive content did little to generate public engagement. Instead, users demonstrated interest in content via likes but were reluctant to take part in a conversation.

Extant literature seems to indicate that dialogue as a result of two-way communication is more prominent in the for-profit sector as contrasted with nonprofits, the findings of Wang and Yang's (2020) comparison between for-profit and nonprofit organizations' usage of online media draws a clear distinction between for-profits' focus on the dialogic loop, and nonprofits' focus on the usefulness of information provided and visitor retention; reasons behind this heterogeneity, however, remain rather unclear. Similarly, Abeza et al. (2013) investigated SM use within race event organizers to identify opportunities and challenges. The authors stated that organizers increasingly extended their online communication beyond one-way static communication approaches. SM enables a better understanding of customers through

advanced interactions as compared to traditional approaches, organizations can synchronously interact with stakeholders in a dynamic one-to-one dialogue (Abeza et al., 2013).

While this definition does not seem to have a unanimous consensus in the scientific community on the field. Both nonprofits and for-profit organizations seem to struggle in generating engagement, it also appears that these studies consider engagement as a phenomenon that is manifested through quantitative metrics – likes, shares, and numbers of comments. A considerable number of scholars consider engagement as a phenomenon that transcends the boundary of mere numerical metrics, they define engagement as a product of dialogue wherein both parties, online publics, and the organization, maintain ethical dialogue with the intent of reaching a mutually beneficial position that serves the interests of all parties taking part in dialogue (Annamalai et al., 2021; Kent & Lane, 2021; Kent & Taylor, 2002; Lovejoy & Saxton, 2012; Nah & Saxton, 2013). This can be achieved by continually educating one's interlocutor on the current state of affairs of issues, events, or organizational decisions in hopes of unifying efforts of all parties to reach a common ground or an objective by demonstrating how it serves the interests of the addressed party. In this definition of engagement, ethical implies that the organization or the stakeholders engage with their counterparts while being predisposed to change their position on issues to reach common ground. This definition relies on the ethical intentions governing a relationship, which is rather difficult to assess or measure. Additionally, it considers the engagement of both the organization and its online publics. In the present study, we only account for the online publics' engagement, we also consider engagement as the process through which the organization guides its online publics toward a tangible behavioral manifestation, e.g., attending events, making donations, volunteering, etc.

In the past fifteen years, online communication research approached new media communication through quantitative methods, mostly through content analyses and surveys; fewer studies in the field of sport communication examined the phenomenon through qualitative methods (Wang et al., 2021). Additionally, little interest was given to the use of organizational websites in combination with SM (Nitschke et al., 2016) which is considerably influenced by the sentiment that organizational websites are a platform for information dissemination. Although many examples support this claim (Kim et al., 2014; Schudde et al., 2018; Sommerfeldt et al., 2012), other scholars contend that it is rather dependent on how organizations use the official website, resource availability, and the technical know-how (Garett et al., 2016; Kirk et al., 2016). In light of the review of the literature, it remains unclear

why national sports organizations, specifically, elect to use online media to communicate with various publics and what outcomes result from such usage as perceived by the organization. It is therefore the direction of this study to illuminate the overarching impetus of online media usage and outcomes as a result thereof from a practitioner's perspective. Although a plethora of studies on online media usage was carried out as detailed in the literature review, the vast majority of them pertain to the for-profit sector (Abdourazakou et al., 2020; Abeza et al., 2013, 2019; Abeza & O'Reilly, 2014; Hambrick & Svensson, 2015), sports organizations in the nonprofit sector remain rather understudied.

Moreover, previous studies focus on organizations within well-defined national or regional borders which significantly limits the generalizability of their findings. Understanding the significance of online media for NSOs is of great relevance because of the influence that national sports organizations exert on the sports scene both nationally and internationally (Naraine & Parent, 2017). This undertaking would not only help similar organizations identify best practices, but it is also an endeavor to contribute and inform the nonprofit literature to unify the narrative around current practices which helps researchers introduce recommendations that are congruent with professional practices. This study aims to build on the existing literature by examining the National Olympic Committees' use of online media. In addressing identified gaps, the present article seeks to answer the following questions:

RQ1. What purposes motivate online media usage by practitioners within NOCs?

RQ2. What are the outcomes, if any, as perceived by practitioners within NOCs?

To serve this purpose, the conceptual model for sports communication was used as a theoretical framework to guide our research and situate the findings within the sports organizational communication landscape. Initially developed by Williams and Chinn (2010) based on Grönroos's (2004) Marketing Process Model, this conceptual model comprises three primary dimensions: communication, interaction, and value. The first dimension, communication, encompasses the reduced reliance on traditional media to the benefit of online media, the integration of social media into the communication strategy, as well as forms of planned, e.g., content created by the organization, and unplanned messages, e.g., third party news stories. The second dimension accounts for organization-stakeholder interaction, and contribution through online media, i.e., content created by members of the community which hinges on two-way communication, as well as the presence on and use of a variety of online media at once, i.e., cross-platform presence and communication. The last and third dimension is value, i.e., the outcome of the usage of online media. The latter dimension encompasses the

increased organization-stakeholder interaction as a result of the recognized importance of online stakeholder participation. Simply put, Williams and Chinn's (2010) conceptual model marries outcomes of online communication with cross-platform presence (e.g., blogs, social media, forums, and organizational websites). This undertaking helps situate the present study within the broader scope of organizational communication, it also helps practitioners in comparable situations adopt the best practices and reflect upon the optimization of their online communication.

METHODS

A qualitative design was implemented to gain insight into the experiences of participants regarding online media usage purposes and perceived outcomes for their organization. Of note, the reader should bear in mind that the interview guide was designed to gather data on different aspects of organizational online communication as it is part of a larger research project; only usage purposes of online media and perceived outcomes fall within the scope of the theoretical framework discussed in the literature review. The interview questionnaire was developed upon review of analogous studies (namely, Abeza et al., 2013, 2019; Abeza & O'Reilly, 2014; Naraine et al., 2021; Naraine & Parent, 2017), whereas the conceptual model proposed by Williams and Chinn (2010) helped us situate the identified themes within a coherent underlying framework. Although this conceptual model addresses multiple facets of organizational communication, some features fall outside the scope of this study insofar as they address practices of agents external to the organization, i.e., community-generated content, and unplanned messages pushed by third-party content creators like journalists and bloggers.

Study Group

As regards the choice of the sample, i.e., National Olympic Committees, these are nonprofit NSOs. NOCs have ties to the international sports scene, e.g., the International Olympic Committee, regional sports associations, and continental and international sports federations. This further emphasizes the importance of online media to circumvent the lack of resources required to leverage traditional media (Naraine & Parent, 2017). It, therefore, constitutes a framework of conformity whereby NOCs operate despite their national environment in that, although each NOC engages in a national environment with a distinct cultural climate, examining a sample of NOCs should offset cultural idiosyncrasies by giving prominence to only the common traits across these organizations which in turn contributes

greatly to the generalizability of the findings to a wide range of NSOs, as contrasted with an examination of national sport organizations within a specific country or region.

The sampling method was the typical case selection which can be described as creating a profile of characteristics for an average case and finding instances of that (Daymon & Holloway, 2010). The selection criteria were that the organization had to be officially recognized by the International Olympic Committee (IOC), resulting in a list of (N=206) National Olympic Committees' website URLs. After this step, the websites were manually visited to ensure their accessibility and that content hosted on the website has been updated within the last three months effectively reflecting that the organization is actively communicating with the online publics through the organizational website, this step resulted in the removal of 32 National Olympic Committees. In the third phase, related Facebook page URLs were collected, for a Facebook page to be considered as "official", it had to possess the "verified badge" and/or linked-to on the website official website of the organization, 44 additional NOCs were removed at this phase. Finally, prior to sending the invitation to the sampled organizations, contact was established with two National Olympic Committees as part of a pilot study, two participants were asked about the medium of convenience they prefer to participate in the interview, to which they indicated that email interviewing would be a pertinent option. To carry the interviews, we ensured that NOCs in the sample provided email contact information, 37 additional National Olympic Committees were removed resulting in a sample of (n=93) NOCs.

Recruiting was done in two phases, first by sending an invitation to our sample through the appropriate email address. In the second phase, NOCs that expressed willingness to participate in the study were sent the interview questions. Participants were given a detailed description of the context of this research. They were informed that they can refrain from answering any questions or withdraw from the study at any time (Meho, 2006). Earlier, five responses were collected and analyzed, following which, 12 additional NOCs were added until theoretical saturation was attained, i.e., no new insight could be identified from the last response collected making a total of 17 responses collected out of 93 initial invitations which amount to a response rate of 18.28% which lower that the response rate in comparable studies which ranges between 20% to 30% (Seltzer & Mitrook, 2007; Taylor et al., 2001). However, a low response yield can be explained by the complexity of our request (i.e., a request to participate in an interview) as compared to the requests of comparable studies (i.e., a single question about organizational activity). Participants had various roles ranging from Chief of Communication Officer to entry-level positions, specific data regarding participant positions

are withheld for confidentiality concerns as some participants did not explicitly consent to disclose their identities. Consequently, consideration was given to ensure their privacy, including not reporting the country and name of the NOC, not explicitly reporting their job titles, and replacing the name of the NOC with a generic one (Table 1).

Data Collection Tools

Considering the nature of the sample, i.e., participants are geographically dispersed, the difference in time zones and the language barrier, email interviewing is a viable solution, it is cost-efficient in terms of time considering its asynchronous nature, and multiple interviews can take place concurrently. Additionally, it allows respondents to formulate their answers competently, which results in well-thought feedback (Daymon & Holloway, 2010).

Data collection was carried out by way of semi-structured interviews. The period between the consent to participate in the study and the completion of the latter ranged from three days to six weeks, from October 2020 to December 2020. Answers were in the form of short sentences, bullet points to multiple paragraphs. Although participants are from different nationalities, 16 out of the 17 collected responses were written in English; one response was written in French, and though the authors understand the French language, participant answers were translated from French to English using the Google Translate service to limit the researcher's influence. The translated answers were, then, read and edited to ensure that the translation accounts for the context of organizational communication.

Data Analysis

Data were unitized and then deductively coded. The unitizing of data segments provided an initial opportunity to align the segments with the specified research questions. Subsequently, information units were classified under emerging themes based on similarity in meaning. Constant comparison was used, that is, recurrent revision and modification of the obtained themes to reach theoretical saturation (Charmaz, 2014). To perform these steps, all data were imported into QDA Miner Lite, a data analysis program that allows data unitizing and coding. Using the Varimax method in the Factor Analysis set for measures higher than 1, 12 facets were at hand including the %70 of the total variance. The status of convergent reliability and validity coefficients are depicted.

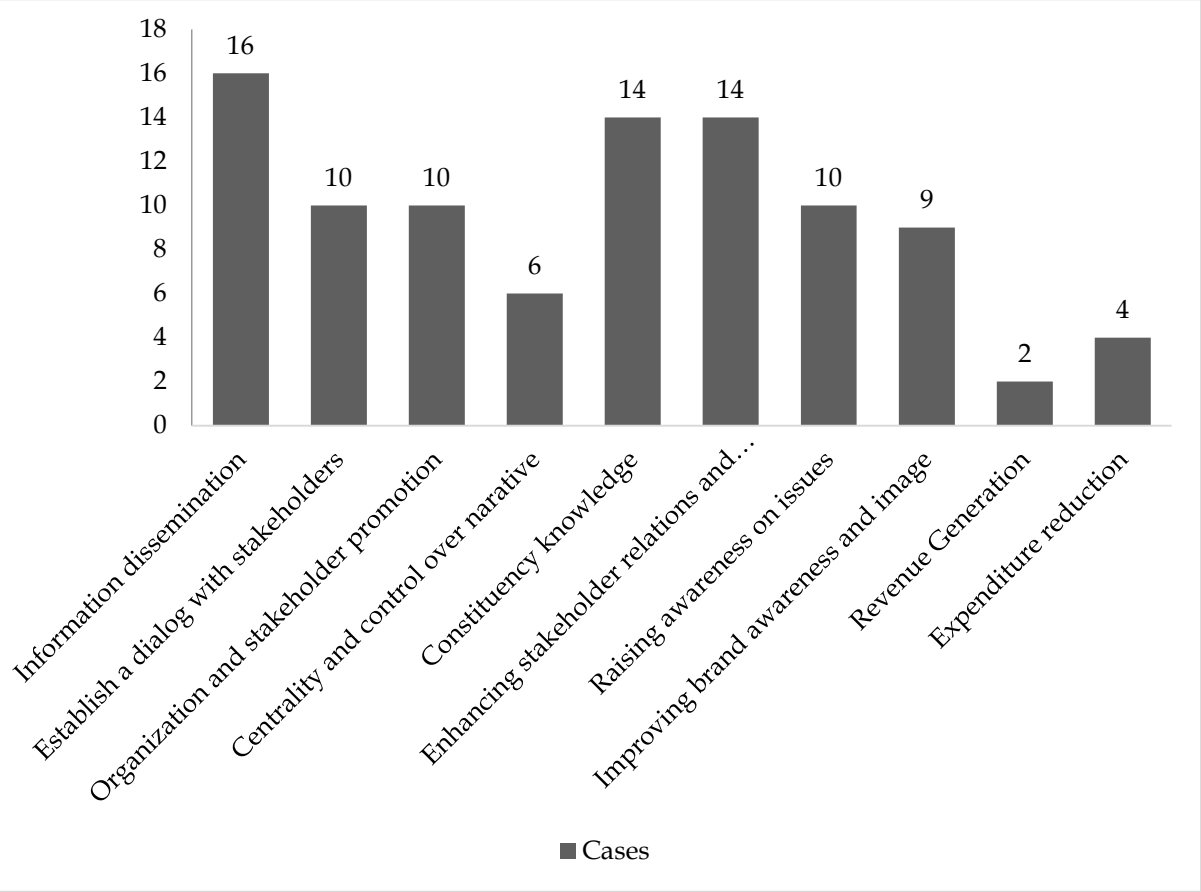
A qualitative content analysis was used to identify the importance of themes based on the number of participants' responses in which a theme is present (see, Morgan, 1993; Figure 1), the qualitative content analysis is not statistically inferential by nature, its only purpose is to help situate a given theme based on its prominence compared to other themes, e.g., a theme

that was identified by 20% participants should be considered as important as a theme identified by 70% of participants (Morgan, 1993).

Table 1
List of Participants (NOCs), Social Media Presence, and Online Media Presence Estimated Based on the Number of Followers Per Country's Population

Country	Official NOC title	Social media channels used	Facebook followers / Country's population	Online media presence (OMP)
Kosovo	Kosovo Olympic Committee	Facebook, Instagram, LinkedIn, Twitter, YouTube	5.46%	High
Liechtenstein	Liechtenstein Olympic Committee	Facebook, Twitter	3.82%	High
-	NOC B	Facebook, Instagram, Youtube	2.62%	High
Great Britain and Southern Ireland	British Olympic Association	Facebook, Instagram, Snapchat, TikTok, Twitter, Youtube	2.47%	High
-	NOC A	Facebook, Twitter, Instagram, LinkedIn, Snapchat, Youtube	2.34%	High
Ireland	Olympic Federation of Ireland	Facebook, Instagram, Twitter, Youtube	1.46%	High
-	NOC C	Facebook, Twitter, Instagram, Pinterest, Youtube, TikTok	1.23%	High
-	NOC D	Facebook, Instagram, Twitter, Youtube	1.04%	High
-	NOC E	Facebook, Instagram, Twitter	0.77%	Low
Croatia	Hrvatski Olimpijski Odbor	Facebook, Twitter, Youtube, Instagram	0.74%	Low
-	Organization F	Facebook, Twitter	0.58%	Low
Panama	Comité Olìmpico de Panamà	Facebook, Instagram, Youtube, Twitter	0.53%	Low
Bosnia and Herzegovina	Olimpijski Komitet Bosne i Hercegovine	Facebook, Instagram, Viber	0.41%	Low
-	NOC G	Facebook, Twitter, Instagram, Youtube	0.26%	Low
Singapore	Singapore National Olympic Council	Facebook, Twitter, Instagram, Youtube, LinkedIn	0.13%	Low
NOC H	NOC H	Facebook, Twitter, Youtube, Instagram	0.08%	Low
Algeria	Comité Olympic et Sportif Algérien	Facebook, Instagram, Youtube	0.07%	Low

Figure 1
Online Media Use Purposes and Outcomes for NOCs, i.e., Number Of Cases (Participants) in Which a Theme was Identified



RESULTS

RQ1. Use purposes:

The themes originating from the obtained data revealed that NOCs used online media for various purposes, namely for information dissemination, establishing a dialogue with various stakeholders, increasing reach and control over the narrative, and self and stakeholder promotion (Figure 1). A detailed account of emerging themes is provided below.

Information dissemination:

The most common theme of why NOCs use online media was to promote organizational activities. In 16 interviews, participants indicated that they leverage their website and SM profiles to reach the public regarding organizational activities and upcoming events (at the time of conducting the interviews, the main marketed event was the Tokyo 2020 Summer Olympics, which was held during the summer of 2021), the participant on behalf of the NOC G indicated that: "…communication on the web is mandatory for any organization, large or small. Social media has helped us a lot to gain visibility and recognition".

Content creation appears to be a constant process, in which teams collaborate to share the main content on the website and complementary micro-content to share on their social media feed to redirect users to the organizational website, the participant on behalf of the NOC of Croatia indicated that:

> *"We do it pretty well. We share short headlines on our Twitter feed, and we offer relatively more information on Facebook because it's possible and people are likely to read the text, we also get more engagement by appending pictures or video clips to the text… a link is often provided to redirect users to the website for more information."*

Respondents also emphasized the relevance of maintaining a level of transparency vis-a-vis stakeholders and the general public by disclosing information regarding their yearly activity, staff, and financial reports. The impetus to reveal this sort of information not only does it emanate from social accountability concerns but also appears to be a contributing factor in sustaining the relationship with funding bodies and sponsors, the participant on behalf of the NOC of Panama stated that:

> *"We have three teams, each dedicated to a category of stakeholder, we have the sports federations team, the education team and we have a team whose purpose is to engage with the general public, to tell stories about relevant events, scores and upcoming competitions. We have a news feed about the preparations and events leading up to the games for the fans to keep them informed in real time."*

Engage in a dialogue with stakeholders:

Though many respondents (10) underscored the importance of online media, in that it provides the organization a platform to voice the Olympic Movement and its values; it does not appear to be the only motivation. The conversational nature of SM appears to be the focus of these organizations to initiate a dialogue and, subsequently, mobilize stakeholders towards the desired goal, the participant on behalf of the NOC of Algeria emphasized that:

> *"We need to be where our stakeholders are in order to open a dialogue and inform them of our events, and unite them around the Algerian National Olympic Committee. We also use Facebook as our primary social media platform to relay information to the public."*

Participants indicated that they utilize both external channels (i.e., sharing content on the website and SM). Still, they also resort to internal channels (e.g. direct contact via Viber, media & press mailing lists, etc.) depending on which stakeholder respondents seek to reach, the participant on behalf of the NOC A stated that:

"To generate engagement, it depends on what we are specifically looking for, sometimes on the web with likes, shares, clicks and time spent on the website, but sometimes we need to provoke, for lack of a better word, some sort of real life reaction in some form or another, it could be getting people to donate or volunteer to help athletes in their community work."

NOC and stakeholder promotion:

Not only do NOCs promote themselves and the values they advocate for, within the community, but they also proclaim relationships with other nonprofit/governmental organizations to foster support, the participant on behalf of the NOC D stated:

"We are cooperating with the IOC on the refugee program launched by the IOC in 2016 to break down barriers and help athletes whose countries are in crisis to be part of the Olympic family under a unified banner."

Similarly, besides promoting other nonprofit/governmental organizations, NOCs leverage their audience to acquire and promote commercial partners, according to the participant on behalf of the British Olympic Association:

"The role also has close ties with the commercial team helping generate value from digital packages and sponsored content with our commercial partners as well as with the wider marketing and communications team on our brand and PR activities... It's our main news feed source and an important part of how we keep the Team GB brand alive outside of Games-time. With over 3,000,000 followers across our social platforms, these channels allow us to champion our athletes 365 days a year, maintain our position as the voice of Olympic sport in the UK and engage our athletes, fans and partners in all things Team GB."

Centrality and control over the narrative:

Some respondents (6) underscored the need to make the organization's online outlets the main source of information, in that respondents use the website to host exclusive content such as interviews with athletes, coaches, and statements from heads of national sports federations. NOCs then share links leading to the content on SM which is considered a platform with higher reach potential than that of the website.

Respondents explained that they need to be the main source of information when it comes to "anything Olympic", they underscored that it is due to seasonality in their activity which makes third-party media less likely to cover stories about the organization outside major events. As such, it serves as an impetus to become the main information source that the

public would elect. For example, the participant on behalf of the NOC of Kosovo argued that "*…in order to reach as many people as possible we take advantage of all popular social media platforms at our disposal*". While the Participant on behalf of the British Olympic Association emphasized that "*Team GB is at the centre of the media landscape every two years - either a summer or winter Olympics… However, for the rest of the time, Team GB is not obviously in the public eye*".

Furthermore, participants emphasized the freedom and control over content and format they enjoy on the website in juxtaposition to SM platforms, the participant on behalf of the NOC of Panama stated:

> *"We decided to make our social media posts more engaging to encourage people to visit the website to read the full story."*
>
> *"The reason we want people to visit the website is because we see social media as having a complementary role that leads readers to the source, the official website where we have the freedom to choose the format and topic..."*

Liberty also encompasses choosing the narrative following which a story is told and the tone in 'celebrating' athletic achievements as opposed to third-party media outlets, which might tell it in a neutral manner that does not meet NOCs' expectations, the participant on behalf of the NOC of Singapore stated that:

> *"It's liberating, it gives the organization its own voice and a unique identity through original content and the way it's told, it helps keep us away from the monotony of external media. I don't mean this as a criticism. In fact, they need to be detached to some extent to tell a story objectively..."*

RQ2. Perceived outcome on the organization:

Similarly, according to our respondents, the unique character of online media benefitted NOCs in various ways, namely: constituency knowledge, enhancing stakeholder relations, and engagement being the most common outcomes identified by participants (Figure 1), followed by raising awareness on issues, enhancing brand awareness and image, fewer respondents reported that online media contributed in reducing their communication expenditures as well as by generating revenue.

Constituency knowledge:

Respondents indicated that they leveraged data from their website and SM to adequately segment and profile their publics, respondents also analyze the data to gain an understanding of the publics' informational needs when interacting with content as well as

the ways they approach the organization. Such inputs enable managers to formulate communication plans to serve content, the Participant on behalf of the NOC of Great Britain stated:

> *"We do a lot of work with third party agencies to research our audiences. This work profiles the sort of people who are stakeholders of Team GB, what sort of content and communications they like, and how they engage with us. This is an important part of how we then formulate our communication strategy."*

Conversely, though participants see the benefits of conducting market research using data available about their online publics, some of them do not carry out similar operations, mainly due to a lack of resources and know-how, the participant on behalf of the NOC of Ireland stated that "*Collecting stakeholder information helps the organization for an aimed information and would lower costs, however it would require planning before undertaking such actions."*

One participant underscored that collecting data enables them to remain aware of how the organization and its stakeholders are perceived by fans and other publics. They also stated that it allows them to identify trends and hot topics that relate to the organization, which in turn contributes to the process of content creation, the participant on behalf of the Croatian NOC argued:

> *"… [by monitoring] mentions of our organization and those of our partners in addition of their recent activities, we can identify trends and hot topics that can affect us or have any sort of relation to the organization. Monitoring partners and related organizations helps come with ideas to generate content especially when there isn't much going on. In addition to that, I find that social media helps organizations understand the relationship they have with their public on the net."*

Constituency knowledge as a theme was prevalent across participants' responses. Upon further examination of participants' responses, we found that most participants used basic metrics as indicators of the general public sentiment (e.g. likes, comments, and shares).

Some participants acknowledged using cookies and SM APIs as a conduit to collect data and occasionally resorting to third party agencies to make sense of it. Most of the identified techniques used third-party toolkits like Google Analytics for the website, and SM dashboards available by default. While advanced techniques allow managers to assess public opinion through sentiment analyses, the less advanced techniques facilitate quantitative analyses, e.g., measuring time spent, bounce rate, or the number of pages visited among other indicators.

Overall, only 6 out of 17 participants (35%) reported using advanced techniques to gain insight into online engagement.

Enhancing stakeholder relations and engagement:

One participant stated that by showing a willingness to engage in a two-way exchange with publics on the website and SM, NOCs were successful in increasing engagement which helps them gain insight into publics' expectations as described, for instance, by the participant on behalf of the NOC G:

> *"We paint the website as not just a platform that relays stories about sporting events or an information platform. We want people to understand that we are here to help the sports community, we invite people to participate and attend events and sometimes we send survey request forms when questions arise. The more people are involved the richer I find feedback to be. We carry this message on all our web platforms."*

One participant (NOC A) concurred that"it helps adding a human aspect to our relationship with them [publics]" by portraying the organization as transparent and open to feedback which humanizes the brand. Respondents mentioned that being accessible helps them reach and retain users from the younger generations. The expedited nature of online media enables organizations to promptly respond to feedback in a one-on-one dialogue with no restriction, for instance participant from NOC F stated that "The web allows for a more personal relationship with the stakeholder, we can answer their questions; we can adjust our strategy in real time based on the feedback we receive."

Raising awareness on issues:

In discussing the relevance of online media to NOCs participants emphasized the importance of online media in raising awareness regarding social issues which directly tie to the activity of NOCs, e.g., the inclusion of women in competitive sports and related fields, the promotion of sports culture within remote areas, anti-doping campaigns, etc., as described by the participant of the Algerian NOC:

> *"We have multiple stakeholders with different interests, sports federations, the state administrations of sports and youth in each city. Generally, we focus on reaching the youth and fans, the promotion of women through sport, high level athletes to help them finance their preparations."*

Participants stated that they also leverage their social capital to raise awareness on issues that do not directly or exclusively relate to NOCs' activities. Many respondents stated

that they collaborated with health organizations to raise awareness regarding the Covid-19 pandemic, the participant on behalf of the NOC A stated:

> *"In our case, communicating on the website and social media platforms helped us raise awareness of the pandemic, not only this communication campaign is addressed to the sports community but to the general public, we collaborate with health institutions to encourage people towards a responsible conduct... "*

Enhancing brand awareness and brand image:

Participants stated that they rely on online media to remain relevant to the public eye, thus enhancing brand awareness, especially outside major events. This is illustrated by the response of the participant on behalf of the NOC of Bosnia and Herzegovina "*For any organization, the Website represents a window to the world!... NOC of BiH has developed a new website, which is highly functional and practical. NOC of BiH is also present on all social networks very successfully.*"

Participant from the NOC F stated that they brand not only themselves but also their commercial partners, by doing so, NOC F serves some of its organizational goals, i.e., gaining exposure vis-à-vis young talents and providing exposure to the public for the sponsors:

> *It's essential for us, our website and social media profiles are very important for people to know about us, our programs and attract the attention of young talent; it's also a great way to offer visibility to our sponsors. And ethically, it makes us transparent as an organization.*

Expenditure reduction:

Organizations claimed that their online media platforms proved to be a cost-efficient tool to reach different publics as an alternative to third-party media as is stated, for example, by the participant on behalf of the Panamanian Olympic Committee:

> *"This is an important asset, reducing distances and saving time and resources, we could reach thousands of people with little means. We also consider these channels as our own media compared to the press on which we have limited influence, therefore we can not [sic] control the news they share and those they don't."*

One participant emphasized the importance of owned online media considering the nonprofit nature of NOCs, that is, the lack of financial and human resources, as emphasized by the participant on behalf of the NOC C:

> *"The web is the backbone of our communication strategy which happens to be budget-friendly... Reaching audiences on the web is cost effective, and cost is an important factor*

to consider in a case like this, and data is freely available on social media, any user can access it with minimum cost.“

Revenue generation:

For a few NOCs, there was an appreciation of the role that online platforms play in generating income by providing a dedicated section on the website to sell merchandise or by sharing sponsored content on social media, an instance of that is the statement of the participant on behalf of the British Olympic Association:

“The role also has close ties with the commercial team helping generate value from digital packages and sponsored content with our commercial partners as well as with the wider marketing and communications team on our brand and PR activities... Our social networks have also enabled us to drive commercial success around Team GB.”

Some participants went so far as to suggest that NOCs do not only leverage their brand to sell goods and promote sponsored content, but they are also mindful of the potential of owned media and the following generated thereby in negotiating with and acquiring sponsors, the participant on behalf of the NOC E argued:

“Increasing the number of visitors to the website gives us leverage when negotiating with partners and sponsors. I think this is a good strategy because it creates a win-win situation: we aim to create quality content for visitors in order to gain traffic.”

DISCUSSION

The purpose of the study is to provide an understanding of online media usage purposes and outcomes for the National Olympic Committees, a nonprofit national sports organization. Some of our findings are consistent with previous studies regarding identified themes, i.e., information dissemination, engagement generation as usage purposes, lack of resources and technical knowledge as challenge. We gained new insight, however, into the special uses of online media dictated by the nonprofit character of NOCs which explains the emphasis on information dissemination as a purpose for online media usage, especially the website. The findings of the present study go a step further by identifying that seasonality in NSOs’ activity is a cogent factor in the way NSOs use online media outlets that is to establish the organizational online outlets as a central source of information through which they have the control over the frequency and narrative of the messages. Table 2 offers a summary of usage purposes and identified outcomes as reported by the participants.

Table 2
Online Media Usage Purposes and Outcomes for National Olympic Committees

Purpose	Outcome
Information dissemination Marketing organizational activities: leveraging online outlets to inform about and promote activities and events. Social media play a support role: multiple teams/individuals contribute to content creation which is fully shared on the website and supported by micro-content on SM. Maintaining transparency: disclosing information about the yearly activity, financial statements, staff, etc.	**Constituency knowledge** Using data to identify, segment, and profile publics. Understanding the publics' informational needs. Use of advanced techniques: mostly in the high OMP cohort (e.g. APIs and cookies; in some cases, third party agencies to interpret data) in combination with basic metrics. Use of basic techniques: mostly in the low OMP cohort (e.g. likes, comments and shares, time spent on a page, bounce rate, etc.) Monitoring of trends and hot topics to come up with content ideas.
Engage in a dialogue with stakeholders Two-way communication helps in generating engagement and mobilizing constituents towards the desired goal. Using internal channels (e.g. Viber, mailing lists) to interact with some stakeholders; using public channels (i.e. organizational website and social media) to interact with other stakeholders (e.g. fans) on a larger scale.	**Enhancing stakeholder relations and engagement** Willingness to engage in dialogue: heightens engagement, humanizes the brand, accessibility helps in reaching and retaining youth. Expedited nature of online media: promptly respond to feedback, engaging in a one-on-one conversation, with little to no restrictions.
NOC and stakeholder promotion Self-promotion: promoting the organization, its activities, and the values it advocates for. Stakeholder promotion: promoting partners and athletes to gain credibility and reach constituents of their partners. Sponsor promotion: as part of the partnership agreement. Leveraging followers to acquire sponsors.	**Raising awareness on issues** Issues directly related to NOCs: the inclusion of women, promotion of the sports culture in remote areas, and anti-doping campaigns. Issues partially related to NOCs: collaborating with health and government organizations to raise awareness of the pandemic.
Centrality and control over the narrative Seasonality of activity incites establishing oneself as an authority figure among information providers, the main source of information by providing exclusive content. Freedom over the format: website hosts various types of content, e.g., articles, surveys, files, audiovisual content, etc. Control over narrative and tone: NOCs choose the narrative, adopting a celebratory positive tone in relaying information as opposed to the press (neutral tone).	**Enhancing brand awareness and image** Online media helps keep the brand relevant to the public; year-round communication about the organization's activities, championing its Olympic athletes. **Revenue Generation** Selling goods; pushing sponsored content. Leveraging followers to acquire sponsors. **Expenditure reduction** Highly targeted communication with little resources. Prominence of online media is further emphasized considering the nonprofit nature of NOCs.

By means of a qualitative approach, the analysis of online media usage among NOCs, this study showed that organizations' usages are mainly centered on information dissemination (Figure 1). Albeit to a lesser extent, NOCs also use online media to establish a two-way dialogue with various publics, either through private channels or public ones, in

addition to promoting the organization and its partners. Finally, the analysis revealed a will to establish NOCs' online media as the main source of information regarding its activity to constitute both a considerable level of following and to have control over the narrative, content, and format. As to outcomes, the analysis identified six benefits with varying degrees of importance (Figure 1), namely, to enhance the organization's relationship with stakeholders and foster fan engagement. With the same degree of importance, NOCs can further their understanding of their constituency and keep track of trends and hot topics that relate to the organization by leveraging available data obtained from SM and the organizational website. Online media help raise awareness on issues that link directly, or otherwise, to the organization. NOCs also benefited from online media in sustaining brand awareness and/or enhancing their brand image, however, the least perceived outcomes according to the data were expenditure reduction and revenue generation.

As outlined, information dissemination is the most prominent reason why NOCs use online media. Most respondents (16; see Figure 1) find that online media are a great venue to propagate information about currently undertaken activities and future events held by or related to the organization. In serving this purpose, data consistently indicated that the organizational website plays the main role by hosting content in various formats while SM plays a support role, in that they offer a brief overview of what is fully available on the website to redirect users thereto. Although information dissemination is a good tactic to maximize reach, it is criticized mainly because it hinders public engagement and does not guarantee to reach the intended public. Drawing from Hambrick & Svensson's (2015), even if the targeted publics are reached, this does guarantee that the public would engage in a conversation with the organization. In contrast, the lack of dialogue may incite fans and other stakeholders to create venues where they can discuss topics related to the organization away from it, resulting in a lack of control over brand perception. Indeed, Abeza et al. (2019) have found the lack of control over user-generated content in spaces provided by the organization as a challenge identified by practitioners within four major for-profit sports organizations in North America (NFL, NBA, NHL, and MLB), a lack of said place would exacerbate the problem considering that the organization would be unable to intervene should it be the case.

Along the same theme, NOCs leverage online media to maintain accountability vis-à-vis various stakeholders, for example, disclosing information about the organization's vision, board of directors, and staff. This finding indicates that NSOs know that transparency breeds a sense of trust, a factor of great importance for nonprofit organizations (Dumont, 2013; Ebrahim, 2016). Ebrahim (2016) has identified four broad areas of accountability, i.e., financial,

governance, performance, and mission. Though these categories are congruent with the obtained results, respondents seem to attribute particular importance to governance and financial accountability. Reasons for such nuance, however, remain rather ambiguous, thus requiring further research.

As indicated previously, communication teams seek to establish direct contact with some stakeholders through internal channels, while they use SM and the website for larger scale communication. Similarly, though to a lesser extent, NOCs use social media to engage in a dialogue with key stakeholders by opting for the most convenient tool in pursuing this objective. Through two-way communication, NOCs can listen to and understand publics' informational needs, which helps create added value for both parties (Abeza et al., 2019), this can be achieved by serving the informational needs of stakeholders which, in turn, contributes to the constitution of a community that the organization can leverage strategically through calls to action/mobilization (see also, Lovejoy & Saxton, 2012). Along the same vein, participants seem to understand the relevance of SM in generating engagement, they use SM to disseminate information (inform), listen to stakeholders and engage in a conversation (community building), and generate support or mobilize the public towards the desired goal, e.g., including women in the sports industry, developing sport in remote areas, etc. (action), which is what Lovejoy and Saxton (2012) characterize as the hierarchy of engagement, the pinnacle that every organization should strive to achieve through its online relationship building practices.

NSOs also promote their commercial partners, especially on the website, which extends the relevance of online media as not solely an informational asset, but also as an income generation platform. NOCs use their online media outlets to promote their partnerships and partners, in many cases, the nature of these relationships has nothing to do with financial income as many partners are nonprofit or governmental organizations, which leads us to posit that the proclamation of such partnerships enables the organization to gain 'cross-visibility', in that organizations could reach their partner's publics which may potentially increase their followership. Furthermore, though Taylor et al. (2001) investigated organizations that are different in important ways from those in this study, but a comparison may help interpret our results. In their study, the authors argue that while for-profit organizations provide content that encourages users to stay on the website, nonprofits often display content related to other organizations to establish credibility and situate the organization within a greater context. National sports organizations display a behavior like

that described by Taylor et al. (2001) as National Olympic Committees often display ties with organizations to suggest identification with other reputable and like-minded.

A rather novel finding was that participants expressed the need to become the main source of information among third-party media outlets, though it is unclear how to explain this finding, we posit that organizations with a low online presence suffer from a lack of third-party media coverage which further accentuates the need to become themselves the main actor information-wise. Furthermore, the seasonality of Olympic events begets a lack of media coverage during the offseason, as such, participants choose to assume the role of the information provider and become the authority figure regarding anything Olympic. Meng et al. (2015) define the seasonality phenomenon as when a sports organization is not actively participating in a tournament or an event, such periods are marked by a subdued level of exposure of an organization to its fans which makes it a challenging period for sports organizations to engage with their publics.

The two most emphasized outcomes, i.e., enhancing stakeholder relations and engagement, and constituency knowledge can be viewed as part of a virtuous circle benefitting both parties. Engaging in a dialogue with constituents encourages interaction, resulting in more feedback. The obtained feedback, if handled correctly, represents a wealth of information that the organization can leverage to understand what different publics are expecting. It would further enhance the organization's relationships with its stakeholders if acted upon. As such, a lack of proper structure to process data into actionable insight can limit growth. The absence of data processing may be caused by the lack of resources and technical knowledge as reported by some respondents. In this regard, extant research appears to be conflicting. Some studies found that a lack of resources in nonprofit organizations has little influence on how organizations adopt and use SM (Nah & Saxton, 2013). However, the findings indicate that a lack of resources in itself is an influencing factor on data usage, this is congruent with previous studies where a lack of resources and expertise are among the most prevalent challenges identified by practitioners within nonprofits (Campbell et al., 2014; Geller et al., 2010; Naraine & Parent, 2017).

As to constituency knowledge, it can be viewed as the result of user engagement in terms of likes, shares, and most importantly comments which constitute data pools for organizations to mine and distill into actionable insight. However, only a third of the participants have indicated using advanced techniques in collecting and analyzing data (e.g. APIs for data collection, and content and sentiment analyses to gain insight), the rest of the participants stated using basic quantitative metrics to measure engagement, which is

narrowed to the numbers of likes, clicks, etc. Such quantitative metrics may not reflect a faithful picture of public engagement which might lead to faulty assumptions about the current state of public interaction and relationships as a whole, an instance of that is URL clicks on Facebook, where Boehmer and Lacy (2014) found that URL clicks are not related to user interactivity, rather a higher level of organizational interactivity with users affected overall visits (e.g., asking questions and addressing the audience directly).

As regards expenditure reduction and revenue generation themes' low occurrence, though it is unclear how to interpret this finding, previous studies addressing online communication within sports organizations have identified comparable findings, some researchers attribute it to the constantly evolving nature of SM which leaves managers incessantly challenged trying to familiarize themselves with available technologies and opportunities thereof (Abeza et al., 2019), while other researchers like Naraine and Parent (2017) associated the subdued adoption of online technologies with the lack of financial and human resources. Our data seem to point toward both factors, we posit that it may be an indicator that NOCs do not yet realize the full potential of online media in generating revenue, in addition to the lack of resources and technical knowledge as hindering factors.

CONCLUSION

The findings of this research advance upon the present understanding of online media use within nonprofit sports organizations. Although an ambidextrous use of online media was found within for-profit sports organizations (Abeza et al., 2019), there is a limited understanding of why online media is used within NSOs. Here, we emphasize the multifaceted approach according to which the organizational website and SM are used, both to maintain a presence within the sports arena and to serve constituents' informational needs, steering the conversation away from the brief one-way communication narrative (Abeza & O'Reilly, 2014) towards a layered depiction of online media usage purposes. Additionally, this research contributes to theory by identifying outcomes of online media usage as perceived by practitioners from different national contexts. This provides insight into NSOs barring idiosyncrasies related to specific national contexts. Lastly, these findings further support the existing knowledge according to which a lack of technical knowledge and financial and human resources are all hindering factors behind the subdued use of online platforms. Finally, Naraine and Parent (2017) discussed that resource availability within NSOs is linked to social media adoption. Annamalai et al. (2021) identified seasonality as an intrinsically linked

phenomenon to the sports industry wherein organizations struggle to foster engagement from their online audience outside events. In this respect, the findings of the present study advance the current state of the literature by uncovering other facets motivating online media usage, i.e., the lack of resources to hire traditional media coverage of external media –e.g., media outlets, bloggers, and other content creators– outside major events appear to be a motivating factor for NSOs to establish their platforms as central sources of information all year round. This also should strengthen NSOs' prospects with regards to sponsoring negotiation. These findings may seem straightforward simple concepts, they guide researchers to think about the status quo of NSOs and how they circumvent the lack of resources, the omnipresent challenge across all nonprofits.

As to research recommendations, considering the constant change in online media platforms, a longitudinal analysis comparing the usage patterns over a period can help identify the advances achieved in online communication by NSOs. It is also recommended to investigate regional and national particularities of online media usage and outcomes from an organizational perspective, as it would provide meaningful insight into how online communication is carried out by organizations in different social and cultural settings, Kilduff & Tsai (2003) argued that common traits (e.g. same country or region) establish the setting for a more meaningful insight into actors. Atouba (2019) demonstrated that to reach communication goals through collaboration between nonprofits, there are two factors to account for, reputation and homophyly. We recommend examining the efficacy of partner collaboration in reaching predefined goals and increasing online following through cross-public communication.

Although online media are praised for enabling a dialogue between an organization and its public, and though NSOs are using online media to serve distinct purposes, information dissemination still has precedence over dialogic communication. As to engagement, many practitioners narrow their definition to the numbers of likes and shares and overlook the potential of online media in begetting change within one's community.

The constantly changing nature of online media represents a greater challenge for practitioners within nonprofits as they neither have the knowledge nor the resources to overcome such difficulties. And though practitioners are using online media creatively within the limit of their resources, there is still room for improvement.

PRACTICAL IMPLICATIONS

From a practical stance, the results provide new insight that may help practitioners within analogous organizations. Indeed, understanding how sports nonprofits use online media promotes and guides the adoption of best practices in other organizations within similar settings. Nonprofit sports organizations should broaden their understanding of engagement as it transcends quantitative measurements, rather it is the outcome of a mutually beneficial bond where each party has a clear conception of the added value obtained from entertaining the relationship. Second, practitioners should consider providing entertaining rather than informative content during the offseason, as sports fans find entertaining content more engaging than informative or promotional messages during these periods (Annamalai et al., 2021). Third, Nonprofit sports organizations utilize Twitter and Twitter hashtags to enable inclusive conversations and popularize hashtags that serve as an anchor for online conversation regarding the organization (Naraine et al., 2021). Lastly, practitioners should make better use of available data, lack of technical knowledge and resources notwithstanding, practitioners could hire volunteers and interns well versed in web technologies and data engineering, practitioners could also call for freelancers as it is less costly than full employment.

Limitations

Though findings can only extend to nonprofit sports organizations as for-profit ones differ in many important ways; some of the results can still be applied to other contexts (e.g. the implications of seasonality on sports clubs' communication). Second, the findings are limited to participant responses comprising the sample, results are assumed to be an accurate representation of their experiences, but respondents may have chosen to depict their experience in a way that differs from reality. In other words, our findings are limited by one data source (i.e. interviews), other data sources (e.g. documents, meetings, etc.) may have offered additional insight. Lastly, though email interviewing allows respondents to offer well thoughts and formulated answers, occasionally, responses were underwhelming and took longer to obtain an explanation; in some cases, when responses were unclear, respondents did not further expand on their answers.

Authors' contributions

The first author, contributions to this research are the conceptualization, methodology, and design of the study. The first author also carried out the data curation and analysis, as

well as the writing of the original draft. The second author, contributions consist of the validation of the methodology governing this study, the supervision and critical reviewing of the original draft, as well as the approval of the final draft.

Conflict of interest declaration

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

REFERENCES

Abdourazakou, Y., Deng, X. (Nancy), & Abeza, G. (2020). Social Media Usage During Live Sport Consumption: Generation Gap and Gender Differences Among Season Ticket Holders. *International Journal of Sport Communication*, 13(4), 696–718. https://doi.org/10.1123/ijsc.2020-0021

Abeza, G., & O'Reilly, N. (2014). Social Media Platforms' Use in Building Stakeholder Relationships: The Case of National Sport Organizations. *Journal of Applied Sport Management*, 6(3), 103–126. https://doi.org/10.7290/jasm

Abeza, G., O'Reilly, N., Prior, D., Huybers, T., & Mazanov, J. (2020). The impact of scandal on sport consumption: Do different scandal types have different levels of influence on different consumer segments? *European Sport Management Quarterly*, 20(2), 130–150. https://doi.org/10.1080/16184742.2019.1586974

Abeza, G., O'Reilly, N., & Reid, I. (2013). Relationship Marketing and Social Media in Sport. *International Journal of Sport Communication*, 6(2), 120–142. https://doi.org/10.1123/ijsc.6.2.120

Abeza, G., O'Reilly, N., & Seguin, B. (2019). Social Media in Relationship Marketing: The Perspective of Professional Sport Managers in the MLB, NBA, NFL, and NHL. *Communication & Sport*, 7(1), 80–109. https://doi.org/10.1177/2167479517740343

Annamalai, B., Yoshida, M., Varshney, S., Pathak, A. A., & Venugopal, P. (2021). Social media content strategy for sport clubs to drive fan engagement. *Journal of Retailing and Consumer Services*, 62, 102648. https://doi.org/10.1016/j.jretconser.2021.102648

Atouba, Y. C. (2019). Let's Start From the Beginning: Examining the Connections Between Partner Selection, Trust, and Communicative Effectiveness in Voluntary Partnerships Among Human Services Nonprofits. *Communication Research*, 46(2), 179–207. https://doi.org/10.1177/0093650215626982

Billings, A. C., Broussard, R. M., Xu, Q., & Xu, M. (2019). Untangling International Sport Social Media Use: Contrasting U.S. and Chinese Uses and Gratifications Across Four Platforms. *Communication & Sport,* 7(5), 630–652. https://doi.org/10.1177/2167479518790014

Boehmer, J., & Lacy, S. (2014). Sport News on Facebook: The Relationship Between Interactivity and Readers' Browsing Behavior. *International Journal of Sport Communication*, 7(1), 1–15. https://doi.org/10.1123/IJSC.2013-0112

Campbell, D. A., Lambright, K. T., & Wells, C. J. (2014). Looking for Friends, Fans, and Followers? Social Media Use in Public and Nonprofit Human Services. *Public Administration Review*, 74(5), 655–663. https://doi.org/10.1111/puar.12261

Charmaz, K. (2014). Constructing Grounded Theory (2nd ed.). SAGE.

Daymon, C., & Holloway, I. (2010). *Qualitative Research Methods in Public Relations and Marketing Communications (2nd ed.)*. Routledge. https://doi.org/10.4324/9780203846544

Dean, B. (2022, May 1). *How Many People Use Twitter in 2022? [New Twitter Stats] [Consultancy company]*. Backlinko. https://backlinko.com/twitter-users

Dumont, G. E. (2013). Transparency or Accountability? The Purpose of Online Technologies for Nonprofits. *International Review of Public Administration*, 18(3), 7–29. https://doi.org/10.1080/12294659.2013.10805261

Ebrahim, A. (2016). *The Many Faces of Nonprofit Accountability. In The Jossey-Bass Handbook of Nonprofit Leadership and Management* (pp. 102–123). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781119176558.ch4

Falkheimer, J., & Heide, M. (2014). *From Public Relations to Strategic Communication in Sweden: The Emergence of a Transboundary Field of Knowledge.* Nordicom Review, 35. https://doi.org/10.2478/nor-2014-0019

Gao, F. (2016). Social Media as a Communication Strategy: Content Analysis of Top Nonprofit Foundations' Micro-blogs in China. *International Journal of Strategic Communication*, 10(4), 255–271. https://doi.org/10.1080/1553118X.2016.1196693

Garett, R., Chiu, J., Zhang, L., & Young, S. D. (2016). A Literature Review: Website Design and User Engagement. *Online Journal of Communication and Media Technologies*, 6(3), 1–14.

Geller, S., Abramson, A., & de Leon, E. (2010). *The Nonprofit Technology Gap – Myth or Reality?*

Greenwood, S., Perrin, A., & Duggan, M. (2016). *Social Media Update 2016.* Pew Research Center.

Grönroos, C. (2004). The relationship marketing process: Communication, interaction, dialogue, value. *Journal of Business & Industrial Marketing,* 19(2), 99–113. https://doi.org/10.1108/08858620410523981

Hambrick, M. E., & Svensson, P. G. (2015). Gainline Africa: A Case Study of Sport-for-Development Organizations and the Role of Organizational Relationship Building via Social Media. *International Journal of Sport Communication*, 8(2), 233–254. https://doi.org/10.1123/ijsc.2014-0087

Hia, E. P. D., Prestiadi, D., Maghfiroh, S. I., & Oktaviani, V. M. (2020). *The Use of Information and Communication Technology Through Website and Social Media as Public Relations Information Media*. 269–274. https://doi.org/10.2991/assehr.k.201112.048

Kent, M. L., & Lane, A. (2021). Two-way communication, symmetry, negative spaces, and dialogue. *Public Relations Review,* 47(2), 102014. https://doi.org/10.1016/j.pubrev.2021.102014

Kent, M. L., & Taylor, M. (2002). Toward a dialogic theory of public relations. *Public Relations Review*, 28(1), 21–37. https://doi.org/10.1016/S0363-8111(02)00108-X

Kilduff, M., & Tsai, W. (2003). *Social Networks and Organizations*. SAGE Publications Ltd. https://doi.org/10.4135/9781849209915

Kim, D., Chun, H., Kwak, Y., & Nam, Y. (2014). The Employment of Dialogic Principles in Website, Facebook, and Twitter Platforms of Environmental Nonprofit Organizations. *Social Science Computer Review,* 32(5), 590–605. https://doi.org/10.1177/0894439314525752

Kirk, K., Ractham, P., & Abrahams, A. (2016). Website development by nonprofit organizations in an emerging market: A case study of Thai websites. *International Journal of Nonprofit and Voluntary Sector Marketing*, 21(3), 195–211. https://doi.org/10.1002/nvsm.1557

Lovejoy, K., & Saxton, G. D. (2012). Information, Community, and Action: How Nonprofit Organizations Use Social Media*. *Journal of Computer-Mediated Communication*, 17(3), 337–353. https://doi.org/10.1111/j.1083-6101.2012.01576.x

McCambridge, R. (2015, July 2). 12 Critical Points on Stakeholder Engagement from the Sweet Briar Experience. *Non Profit News | Nonprofit Quarterly.* https://nonprofitquarterly.org/12-critical-points-on-stakeholder-engagement-from-the-sweet-briar-experience/

McFarland, L. A., & Ployhart, R. E. (2015). Social media: A contextual framework to guide research and practice. *Journal of Applied Psychology*, 100(6), 1653–1677. https://doi.org/10.1037/a0039244

Meho, L. I. (2006). E-mail interviewing in qualitative research: A methodological discussion. *Journal of the American Society for Information Science and Technology*, 57(10), 1284–1295. https://doi.org/10.1002/asi.20416

Meng, M. D., Stavros, C., & Westberg, K. (2015). Engaging fans through social media: Implications for team identification. *Sport, Business and Management: An International Journal,* 5(3), 199–217. https://doi.org/10.1108/SBM-06-2013-0013

Mogensen, K. (2014). Henry Jenkins, Sam Ford & Joshua Green: Spreadable media: Creating Value and meaning in A Networked Culture, New York: New York University Press. 2013. MedieKultur: *Journal of Media and Communication Research*, 30, 4. https://doi.org/10.7146/mediekultur.v30i56.16054

Morgan, D. L. (1993). Qualitative Content Analysis: A Guide to Paths not Taken. *Qualitative Health Research*, 3(1), 112–121. https://doi.org/10.1177/104973239300300107

Nah, S., & Saxton, G. D. (2013). Modeling the adoption and use of social media by nonprofit organizations. *New Media & Society*, 15(2), 294–313. https://doi.org/10.1177/1461444812452411

Naraine, M. L., & Parent, M. M. (2017). Examining social media adoption and change to the stakeholder communication paradigm in not-for-profit sport organizations. *Journal of Amateur Sport*, 3(2), Article 2. https://doi.org/10.17161/jas.v3i2.6492

Naraine, M. L., Pegoraro, A., & Wear, H. (2021). #WeTheNorth: Examining an Online Brand Community Through a Professional Sport Organization's Hashtag Marketing Campaign. *Communication & Sport*, 9(4), 625–645. https://doi.org/10.1177/2167479519878676

Nitschke, P., Donges, P., & Schade, H. (2016). Political organizations' use of websites and Facebook. *New Media & Society*, 18(5), 744–764. https://doi.org/10.1177/1461444814546451

Parveen, F., Jaafar, N. I., & Ainin, S. (2015). Social media usage and organizational performance: Reflections of Malaysian social media managers. *Telematics and Informatics,* 32(1), 67–78. https://doi.org/10.1016/j.tele.2014.03.001

Schudde, L., Bradley, D., & Absher, C. (2018). *Ease of Access and Usefulness of Transfer Information on Community College Websites in Texas*. https://doi.org/10.7916/D8HX2VQH

Seltzer, T., & Mitrook, M. A. (2007). The dialogic potential of weblogs in relationship building. Public Relations Review, 33(2), 227–229. https://doi.org/10.1016/j.pubrev.2007.02.011

Sommerfeldt, E. J., Kent, M. L., & Taylor, M. (2012). Activist practitioner perspectives of website public relations: Why aren't activist websites fulfilling the dialogic promise? *Public Relations Review*, 38(2), 303–312. https://doi.org/10.1016/j.pubrev.2012.01.001

Taylor, M., Kent, M. L., & White, W. J. (2001). How activist organizations are using the Internet to build relationships. *Public Relations Review*, 27(3), 263–284. https://doi.org/10.1016/S0363-8111(01)00086-8

Wang, Y., Cheng, Y., & Sun, J. (2021). When public relations meets social media: A systematic review of social media related public relations research from 2006 to 2020. *Public Relations Review*, 47(4), 102081. https://doi.org/10.1016/j.pubrev.2021.102081

Wang, Y., & Yang, Y. (2020). Dialogic communication on social media: How organizations use Twitter to build dialogic relationships with their publics. *Computers in Human Behavior*, 104, 106183. https://doi.org/10.1016/j.chb.2019.106183

Williams, J., & Chinn, S. J. (2010). Meeting Relationship-Marketing Goals Through Social Media: A Conceptual Model for Sport Marketers. *International Journal of Sport Communication*, 3(4), 422–437. https://doi.org/10.1123/ijsc.3.4.422

Williams, J., Chinn, S. J., & Suleiman, J. (2014). The value of Twitter for sports fans. Journal of Direct, *Data and Digital Marketing Practice*, 16(1), 36–50. https://doi.org/10.1057/dddmp.2014.36

Appendix A.

Interview Protocol

1st Component: Role and current practices

Section 1. Exploration of the National Olympic Committee's communication strategy

Position within the organization and role description**.**

The relevance of online communication to the NOC and how SM and the website are used to reach organizational objectives.

Enumeration of constituent groups targeted by the organization and information of interest to each group.

Online channels used to relay organizational messages.

Difficulties encountered in communicating using the organizational website and SM.

2nd Component: Cross-platform presence and data collection

Section 2. Exploration of the attitude toward Integrated Communication

Stance of the respondent on collecting stakeholders' data to guide the organizations' communication strategy.

Stance of the respondent on online presence on multiple platforms freely available to the organization (e.g., Youtube, Facebook, Twitter, Website, etc.)

Stance of the respondent as regards integrated communication.

Section 3.: National Olympic Committee's use of analytic tools and metrics of interest.

Usefulness of metrics and web analytics in measuring communication effectiveness.

[If tools are used] enumeration of indicators are used by the organization to measure communication effectiveness.

doi.org/10.54141/psbd.1143549

PAMUKKALE JOURNAL OF SPORT SCIENCES
ISSN: 1309-0356 dergipark.org.tr/en/pub/psbd

Pamukkale J Sport Sci, 13(3), 131-145, 2022 Research Article

Nutritional Knowledge and Ergogenic Aid Using Status of Competitive and Recreational Cyclists

Dilara SAK[1] Taygun DAYI[1] Erkan GÜNAY[2] Adile ÖNİZ[3*]

[1]*Department of Nutrition and Dietetics, Health Sciences Faculty, Near East University, Nicosia, Cyprus.*
[2] *Department of Coaching Education, Faculty of Sport Sciences, Celal Bayar University, Manisa, Turkey.*
[3] *Department of Biophysics, Institute of Graduate Studies, Near East University, Nicosia, Cyprus.*

Keywords
Cyclists,
Ergogenic aids,
Nutritional knowledge

Article History
Received 13 July 2022
Revised 25 October 2022
Accepted 02 December 2022
Available Online 20 December 2022

* **Corresponding Author**:
Adile ÖNİZ
E-mail Address:
adile.oniz@neu.edu.tr

ABSTRACT

This study aimed to determine cyclists' nutritional knowledge and habits and nutritional ergogenic aid usage and shed light on the relation between cyclists' nutritional knowledge and ergogenic aid usage. It was conducted in Cyprus. There were three groups (study groups: competitive cyclists-CC, recreational cyclists-RC, and control group-CG: sedentary adults). Data were collected with a questionnaire that includes three sections (the first two sections were related to general nutritional habits, ergogenic aids, and anthropometric measurements, and the last section included The Nutrition for Sport Knowledge Questionnaire-NSKQ). All data were evaluated by Statistical Package for the Social Science-SPSS version 24.0. Totally 174 adults participated voluntarily in this study (n: 58 for each group). CC and RC skipped their main meals and smoked less than CG ($p<0.05$). Although most of the participants had poor sports nutrition knowledge (60.0%), CC had the highest NSKQ score, and this result showed us that CC had more information about sports nutrition than CG ($p= 0.001$). According to ergogenic aids usage, CC (56.9%) used more than RC (39.7%) ($p= 0.000$). This study showed that cyclists (CC and RC both) -who used ergogenic nutritional aids- had lower NSKQ scores ($p= 0.027$). In conclusion, the nutritional knowledge levels of the cyclists were found to be insufficient. It was observed that cyclists had significant differences in nutritional knowledge and low level of knowledge about ergogenic supports. Thus, continuous sports nutritional education is necessary to increase their knowledge.

Citation: Sak, D. Dayı, T. Günay, E. Öniz, A. (2022). Nutritional Knowledge and Ergogenic Aid Using Status of Competitive and Recreational Cyclists. *Pamukkale Journal of Sport Sciences*, 13(3), 131-145. doi.org/10.54141/psbd.1143549

INTRODUCTION

The last decade has shown us that humans need a proper level of activities for daily life as well as for healthy aging. Among possible activities, cycling is an important transportation type that is also economical and environmentally friendly. In addition, cycling is a recreational activity for amateurs and a sports branch for professional cyclists (Bopp et al., 2018). Cycling is a type of endurance sport that is defined as the ability to continue a physical action or exercise without getting tired. Thus, it needs aerobic energy systems. Generally, cyclists do this sport with low intensity and for a long period (Benardot, 2020; Bompa & Buzzichelli, 2018; Fink et al., 2018).

Endurance athletes need sufficient and balanced personal nutrition strategies to improve their energy requirements and optimize training effects (Maughan & Shirreffs, 2012). On the other hand, nutrition can play an important role in improving general health, supporting cyclists' athletic performance, and improving life quality (Pessi & Fayh, 2011). Although nutrition plays a key role in increasing cyclists' performance (Leonarda et al., 2018), consuming only regular food items may not be adequate to improve nutrient intake (Spriet, 2019). Especially endurance athletes need a higher amount of energy intake to increase their performance (Bescós et al., 2012). Thus, endurance athletes such as cyclists may need further ergogenic aids (Kerksick et al., 2018). In addition to a balanced diet, dietary supplements such as ergogenic aids are important and reliable products that might have positive effects on human metabolism (Fraczek et al., 2016; Kerksick et al., 2018; Ronsen et al., 1999). However, most athletes have low nutritional knowledge about dietary supplements -which have ergogenic roles-, and it may affect their nutritional status and hence performance (Dascombe et al., 2010; Sousa et al., 2016). In addition, even though the accessibilities to these products are so easy nowadays, there is a limited number of evidence about their effects and safety (Garthe & Maughan, 2018).

And also, many countries do not have specific laboratory tests for substances that have been prohibited in sports areas by World Anti-Doping Agency (WADA) (Garthe & Maughan, 2018). Thus, there is a necessity to determine and compare the nutritional knowledge of athletes about this subject. And also, there is a need to shed light on their ergogenic aid knowledge and usage status.

The ergogenic aid is a method to increase athletes' physical performance (Kerksick et al., 2018). According to the literature, there is an important relationship between athletes' nutritional habits, nutritional ergogenic aid usage, and their nutritional knowledge (Condo et

al., 2019; Jovanov et al., 2019). Some studies reported that education about nutrition and ergogenic aids is essential to provide optimal physical performance (Couture et al., 2015; Molinero & Márquez, 2009). On the other hand, there are a limited number of studies that aimed to determine endurance athletes' nutritional knowledge and nutritional ergogenic aid usage (Condo et al.. 2019; Jovanov et al., 2019; Pessi & Fayh, 2011). From this point, the present study is aimed to determine the relationship between endurance athletes' nutritional knowledge, habits, and nutritional ergogenic aid usage.

METHODS

Study Group

This study was conducted between December 2020 - May 2021 on the island of Cyprus. Competitive cyclists (CC) -who cycle as an endurance sport, compete regularly in the season, and have continued training in the Corona Virus Pandemic-, recreational cyclists (RC), and sedentary people formed the universe of this study. Because of the limited universe size, all physically active adult cyclists (≥19 years) in the national cycle federation were invited. Participation was voluntary, and 58 CC participated in the presented study. Matching the number of participations, researchers invited RC (n: 58) -who cycle as a hobby- and sedentary individuals (control group/CG) (n: 58) -who do physical activity for less than 150 minutes per week and sit or lay down more than seven hours in a day-. There were 174 participants in this study with ethical compliance (Near East University Scientific Ethical Committee, 24/12/2020; NEU/2020/86-1235).

Data Collection Tools

All data were collected using a questionnaire that had three sections. The first two sections were developed by researchers to determine participants' general nutritional habits, nutritional ergogenic aid usage, and anthropometric measurements such as body weight and height.

Body Mass Index (BMI) was calculated from these measurements according to the formulation (kg/m^2) of the World Health Organization (Nuttall Frank, 2015). Section three of the questionnaire was composed of The Nutrition for Sport Knowledge Questionnaire (NSKQ). NSKQ was developed by Trakman et al. (2017) and validity and reliability studies for the related population were conducted by Cirak & Cakiroglu (2019).

The Nutrition for Sport Knowledge Questionnaire-NSKQ

There are six subgroups and 68 items in this questionnaire. Weight management (3 items), macronutrients (22 items), micronutrients (12 items), sports nutrition (11 items), supplementation (11 items), and alcohol (9 items) are subgroups. Answers are given on a triple Likert scale, such as 'agree, disagree, not sure' or 'yes, no, not sure' or multiple choices. Each correct answer provides a +1 point to a participant. The maximum point of this questionnaire is 68. Scores of participants are evaluated by percentage and '0.0-49.0%' means poor, '50.0-65.0%' moderate, and '66.0-75.0%' good, and '≥76.0%' excellent nutritional knowledge status (Cirak & Cakiroglu, 2019; Trakman et al., 2017).

Data Analysis

Statistical Package for the Social Science version 24.0 was used for analysis. The number (n) and percentage (%) of qualitative data and the mean ($\bar{x}$) and standard deviation (SD) of quantitative data were determined with descriptive statistics. The compliance of the data to normal distribution was evaluated by the Levene test. In addition, the comparison of the data was evaluated with Pearson Chi-Square, Independent Sample t-test, One Way ANOVA, and Post Hoc; Bonferroni test. $p<0.05$ shows statistical significance.

RESULTS

There were two studies, and one control group in the present study (n: 58 for each group), and all of them completed the study phase (n: 174). The mean age of participants was 35.38±11.87 years (min. 19-max. 64). Majority of participants (69.5%) were males. Competitive cyclists (CC) and recreational cyclists (RC) skipped their meals less than the control group (CG). On the other hand, RC seemed to have skipped more than CC, though not reaching statistical significance. In addition, both CC and RC smoked less than CG. Similar to meal skipping, RC smoked more than CC ($p= 0.001$; Table 1).

Table 1
Participants' General Habits and Backgrounds

	Competitive cyclists (n: 58)		**Recreational cyclists (n: 58)**		**Control group (n: 58)**		**Total (n: 174)**	
Skip the meal	**n**	%	**n**	%	**n**	%	**n**	%
No	27	46.6	24	41.4	13	22.4	64	36.8
Sometimes	16	27.6	14	24.1	17	29.3	47	27.0
Yes	15	25.9	20	34.5	28	48.3	63	36.2
Total	58	100.0	58	100.0	58	100.0	174	100.0
p_1			*0.050*					

Table 1 (Continued)

	Competitive cyclists (n: 58)		Recreational cyclists (n: 58)		Control group (n: 58)		Total (n: 174)	
Skip the snacks	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
No	10	17.2	4	6.9	7	12.1	21	12.1
Sometimes	27	46.6	35	60.3	25	43.1	87	50.0
Yes	21	36.2	19	32.8	26	44.8	66	37.9
Total	58	100.0	58	100.0	58	100.0	174	100.0
p_2			*0.220*					
Smoking								
No	53	91.4	46	79.3	37	63,7	136	78.1
Yes	5	8.6	12	20.7	21	36.2	38	21.8
Total	58	100.0	58	100.0	58	100.0	174	100.0
p_1			*0.001**					

p_1: Pearson Chi-Square test
p_2: Fischer Exact test
**: Statistically significance*

There was statistical significance between body weight and body mass index (BMI). According to the Bonferroni test, CC had a lower BMI than RC (p= 0.020; Table 2).

Table 2
Participants' Anthropometric Measurements

	Competitive cyclists (n: 58)	Recreational cyclists (n: 58)	Control group (n: 58)	Total (n: 174)	p
	$\bar{x}$±SD (min-max)	$\bar{x}$±SD (min-max)	$\bar{x}$±SD (min-max)	$\bar{x}$±SD (min-max)	
Body height (cm)	175.43±7.48 (158.00-198.00)	173.22±8.05 (158.00-190.00)	167.58±8.52 (150.00-190.00)	172.09±8.66 (150.00-198.00)	*0.001**
Body weight (kg)	73.74±10.98 (52.00-114.00)	77.70±12.44 (50.00-110.00)	68.32±15.20 (40.00-93.00)	73.16±13.46 (40.00-114.00)	*0.001**
BMI (kg/m^2)	23.92±2.94 (17.60-34.80)	25.83±3.47 (19.71-35.65)	24.34±4.80 (15.67-37.25)	24.70±3.88 (15.67-37.25)	*0.020**

p= One Way ANOVA; Bonferroni Post-Hoc test: Body weight [RC-CG (p= 0.001)], BMI [CC-RC (p= 0.020)].
**: Statistically significance*

The highest NSKQ score was found in the group of CC (30.46±9.07), RC (27.46±7.72), and CG (24.15±10.13) followed NSKQ scores. The difference was statistically significant (p= 0.001). According to the Bonferroni test, CC had a higher score than CG (p= 0.001). Most of the participants (>60.0%) had poor sports nutrition knowledge, according to NSKQ for each group. On the other hand, excellent knowledge status was not reported (in all groups) in the current study (Table 3).

Table 3
Participants' NSKQ Scores and Sports Nutrition Knowledge Status

	Competitive cyclists (n: 58) $\bar{x}$±SD (min-max)	Recreational cyclists (n: 58) $\bar{x}$±SD (min-max)	Control group (n: 58) $\bar{x}$±SD (min-max)	Total (n: 174) $\bar{x}$±SD (min-max)	p_1
NSKQ score	30.46±9.07 (5.00-48.00)	27.46±7.72 (16.00-46.00)	24.15±10.13 (2.00-44.00)	27.36±9.34 (2.00-48.00	*0.001**

Classification of sports nutrition knowledge

Classification	n	%	n	%	n	%	n	%	p_2
Poor (0.0-49.0%)	36	62.1	44	75.9	45	77.6	125	71.8	
Moderate (50.0-65.0%)	19	32.8	13	22.4	13	22.4	45	25.9	*0.196*
Good (66.0-75.0%)	3	5.2	1	1.7	0	0	4	2.3	
Total	**58**	**100.0**	**58**	**100.0**	**58**	**100.0**	**174**	**100.0**	

p1: One Way ANOVA; Bonferroni Post-Hoc test: NSKQ score [CC-CG (p= 0.001)]
p2: Fischer Exact test
**: Statistically significance*

It was observed that CC (56.9%) used more nutritional ergogenic aids than RC (39.7%) (p= 0.000). The main cause for using ergogenic nutritional aid in CC was mostly (93.6%) to increase physical performance. On the other hand, RC used ergogenic nutritional aids mostly to increase physical performance (52.2%) and prevent diseases (26.1%) (p= 0.000). Nearly half of the RC (47.8%) started to use nutritional ergogenic aid with the suggestion of health professionals. However, most of the CC (72.7%) started with their coaches' suggestions and internet sources (p= 0.017; Table 4). In addition, it was determined that CC and RC -who had lower NSKQ scores- used more ergogenic nutritional aids than others who had higher scores (p= 0.027). This shows that ergogenic aids are used haphazardly by athletes (Table 4).

Table 4
Participants' Nutritional Ergogenic Aid Usage Information

Nutritional ergogenic aid usage status

	Competitive cyclists (n: 58)		Recreational cyclists (n: 58)		Control group (n: 58)		Total (n: 174)	
	n	%	n	%	n	%	n	%
No	25	43.1	35	60.3	58	100.0	118	67.8
Yes	33	56.9	23	39.7	0	0.0	56	32.2
Total	**58**	**100.0**	**58**	**100.0**	**58**	**100.0**	**174**	**100.0**
p_1				*0.000**				

Table 4 (Continued)

Reason for nutritional ergogenic aid usage						
	Competitive cyclists (n: 33)		**Recreational cyclists (n: 23)**		**Total (n: 56)**	
	n	%	**n**	%	**n**	%
To increase physical performance	31	93.6	12	52.2	43	76.8
To lose weight	0	0.0	1	4.3	1	1.8
To increase muscle mass	2	6.1	4	17.4	6	10.7
To prevent diseases	0	0.0	6	26.1	6	10.7
Total	**33**	**100.0**	**23**	**100.0**	**56**	**100.0**
p_2			*0.000**			
Source of nutritional ergogenic aid suggestion						
	Competitive cyclists (n: 33)		**Recreational cyclists (n: 23)**		**Total (n: 56)**	
	n	%	**n**	%	**n**	%
Health professionals	9	27.3	11	47.8	20	35.7
Others (Coaches, internet sources, etc.)	24	72.7	12	52.2	36	64.3
Total	**33**	**100**	**23**	**100.0**	**56**	**100.0**
p_2			*0.017**			
NSKQ scores according to nutritional ergogenic aid use						
	Competitive cyclists (n: 58)		**Recreational cyclists (n: 58)**		**Total (n: 116)**	
	$\bar{x}$±SD		**$\bar{x}$±SD**		**$\bar{x}$±SD**	
Using	28.16±10.36 (n: 33)		26.65±6.92 (n: 23)		27.28±8.47 (n: 56)	
Non-using	32.21±7.66 (n: 25)		28.69±8.81 (n: 35)		30.76±8.26 (n: 70)	
p_3			*0.027**			

p_1: Pearson Chi-Square test
p_2: Fisher Exact test
p_3: Independent Samples test
**: Statistically significance*

Table 5 lists the nutritional ergogenic aids classification used by athletes in the present study. Most commonly used ergogenic aids by cyclists were sports gels (48.7%), protein supplements (40.1% BCAA, 29.2% whey), sports drinks (16.2%), electrolytes (14.5%), multi-vitamin and mineral (12.7%) supplements. Each of the athletes -who prefer nutritional ergogenic aid - used more than one nutritional ergogenic aid (Table 5).

Table 5
Nutritional Ergogenic Aids Used by the Athletes

Nutritional ergogenic aids [a]	Competitive cyclist (n:33)		Recreational cyclist (n:23)		Total (n:56)	
	n	%	**n**	%	**n**	%
Sports gels	21	63.6	6	26.6	**27**	**48.7**
Protein supplements (BCAA)	17	51.6	5	22.9	**22**	**40.1**
Protein supplements (Whey)	12	42.4	4	18.4	**16**	**29.2**
Sports drinks	6	18.2	3	13.0	**9**	**16.2**
Electrolyte supplements	3	9.1	5	21.9	**8**	**14.5**
Multivitamin	1	3.0	6	26.6	**7**	**12.7**
Mineral (Magnesium)	4	12.1	3	13.6	**7**	**12.7**
Other (creatine, glutamine, pre-workout powder)	10	30.2	6	24.0	**16**	**29.0**

BCAA: Branched-chain amino acid
a: More than one answer has been given

DISCUSSION

This study aimed to shed light on a shallow area in sports science; cyclists' nutritional knowledge, status, ergogenic aids knowledge, usage status, etc. and also aimed to show insufficient matters to give inform cyclists to support their performance by increasing their knowledge. Competitive cyclists (CC) had the highest athletic nutrition knowledge scores among the groups participating in the present study (p= 0.001; Table 4). CC group skipped main meals less than the other groups when the main meal skipping rates were examined (p= 0.050; Table 1). Pendergast et al. (2016); was found similar results when they analyzed 35 original articles. They reported that sedentary adults skipped meals commonly. On the other hand, in a study -which had similar results to our study- cyclists' nutritional habits were found to be more regular than sedentary adults (da Rocha Penteado et al., 2010). Another study -which aimed to determine different endurance sports types and athletes' nutritional habits- found that cyclists' nutritional habits were better than others (Baranauskas et al., 2015). In another study that aimed to evaluate the effects of nutritional habits on physical performance in athletes from different branches, researchers reported that unbalanced and inadequate nutritional habits affected athletes' performance negatively (Debnath et al., 2019). In summary, some endurance athletes -who have unhealthy nutritional habits such as skipping meals- may be at nutrient deficiency risk. Nutrient deficiencies are directly related to physical performance (Noll et al., 2020). According to the literature, adequate and balanced meals and snacks prevent athletes from losing body muscle mass and increase their physical performance (Leonarda et al., 2018). On the other hand, some studies showed that smoking affects sports

performance negatively and may cause chronic disorders such as cancer, cardiovascular and pulmonary disorders, etc. (Chaabane et al., 2016; Lee & Chang, 2013). In this study, CC smoked less than RC and CG (p=0.001; Table 1).

Although not sufficient, we can tell that CC -who do this sport professionally- care for their performance and try to avoid some habits which can decrease their athletic performance.

Especially for endurance athletes -such as long-distance running, cycling and triathlon, etc.- high body weight decreases physical performance. Thus, a slim body type is more appropriate for these athletes (Fink et al., 2018). In the present study, CC had a lower BMI than RC (p= 0.020; Table 2). This result is in line with the literature and shows that cyclists -who cycle to compete- have a slimmer body type than RC who cycle for the hobby.

Nutrient intake and ergogenic aid use by athletes are related to their nutritional knowledge (Condo et al., 2019; Jovanov et al., 2019). Some studies reported that athletes have information pollution and what they know as principles may be wrong about sports nutrition. On the other hand, these studies showed that if their nutritional knowledge increase, it reflects their nutritional habits (Spronk et al., 2015; Trakman et al., 2016). The highest NSKQ score was found in the CC group (30.46±9.07 out of 68 points) in the present study (p=0.001; Table 3). Spronk et al. (2015); used General Nutrition Knowledge Questionnaire-GNKQ to evaluate athletes' nutrition knowledge. The mean score was found as 65.5±12.2 out of 113 points. In addition, the mean score was reported as 43.8±11.4 out of 90 points by Bird et al. (2020) when they used Nutrition Knowledge Questionnaire to determine participants' nutritional knowledge (NKQ). In this study, 62.1% of CC had poor, 32.8% moderate, and 5.2% good sports nutrition knowledge. These ranges were found in CG as 77.6%, 22.4%, and 0.0% (p= 0.196; Table 3). In another study with similar design and results, athletes' nutritional knowledge status was reported as 94.6% poor, 4.5% moderate, and 0.9% good. And for non-athlete adults, as 96.0% were poor, 4.0% moderate, and 0.0% were good (Miškulin et al., 2019). Devlin and Regina Belski (2015) designed a similar study, and they reported nutritional knowledge's important role in nutrient intake, which is related to athletes' physical performance. They underlined the importance of dietician and sports nutrition education for athletes.

These results and literature show us that there is a necessity to give regular and effective nutrition education to trainers and athletes. This nutritional education may help to increase their nutritional knowledge and physical performance.

The use of ergogenic aids -which increase exercise capacity- is common among athletes. These supplements have positive effects on energy metabolism. Thus, when an athlete needs more energy and nutrients in addition to a balanced and adequate food intake, they should use ergogenic aids via physician prescription (Fraczek et al., 2016). On the other hand, there is

a large number of unsupervised ergogenic aids in the supplement market. These products may include substances that might have a doping effect. Thus, the contents of all ergogenic aids should be checked by nutritionists and physicians. In addition, their beneficial effects must be proven, and they must have only beneficial effects on human health (Fink et al., 2018). In this study, 59.9% of the CC used nutritional ergogenic aid. Accordingly, it was determined that the athletes commonly obtained information about nutritional ergogenic aid from sources such as coaches and the internet (Table 4). Sousa et al. (2016); reported that 64.0% of the athletes stated that they used nutritional ergogenic aid. In another study, athletes using nutritional ergogenic aid (76.8%) generally obtained information about the use of nutritional ergogenic aid from social media, trainers, the internet, and their friends (65.9%). Accordingly, it was thought that the athletes did not have the proper information about the ergogenic aid products they used. Aljaloud and Ibrahim (2013); found that 93.3% of competitive athletes used nutritional ergogenic aid, 43.8% resorted to the use of nutritional ergogenic aid because they believed that it would improve athletic performance, and 6% believed that ergogenic aids also improve health. In addition, it was observed that the athletes mostly used sports drinks (88.7%), followed by the use of vitamin C (82.6%) and multi-vitamin (52%) supplements.

In a study conducted on track and field athletes participating in international competitions, it was found that 63.9% of them used nutritional ergogenic aids. It was stated that the most commonly used nutritional ergogenic aids were amino acids (49.3%) and vitamins (48.3%) (Tabata et al., 2020). In another study on endurance athletes, 80% of the athletes used nutritional ergogenic aid. These athletes -who declared using ergogenic aids- had moderate nutritional knowledge. It shows that athletes need an education program to increase their nutritional knowledge (Jovanov et al., 2019). In the current study, 93.6% of CC used ergogenic nutritional aids to increase their physical performance (Table 4). The most common ergogenic nutritional aids used by athletes were sports food, and medical supplements such as sports gels (48.7%), protein supplements (40.1% BCAA, 29.2% whey), sports drinks (16.2%), electrolytes supplements (14.5%), multi-vitamins and minerals (12.7%) supplements were used (Table 5).

On the other hand, Condo et al (2019); found that 54.5% of the athletes answered the 88-item Sports Nutrition Knowledge Questionnaire -SNKQ correctly, and incorrect answers were more common in the nutritional ergogenic aid section. It was seen that vitamin-mineral (70.0%) and protein supplements (65%) were used most commonly by athletes. According to the results, the nutritional knowledge of the athletes was found to be insufficient, especially in the nutritional supplement section. In a study on amateur athletes, the Nutrition Knowledge

on Sport -NKS questionnaire was used. Almost half of the participants (46.4%) stated that they used nutritional ergogenic aids. In particular, it was observed that 31.0% of them used vitamins, and 29.5% of them used amino acids. While it was stated that the athletes mostly used it to increase (39.9%) and repair (35.1%) muscle mass, it was reported that especially sports coaches (84%) suggested them to use supplements. On the other hand, 47.3% of the participants had sufficient knowledge of sports nutrition. This was revealed once again that amateur athletes and trainers do not have enough knowledge about sports nutrition (Finamore et al., 2022).

In another study, 56.3% of the competitive athletes had poor nutritional knowledge-NK, and 55.6% of them had poor nutrition practice-NP scores. At the same time, it was found that 7.2% of the participants used ergogenic nutritional aids and preferred protein powder mostly (Sunuwar et al., 2021). In the current study, low scores on the sports nutrition knowledge questionnaire, which were answered by the individuals who used ergogenic aids, showed that the athletes use ergogenic supplements haphazardly (Table 4). Wardenaar et al. (2017); reported that athletes who received dietary counseling made better choices about the use of nutritional ergogenic aids compared to athletes who did not. To produce some solutions to this problem, athletes should be better informed and educated about the possible misuse effects of ergogenic aids.

CONCLUSION

The present study showed that the nutritional knowledge levels of the CC and RC were insufficient. In addition, it was observed that cyclists had significant differences in knowledge and low level of knowledge about ergogenic supports. According to the results, ergogenic aids were mainly suggested by the trainers. From this point, it is possible to say that nutrition education is essential for both trainers and cyclists. Nutrition education can affect athletes' food choices, eating habits, and physical activity behaviors. Further, it shows us there is a need for this education by a dietician and physician for this study group. Most cyclists preferred ergogenic aids to increase their physical performance. However, ergogenic aids play a less important role than nutrition in athletic performance. Athletes should be informed about nutritional strategies which are specific to cycling performance. Besides, as a multidisciplinary group, a sports dietician, physician, and trainers should work together to provide maximum athletic performance. Nowadays, the availability of many ergogenic aids is so easy to reach. If athletes use ergogenic aids in an uncontrolled fashion, the risk of various complications may increase, and this may even result in death.

Acknowledgments

The authors would like to thank to North Cyprus Cycling Federation.

Declaration of Conflict Interest

There is no conflict of interest to be reported.

Author contributions

The first author collected data, second author contributed to the study design, third author supported the tools selection, and the fourth author supervised the general processes. All authors contributed to the scientific outline of Ms. The first and second authors marked nutritional, third author highlighted sports background while fourth author linked health scope.

REFERENCES

Aljaloud, S. O., & Ibrahim, S.A. (2013). Use of dietary supplements among professional athletes in Saudi Arabia. *Journal of Nutrition and Metabolism*, 2013, 1-7. https://doi.org/10.1155/2013/245349

Baranauskas, M., Stukas, R., Tubelis, L., Žagminas, K., Šurkienė, G., Švedas, E., Giedraitis, V. R., Dobrovolskij, V., & Abaravičius J.A. (2015). Nutritional habits among high-performance endurance athletes. *Medicina*, 51(6), 351-362. https://doi.org/10.1016/j.medici.2015.11.004

Benardot, D. (2020). Advanced sports nutrition. Human Kinetics Publishers.

Bescós, R., Rodríguez, F. A., Iglesias, X., Benítez, A., Marina, M., Padullés, J.M., Torrado, P., Vázquez, J., & Knechtle B. (2012). High energy deficit in an ultra-endurance athlete in a 24-hour ultra-cycling race. *Baylor University Medical Center Proceedings*, 25(2), 124-128. https://doi.org/10.1080%2F08998280.2012.11928806

Bird, S. P., & Rushton, B.D. (2020). Nutritional knowledge of youth academy athletes. *BMC Nutrition*, 6(1), 1-8. https://doi.org/10.1186/s40795-020-00360-9

Bompa, T. O., & Buzzichelli, C. (2018). *Periodization-: theory and methodology of training*. Journal Human Kinetics.

Bopp, M., Sims, D., & Piatkowski, D. (2018). *Bicycling for transportation: The bicycle: a technological and social history*. Elsevier.

Chaabane, Z., Murlasits, Z., Mahfoud, Z., & Goebel, R. (2016). Tobacco use and its health effects among professional athletes in Qatar. *Canadian Respiratory Journal*, 182(18), 867-869. https://doi.org/10.1155/2016/2684090

Çırak, O., & Çakıroğlu, F. P. (2019). The validity and reliability study of the Turkish version of the nutrition for sports knowledge questionnaire. Ankara Medical Journal, 1, 35-49.

Condo, D., Lohman, R., Kelly, M., & Carr, A. (2019). Nutritional intake, sports nutrition knowledge and energy availability in female Australian rules football players. *Nutrients*, 11(5), 1-13. https://doi.org/10.3390%2Fnu11050971

Couture, S., Lamarche, B., Morissette, E., Provencher, V., Valois, P., Goulet, C., & Drapeau, V. (2015). Evaluation of sports nutrition knowledge and recommendations among high school coaches. *International Journal of Sport Nutrition and Exercise Metabolism*, 25(4), 326-334. https://doi.org/10.1123/ijsnem.2014-0195

da Rocha Penteado, V. S., de Moura Castro, C.H., de Medeiros Pinheiro, M., Santana, M., Bertolino, S., de Mello, M.T., & Szejnfeld, V.L. (2010). Diet, body composition, and bone mass in well-trained cyclists. *Journal of Clinical Densitometry*, 13(1), 43-50. https://doi.org/10.1016/j.jocd.2009.09.002

Dascombe, B. J., Karunaratna, M., Cartoon, J., Fergie, B., & Goodman, C. (2010). Nutritional supplementation habits and perceptions of elite athletes within a state-based sporting institute. *Journal of Science and Medicine in Sport*, 13(2); 274–280. https://doi.org/10.1016/j.jsams.2009.03.005

Debnath, M., Chatterjee, S., Bandyopadhyay, A., Datta, G., & Dey, S. K. (2019). Prediction of athletic performance through nutrition knowledge and practice: a cross-sectional study among young team athletes. *Sport Mont Journal*, 17(3), 13-20. http://doi.org/10.26773/smj.191012

Devlin, B. L., & Belski, R. (2015). Exploring general and sports nutrition and food knowledge in elite male Australian athletes. *International Journal of Sport Nutrition and Exercise Metabolism*, 25(3), 225-232. https://doi.org/10.1123/ijsnem.2013-0259

Finamore, A., Benvenuti, L., De Santis, A., Cinti, S., & Rossi, L. (2022). Sportsmen's Attitude towards Dietary Supplements and Nutrition Knowledge: An Investigation in Selected Roman Area Gyms. *Nutrients*, 14(5), 945. http://doi.org/10.3390/nu14050945

Fink, H. H, Burgoon, L.A., & Mikesky, A.E. (2018). Practical applications in sports nutrition. Jones and Bartlett Learning.

Fraczek, B., Warzecha, M., Tyrala, F., & Pieta, A. (2016). Prevalence of the use of effective ergogenic aids among professional athletes. *Roczniki Państwowego Zakładu Higieny-Annals of the National Institute of Hygiene*, 67(3), 271-278. PMID: 27546324

Garthe, I., & Maughan, R. J. (2018). Athletes and supplements: prevalence and perspectives. *International Journal of Sport Nutrition and Exercise Metabolism*, 28(2), 126-138. https://doi.org/0.1123/ijsnem.2017-0429

Jovanov, P., Đorđić, V., Obradović, B., Barak, O., Pezo, L., Marić, A., & Sakać, M. (2019). Prevalence, knowledge, and attitudes towards using sports supplements among young athletes. *Journal of the International Society of Sports Nutrition*, 16(1), 1-9. https://doi.org/10.1186/s12970-019-0294-7

Kerksick, C. M., Wilborn, C.D., Roberts, M.D., Smith-Ryan, A., Kleiner, S.M., Jäger, R., Collins, R., Cooke M, Davis, J.N., Galvan, E., Greenwood, M., Lowery, L.M., Wildman, R., Antonio, J., & Kreider, R.B. (2018). ISSN exercise & sports nutrition review update:

research& recommendations. *Journal of the International Society of Sports Nutrition*, 15(1), 1-38. https://doi.org/10.1186/s12970-018-0242-y

Lee, C. L., & Chang, W.D. (2013). Effects of cigarette smoking on exercise performance and heart rate variability in college students. *International Journal of Women's Health*, 17(5), 667-679. https://doi.org/10.2147/ijwh.s49220

Leonarda, G., Fedele, E., Vitale, E., Lucini, D., Mirela, V., & Mirela, I. A. (2018). Healthy athlete's nutrition. *Journal of the Romanian Sports Medicine Society*, 14(1), 2967-2985.

Maughan, R. J., & Shirreffs, S.M. (2012). Nutrition for sports performance: issues and opportunities. *Proceedings of the Nutrition Society*, 71(1), 112-119. https://doi.org/10.1017/S0029665111003211

Miškulin, I., Šašvari, A., Dumić, A., Bilić-Kirin, V., Špiranović, Ž., Pavlović, N., & Miškulin, M. (2019). The general nutrition knowledge of professional athletes. *Food in Health and Disease: Scientific-professional Journal of Nutrition and Dietetics*, 8(1), 25-32.

Molinero, O., & Márquez, S. (2009). Use of nutritional supplements in sports: risks, knowledge, and behavioral-related factors. *Nutricion Hospitalaria*, 24(2), 128-134. PMID: 19593480

Noll, M., Rodrigues, A. P. S., & Silveira, E.A. (2020). The health-related determinants of eating pattern of high school athletes in Goiás, Brazil. *Archives of Public Health*, 78(1), 1-11. https://doi.org/10.1186/s13690-020-0396-3

Nuttall Frank, Q. (2015). Body Mass Index. *Nutrition Today*, 50(3), 117-128. https://doi.org/10.1097/nt.0000000000000092

Pendergast, F. J., Livingstone, K.M., Worsley, A., McNaughton, S.A. (2016). Correlates of meal skipping in young adults: a systematic review. *International Journal of Behavioral Nutrition and Physical Activity*, 13(1), 1-15. https://doi.org/10.1186/s12966-016-0451-1

Pessi, S., & Fayh, A. P. T. (2011). Evaluation of the nutritional knowledge of professional track and field and triathlon athletes. *Revista Espanola de Nutricion Humana y Dietetica*, 17(4), 242-245. https://doi.org/10.14306/renhyd.25.S1.1393

Ronsen, O., Sundgot-Borgen, J., & Maehlum, S. (1999). Supplement use and nutritional habits in Norwegian elite athletes. *Scandinavian Journal of Medicine & Science in Sports*, 9(1), 28–35. https://doi.org/10.1111/j.1600-0838.1999.tb00203.x

Sousa, M., Fernandes, M. J., Carvalho, P., Soares, J., Moreira, P., & Teixeira, V.H. (2016). Nutritional supplements use in high-performance athletes is related with lower nutritional inadequacy from food. *Journal of Sport and Health Science*, 5(3), 368–374. https://doi.org/10.1016%2Fj.jshs.2015.01.006

Spriet, L. L. (2019). Performance nutrition for Athletes. *Sports Medicine*, 49(1), 1-2. http://doi.org/10.1007/s40279-018-1027-9

Spronk, I., Heaney, S. E., Prvan, T., & O'Connor, H.T. (2015). Relationship between general nutrition knowledge and dietary quality in elite athletes. *International Journal of Sport Nutrition and Exercise Metabolism*, 25(3), 243-251. https://doi.org/10.1123/ijsnem.2014-0034

Sunuwar, D. R., Singh, D. R., Bohora, M. P., Shrestha, V., Karki, K., & Pradhan, P. M. S. (2021). Association of nutrition knowledge, practice, supplement use and nutrient intake with athletic performance among Taekwondo players in Nepal. https://doi.org/10.21203/rs.3.rs-29955/v2

Tabata, S., Yamasawa, F., Torii, S., Manabe, T., Kamada, H., Namba, A., Kato, J., Kaneko, H., Tahara, K., Tsukahara, Y., & Sato, K. (2020). Use of nutritional supplements by elite Japanese track and field athletes. *Journal of the International Society of Sports Nutrition*, 17(1), 1-8. https://doi.org/10.1186/s12970-020-00370-9

Tian, H.H., Ong, W.S, & Tan, C.L. (2009). Nutritional supplement use among university athletes in Singapore. *Singapore Medical Journal*, 50(2), 165-172. PMID: 19296032

Trakman, G. L., Forsyth, A., Devlin, B.L., & Belski, R.A. (2016). Systematic review of athletes' and coaches' nutrition knowledge and reflections on the quality of current nutrition knowledge measures. *Nutrients,* 8(9), 1-23. https://doi.org/10.3390/nu8090570

Trakman, G.L., Forsyth, A., Russell, H., & Belski, R. (2017). The nutrition for sport knowledge questionnaire (NSKQ): development and validation using classical test theory and Rasch analysis. *Journal of the International Society of Sports Nutrition*, 14, 1-11. https://doi.org/10.1186%2Fs12970-017-0182-y

Wardenaar, F. C., Ceelen, I. J., Van Dijk, J. W., Hangelbroek, R. W., Van Roy, L., Van der Pouw, B., De Vries, J. H. M., Mensink, M., & Witkamp, R. F. (2017). Nutritional supplement use by Dutch elite and sub-elite athletes: does receiving dietary counseling make a difference? *International Journal of Sport Nutrition and Exercise Metabolism*, 27(1), 32-42. https://doi.org/10.1123/ijsnem.2016-0157

doi.org/10.54141/psbd.1109812

PAMUKKALE JOURNAL OF SPORT SCIENCES
ISSN: 1309-0356 dergipark.org.tr/en/pub/psbd

Pamukkale J Sport Sci, 13(3), 146-173, 2022 Research Article

Gender-Stereotyped Barriers Against Women Football Players in Turkey: A Qualitative Perspective on the Eccles' Expectancy-Value Theory

Safter ELMAS[*1] **F. Hülya AŞÇI**[2]

[1]*Department of Physical Education and Sports, Faculty of Sport Sciences, Marmara University, Istanbul, Türkiye.*
[2]*Department of Physical Education and Sports, Faculty of Sport Sciences, Fenerbahçe University, Istanbul, Türkiye.*

Keywords
Expectancy-value theory,
Women,
Football,
Gender inequality,
Stereotype

Article History
Received 27April 2022
Revised 01 November 2022
Accepted 14 November 2022
Available Online 20 December 2022

[*] **Corresponding Author**:
Safter ELMAS
E-mail Address:
safter.elmas@gmail.com

ABSTRACT

This qualitative research aimed to investigate the experiences of women football players in Turkey in terms of Eccles' Expectancy-Value Theory from a gender stereotypes perspective. A phenomenological method was used to allow a deeper understanding of their experiences. The research group consisted of eight women from three different football league levels in Istanbul, TR. The data were analyzed via thematic and content analysis. The identified themes after content analysis are: (1) loving football; (2) instrumentality of football; (3) sociocultural barriers against women players; (4) multidimensional perceived costs. According to these findings, we can illustrate that the social, cultural, and institutional environment of the women players creates many problems, difficulties, and deprivations in their participation, which make it difficult for their expectancy for success, task values, and future plans in their sports. In order to make the experiences of female football players about gender-based stereotypes more understandable, it is recommended that more studies that deal with the qualitative method and Eccles' theory should be done in future studies.

Citation: Elmas, S. and Aşçı, H. F. (2022). Gender-Stereotyped Barriers Against Women Football Players in Turkey: A Qualitative Perspective on the Eccles' Expectancy-Value Theory. *Pamukkale Journal of Sport Sciences*, 13(3), 146-173. doi.org/10.54141/psbd.1109812

INTRODUCTION

Gender stereotypes and inequalities exist in most practices, including sports, worldwide (Metcalfe, 2018). Despite a long way, women are guided in the occupations seen as women-appropriated domains in societies. However, they remain underrepresented in many sports as well as college majors such as physical sciences, technology, engineering, math, and economics (Boxill, 2006; Wegemer & Eccles, 2019). Upon the gender inequality and stereotypes in sports, Pfister (2010) suggests that:

> *"The gender of sport in the past was clearly and conspicuously masculine. From the very beginning, women in sport were the 'other sex'; they were outsiders, new- or latecomers who, if they were allowed to at all, could take part in 'suitable' forms of exercise and sport" (p. 234).*

As Pfister explains above, many sports including football, are still considered as men's territories. Even though a recent report from the Women's Sports Foundation (Staurowsky et al., 2015) indicates that girls gain benefits from sports and participation in sports has increased, the same report shows that boys have more opportunities than girls in sports. Sport has continued to thrive by structuring men's privilege almost all over the world (Joseph & Anderson, 2016). Media outlets provide daily commonsense, physical proof, apparent that women are "naturally" inferior to men in the sport. Thus, men's dominant status is still strengthened while women's sports are regarded as subordinated and less exciting (Fink et al., 2016). This men-centered culture of sport is touted as a central component of this gender segregation, reflected in patterns of women self-selecting out of the sport as an occupational choice. Furthermore, girls' participation during adolescence is 2-3 times more likely to drop out than boys. Girls' participation in men-dominated sport is even lower (Guillet et al., 2006; Abadi & Gill, 2020).

Women and Football

On the 5th of December 1921, the English Football Association (FA) issued a ban prohibiting women's football matches from taking place on pitches owned by clubs associated with the FA (Jenkel, 2021). From those days to the 90s, the FIFA Women's World Cup was established in 1991, and women's football became an Olympic sport in 1996 (Pfister, 2015). After these developments, early studies on women's football appeared in a special 2003 issue of the journal Soccer and Society. Researchers analyzed opportunities and challenges for women players considering the gender order in diverse national settings. Then, feminist-

sociologist scholars such as Connell and Messner identified barriers, such as traditional notions of femininity and prejudices about women's abilities and explored the politics of federations and their impact on the development of the game (Pfister, 2015). In the 2010s, studies focused on the intersection of gender with other identities, such as ethnicity and sexuality, to provide a deeper understanding of women's experiences with football. There has been a trend toward feminist studies with cultural and sociological basis, such as economy, media, inequality, discrimination, and body in the last decade (Pfister, 2015; Okholm-Kryger et al., 2021).

Although football appears to be integrated neither-gendered sports according to some studies (Sobal & Milgrim, 2019), it is a sport played considering male-dominated rules and needs socioculturally (Fredricks and Eccles, 2005; Abadi & Gill, 2020). Due to male-dominated societal thought in football, girls and women are considered inappropriate and excluded from the playing field (Martínez-García & Rodríguez-Menéndez, 2021; Fredrick & Eccles 2005). For instance, boys mostly use sexist language that prevented girls from playing football. Furthermore, girls who play football are described as 'tomboys' and occupy a marginal role (Aktan, 2021; Devonport et al., 2019). Looking at the international level, women's football retains a peripheral place in England as a whole (Pielichaty, 2019). Similarly, the characterization of football serves to solidify a stereotype of women players as 'butch' in Germany by marginalizing women's football (Meier et al., 2020). Also, women's football in Israel is like "a tree falling in the forest': Who sees it? Who hears it? Who cares about it, aside from the players?" (Ben Porat, 2020, p. 9). The cultural climate and the football institutions restrict women's movements and football remains the territory of men in all over the world (Ben Porat, 2020).

Football and Women in Turkey

Although the Republic of Turkey was established as a secular state, patriarchal and Islamic values influentially appear in public and social institutions (Aktan, 2021). The country as a mainstream Muslim nation and women are attached to their conventions and traditions. The Turkish Football Federation and sport clubs' executives repose upon these conventions and traditions; thus, the gap between the offices, facilities, and the number of sports (notably football) accommodating men and women athletes is entirely apparent (Yenilmez & Çelik, 2020). the women's football league was suspended by the Turkish Football Federation for three seasons in 2003 without giving any reasonable explanations. More than 200 football players found themselves without a club, and they have experienced problems such as financial

difficulties, abuse, and institutional sexist policies. The Women's League resumed in 2006 and operates with three divisions today (Aktan, 2021; Nuhrat, 2021). Moreover, in the report titled 'Mapping Gender Equality in Turkey', women experience gender inequalities because of injustices in sports participation, coaching, sports/clubs management, and sports media (Koca 2018).

Although the researches on women's football in Turkey have increased in recent years, the number of studies conducted, especially with a gender perspective, is still low. On the other hand, Öztürk (2017), who has important studies in the field, in her study conducted with Bourdieu's field theory, considers women's football as a social responsibility project by the structure and is pushed to the periphery of football. Bozlu (2019), on the other hand, examined the experiences of female athletes in the field of football, which is under the influence of male dominance, with Bourdieu's concepts of space and capital. In the study of Öztürk and Koca (2021), which they conducted with an ethnographic method and a feminist perspective, it was revealed that the denial attitudes of club managers subordinate female football players. In Nuhrat's research (2020), it was concluded that women see the football field as an instrument where they are marginalized. Nuhrat's (2021) another qualitative study negotiates gender anxieties and norms through football. Moreover, Kavasoğlu and Bozok's (2022) study examined the football experiences of athletes who are not compatible with the idealized body in women's football in Turkey, with Foucault's concepts of discipline, control, and punishment.

Eccles' Expectancy-value Approach

The expectancy-value theory was directly derived from a joint psychological and sociological perspective that considers cultural beliefs such as gender stereotypes and experienced barriers that may increase the perceived cost of engaging in any particular kind of activity (Eccles, 2015; Dicke, Safavian & Eccles, 2019). Expectancy-value theory (EVT) is a multidimensional and detailed framework. Also, the theory was proposed by a set of feminist social scientists (Eccles et al., 1983). They explain at great length the cultural milieu, gender stereotypes, and gendered occupational characteristics. EVT also focuses on the role of socializers' beliefs, individuals' perceptions of socializers' beliefs, and individuals' interpretations of their experiences (Eccles et al., 1983; Eccles, 2009).

According to EVT, stereotypes, and norms affect individuals who interact with their environment (i.e., parents, peers, teammates, or coaches) in an active manner, and these social agents play a vital role in influencing one's choices in sport such as physical education, football

and track, and field (Eccles & Harold, 1991; Fredericks & Eccles, 2002; Chin et al., 2009; Banerjee et al., 2018; Chalabaev et al., 2009). Parents, for example, rate their children's sports abilities higher for boys than girls (Fredericks & Eccles, 2005). Physical education teachers and coaches also have a determining role in students' and athletes' self-competence and persistence in terms of their sexuality (Dixon et al., 2008). Those significant others' gender-related beliefs and stereotypes cause lower competence beliefs and task values for women than men in sports generally (Fredricks & Eccles, 2002; Guillet et al., 2006; Simpkins et al., 2012).

EVT has two sub-components of achievement behavior: Expectancies for success and subjective task value. *Expectancies* are shaped by individuals' perceptions of competence, ability beliefs, and personal goals, all of which are influenced by the socialization process within their cultural milieu and their own interpretations of past experiences. Subjective task value comprises four subcomponents: attainment, interest, utility value, and cost (Wigfield & Eccles, 2000; Wegemer & Eccles, 2019). *Attainment value* is engaging in an activity that affects one's self-image and social identity. Providing opportunities for fulfilling achievement, power, and social needs is related to attainment value. *Interest value* is based on enjoyment for engaging in the activity itself, and it relates most directly to the activity itself (Eccles & Wigfield, 2002; Eccles 2009). *Utility value* facilitates one's short or long future goals. It assists individuals with the desire to obtain long-term external rewards, which are extrinsic reasons for engaging in any activity (Zhu, 2009; Eccles & Wigfield, 2020).

Cost is loss of time, effort, and energy for other activities (Eccles & Wigfield, 2002). Cost is also discussed as psychological, financial, and physical. Psychological costs are negative psychological states resulting from struggle, anxiety, fear of failure (Barron & Hulleman, 2015; Flake et al., 2015), disappointment, harassment, or discrimination (Watkinson et al., 2005; Chen & Lui, 2009). Financial costs, such as minimum salary (Eccles, 2009; Zhu, 2009), and physical costs, such as injury, are other types of costs. These cost factors negatively influence individuals' achievement, motivation, and consequently, their choices (Eccles et al., 2000; Plaza et al., 2017). Until the last part, where we discuss Eccles' theory, we have touched on the historical, cultural, and sociological processes of women's football in the world and in Turkey. In the next section, we will examine the difficulties women face in the football world within the framework of Eccles' expectation-value theory and in the context of gender stereotypes.

The Present Study

In this paper, we tried to look at women's football in Turkey from the framework of the Eccles theory. In compliance with Eccles' theoretical framework, we aimed to bring out the

situation of women in football, in which there is a great variety of gender stereotypes. Specifically, we aimed to understand the role of socializers who take sides with dominant cultural and institutional values in the football domain. In the international literature, this theory has mostly been discussed from the perspective of adolescence and gender. In this research, we will focus on the experiences of adults because this framework has rarely been used to research the experiences of adults in competitive sports. We now have a comprehensive understanding of the experiences of young women in sports in terms of gender, but sports and gender literature in Turkey has not yet conducted research using this theory. We think that using this theory in this research will be beneficial in understanding the following issues.

METHODS

This research highlighted the utility of qualitative research methods to increase understanding of the lived experiences of women participating in the study. By using phenomenology design, we aimed to acquire information that is useful for understanding the complexity, depth, and variation surrounding women soccer players (Patton, 2002). As Aspers and Corte (2019) point out, we define qualitative study as an iterative process in which improved understanding of the scientific community is achieved by making new significant distinctions resulting from getting closer to the phenomenon studied (p. 155). Eccles' theoretical framework was in fact a ride from Anant who is from phenomenology, so, it is quite appropriate to the qualitative approach (Jain, 1985).

Study Group

Purposive sampling was used in this study to explore dynamics in women players' football domain (Patton, 2002). Our sample included eight women football players from three different league levels. They are also university students in Istanbul. The city of Istanbul is the center of football in Turkey and is a place where women's football has started to spread rapidly compared to other cities. However, the number of athletes both studying at university and continuing to play football in different cities was quite limited at the beginning of the study. For this reason, we could not hold meetings in other cities. The selection of players from three different leagues is to provide maximum diversity and thus to reach different experiences. These criteria were decisive in the selection of participants. Demographic information of participants can be found in Table 1.

Table 1
Information about participants and personal information.

Participants Names*	Level of league	Length of Affiliation / Age	Length of interview**
Meli	First League	Six years / 20	32 min
Emessine	First League	Six years / 20	38 min
Demet	First League	Five years / 19	40 min
Nil	First League	Five years / 23	43 min
Azra	First League	Five years / 22	35 min
Gül	Second League	Five years / 22	45 min
Bade	Second League	Four years / 18	34 min
Emi	Third League	Four years / 20	30 min

**All participants were given pseudonyms to preserve anonymity and confidentiality.*
***As seen in Table 1, our interviews with women players lasted shorter than the average qualitative interview times. The first reason for this is that the researcher conducting the interviews was men and therefore could not examine some of the experiences of women players in depth. This can be considered as the weak points of interviews. However, the descriptive feature of the research was also decisive in the shorter interview times.*

Data Collection Tools

We used semi-structured interviews to collect the data to understand participants' reasons for pursuing careers that were incongruent with their initial aspirations (Smith & McGannon, 2018). This semi-structured format included questions about football background, experiences, barriers to football participation and continuation, and whether these barriers had been overcome (Bevan et al., 2021). Interview questions were regarding: (a) experiences of women players in the football field, such as discrimination; (b) the role of significant others in their involvements such as coaches, parents, teachers and club executives; (c) hopes and plans for the involvement in the future such as being national team player or physical education teacher; (d) perceived costs which prevent individuals from being motivated in their football careers such as time, money, effort, and injury. Players were asked to sign an informed consent form to be audio-taped. Each interview was recorded and transcribed verbatim. The confidentiality of the respondents was ensured by pseudonyms (Corbin & Strauss, 2014). The first author, who is an experienced qualitative researcher with a background in football participation, conducted all interviews. Eight interviews were carried out and lasted between 32 and 45 min (average of 37 min). Three interviews took place at the players' clubs and a further five at participants' schools.

Data Analysis

During analysis, our approach was both descriptive and interpretative. Descriptive and interpretative approaches to qualitative research endeavor to keep a balance between the description of phenomena and the interpretation of the described phenomena (O'Halloran et al., 2018). Given that researchers want to report concisely on what was found and given that we are by nature meaning-making individuals, it is inevitable that any findings/results will

be colored by an interpretative framework (Timulak & Elliott, 2019). Two researchers of this study and one external expert analyzed the data which gathered from eight footballers by using qualitative thematic analysis. The analysis proceeded using the six steps method described by Braun and Clarke (2006; Clarke & Braun, 2013) because it offers such a clear and usable framework for doing thematic analysis. The authors manually coded the data by using Microsoft Word document. The first author's experience as an ex-footballer about ten years, as well as football and gender studies provided great convenience to analyze.

As suggested by Braun & Clarke (2006), we firstly organized the data in the transcripts for familiarization with the data. Then reading and re-reading transcripts to become familiar with the content. Secondly, we and one external expert who studies sports and gender, separately identified features using general codes across the football player data set to the generation of initial codes. Thirdly, we discussed preliminary codes and compared interpretations of further themes to search for themes. In step four, the coded data were developed by consensus into a thematic map, whereby the researchers considered the arrangement of themes and sub-themes. In step five, definitions were derived for each label for defining and naming themes. Finally, each theme's name was organized to reflect the study's questions, the literature, and the data for producing the findings. We generally followed and interested in how the women in the football field made decisions about their involvement or discontinuation; thus we focused on passages that were coded for motivation, costs, and benefits, future plans, expectations of significant others.

Research Credibility

Credibility or authenticity in qualitative research is based on the skills, experiences, and sensitivities of the researcher, in how he or she uses herself as a knower and as an inquirer (Sparkes & Smith, 2013). To enhance the credibility of our study, data triangulation was employed through interviews and field notes (Braun & Clarke, 2013). Field notes assisted in generating keywords, identifying codes, and naming themes. Considering analyst triangulation, researchers reviewed the findings of the study and discussed the results in regular meetings with interpretations of the data. To enable transferability, direct quotations were used in the results (Lincoln & Guba, 1985; Shenton, 2004).

RESULTS

The prominent themes that were identified from the findings of this study were stereotypes which are largely gender stereotypes and socially shared beliefs about women

players based on their sex. For example, gender bias in the football community, disregarding of significant others, insufficient support from parents, and poor physical conditions. Another theme stemming from stereotypes was related to inadequate and unqualified facilities, negative media influence, insufficient sponsorships, and very low-income levels. The costs created by barriers preventing from stereotypes are themed through findings such as disruption of education, loss of time and effort, fear of injury, and anxiety for the future. Otherwise, there was the theme of the happiness of women athletes from football and the theme of seeing football as a tool for certain achievements such as university entrance, scholarship, and being a physical education teacher.

Loving Football

One of the main reasons young people participate in sports is the fun they experience. These enjoyable experiences contribute to increase in their intrinsic motivation, love, and interest, which translates into higher quality of their involvement in sports (Ryan & Deci, 2017). Also, experiences of fun and involvement quality make it easier for young people to continue practicing their sport. Loving football theme is regarding Eccles' attainment and intrinsic values which were derived from the responses of women to the questions about feelings of success and attendance in sports (Eccles & Wigfield, 2002). Not surprisingly, the findings in our study showed that women players have similar good feelings about football. For example, Emessine (20 years old) shared her feelings succinctly: *"I believe that girls and women can play football because I believe I am talented. I have been playing football since my childhood."* Another player Gül (22 years old) reflected her feelings as: *"The reason I love football is that we play it with our feelings inside. When we train, we don't think the next action, it happens automatically. The most beautiful part for me is that I feel passion, relaxation, and commitment."* Another football player Azra (22 years old) expressed her thoughts about loving football as follows: *"You do football because you enjoy and love it. You don't really care what other people think. So, ultimately, it's really fun, and you have got lots of friends both on your own team and on the opposing team."*

Women players value feeling talented, having capacity, succeeding, and social acceptance for attainment. To expectancy-value theory, people's perceptions of being good at any activity seem to motivate them to keep investing effort on that activity because they perceive they have the ability. This creates attainment value to activity that provides positive psychological consequences such as self-confidence, self-efficacy, pride of achievement, and so on. (Eccles & Wigfield, 2002; Fredericks et al., 2002; Dicke et al., 2019). Furthermore, statements regarding intrinsic value showed that it is seen as pleasure, happiness,

commitment, passion, and suchlike. Also, the abovementioned expressions of Gül about loving football share similarities with the studies about the intrinsic value that when enjoyment is motivating for pleasure of the activity, individuals always feel deeply for activity (Eccles, 2009; Myrold & Ullrich-French, 2017; Abadi & Gill, 2020; Pielichaty, 2019). Football playing give these participants a sense of achievement and success. For example, participant Emi (20 years old) said: *"I'm happier when my teammates and coach are happy. You know, you feel great pleasure and you have more commitment as long as you succeed and win."* Similarly, Nil (23 years old) referred to the relationship between success and attachment to the team. *"I care about being in a team and being successful. Because I believe that my success has a positive effect on the team. My primary source of motivation is the support from my teammates and their hard work."*

If a particular activity is a crucial piece of his/her/their social identity, engaging in it has high attainment value for individuals, and interest value will be positively influenced (Zhu, 2009; Drane & Barber, 2016; Pielichaty, 2019). Our participant Nil's experiences above show similarities related to the importance of being on a team and being successful as a team which are her basic sources of intrinsic value. Regarding social agents, our work shows the importance of developing women players' motivation. It makes us think of the important role that significant people such as parents, teachers or coaches play in helping young women increase their confidence, pleasure, and feel of success through the interactions they have with them (Eccles & Harold, 1991; Fredricks & Eccles, 2005; González et al., 2019).

Instrumentality of Football

During the interviews, the participants were asked to talk about their preferences in football. They often stated common instrumental values such as being a *national team player*, *entering university*, *getting scholarships*, and being a *physical education teacher*. The women's following statements show the critical instrumentalization of football. For example, Demet (19 years old) pointed out the utility of football:

> *"I have two European championship participations, and I need eight more to be appointed as a teacher. That's all my concern because there is no future in football for me. That's why I attended the school. Why am I going to university? I study to become a physical education teacher. I have three more years to be selected eight times for a national team. I stand the gaff three more years. At least with this way, I can become a teacher and get a public salary regularly."*

According to Azra's view, playing football was one of the most useful ways to become a physical education teacher:

"Football is not like a feature-length film for women. We can start at about fifteen years old, and we play for seven or eight years. That's it. Fortunately, this semester, I'm a senior student in university, and I'm going to be directly appointed as a physical education teacher. I benefit from the right of open admission since I've been a national team player ten times."

The financial and institutional deprivation that women experience in football brings focusing on university education and other professions as PE teacher while playing football. Football, which is not normatively identified with women, cannot be imagined as a women's career even by women themselves. Azra also mentions above that football is a short-lived career choice for women. To pursue further career opportunities, women athletes retire from football at an early age and see football as an instrument in that process (Nuhrat, 2020). For most women football players like Emessine, the most important feature of football is that it plays an instrumental role in reaching other future plans:

"I can play football for four more years. Then, I don't think I can play. I have irrefutable gold bracelets, such as being a national team player and having a university diploma. I will be a physical education teacher in any case."

Both Nil and Meli (20 years old) expressed their different future plans with similar thoughts in turn:

"What does football do for women? It is just helpful to be a national player. I've fulfilled the criteria of being a national player ten times. It's provided me to enroll at university through additional placement. In this way, I get a scholarship automatically from a public institution."

"Actually, we have no other way. Even though I love playing football, I stay in the game to save my future. At least I'll get into university, there are private schools that offer scholarships. Then I become a physical education teacher and spend the rest of my life more comfortably."

Similar to the quotes above, in Bozlu's (2019) study with Bourdieu's concepts of field and capital with female football players in Turkey, the field of football for female football players is seen as an instrument for their possible future careers, such as entering a university, being a national athlete, being a physical education teacher. To Eccles, this instrumentality contains the perception of the future utilization in engaging in the task (Eccles, 2009). Correspondingly to Eccles' frame, in our study, engaging in football is a facilitator for women to obtain short or long-term external rewards which are non-football things (Zhu, 2009). They consider football as an investment or ladder for their vocational career in the future. Getting a

scholarship, entering university, being a physical education teacher, and so forth are seen as the only way out for women in the strictly structured football context. We can see these similar trends for women players in different cultures, such as Norway, the United States, and Ireland (Bourke, 2003; Stuart, 2003; McCormack & Walseth, 2013).

In Turkey and Palestinian sample, women's football continues to be treated as a 'social project' (Öztürk, 2017; Stewart, 2012). As a social project, football plays an instrumental role that facilitating the transition of women to non-football fields rather than providing career development or opportunities. Few of them might be coaches, or sports writers, or at least all become well-educated mothers, but they may not be professional athletes who would benefit from a potential and long-term career option (Stewart, 2012; Öztürk, 2017). Also, the football community 'helps' women to integrate in formal education and business networks so they may serve as fully functioning members of society, as educated workers or teachers (Nuhrat, 2020; Stewart, 2012). Since both the women athletes themselves and the football community consider football as a male field, they do not see it as a career choice (Dicke et al., 2019; Wegemeer & Eccles, 2019; Mascarin, Vicentini & Marques 2019). This culminates in producing women's football as both instrumental and eventually trivial and 'out of place' (Nuhrat, 2021).

Sociocultural Barriers against Women Players

In any field, if there is no support or encouragement from significant others, an individual's expectancy of success and future declines dramatically. Notably, gendered approaches and interpretations of socializers strengthen stereotypes and yet decrease individuals' persistence over time (Boiché et al., 2014). In our study, sociocultural and institutional stereotypes and barriers intensely exist for women. We can see numerous barriers in women's excerpts herein below starting from Bade (18 years old):

> *"This year, we and the male team became champions together. Our female team became unbeaten champions, but club executives didn't give value to us as they gave the male team. For example, during the championship celebrations, club executives organized fireworks events and city bus tour for male teams. Also, the male team's championship premium was at astronomic levels. They don't appreciate their female players, and they ignore us and our labor. Actually, if we are a football team, both women and men should be the same (equal)."*

Bade's emphasis on club managers shows us that institutional neglection and stereotypes are quite strong and rooted. This emphasis reflects a recent study by Öztürk and Koca (2021) that club management did not see women as football players but just as women,

and they were unwilling to maintain women's football at the club and looking for excuses to close it down. Another participant Emessine referred to other difficulties in women's football:

> *"Men have their own training equipment. Their uniforms are stitched fit size for their body, but we have to wear uniforms which are stitched for their body occasionally. They train whenever they want, but our training schedule is timed according to their situation. For example, if their training ends at 7.30, we have to train at 8.00. Even the pitch is sometimes filled, so we cancel our training. Men have all facilities available like training and match. To tell the truth, how much do we develop with only two trainings in a week? Also, we are forced to use men's changing rooms and toilets."*

As Emessine point out, women share changing rooms and football uniforms with men. Öztürk and Koca (2021) have found similar results. In their findings, the basic necessities such as restrooms, showers, and lockers generally were not available for women players in the facilities. Another study by Öztürk and Koca (2018) in Turkey shows close results that women have restricted space in clubhouses, limited transportation, equipment, and uniforms. Also, Emessine's expressions about discriminatory training schedule are very similar with English women football players. Women's trainings are scheduled depending on the men's team training schedule as well as they do not have the best facilities to train or play because of the lower status of women's teams in the club (Welford, 2018; Peeters & Sterkenburg, 2017). The study in Norway found that boys have training camps, free clothing, tournaments, transportation, and trips abroad, but girls have to pay for them. Boys have professional coaches, while girls do not (Eriksen, 2021). Poor facilities, inadequate equipment, and shared changing rooms are major problems for women players in the cases of Turkey, England, and Norway. Another example of barriers comes from Nil:

> *"Neither the media nor sponsors make a significant contribution to the women football field. For example, the women football league isn't aired on televisions. Further, our football isn't newsworthy in newspapers. Additionally, sometimes I think maybe we are treated as a U11 Development League by the Turkish Football Federation. Even you have great ability there's no sufficient motivation -which will bring success for women- such as fans, support of club, sponsors, media, proper salary, and guidance of coaches."*

The abovementioned statements demonstrate that authorities and institutions such as media, sponsors, television, newspapers, federations, clubs' executives, and fans act in unison against women players. The lack of media interest in women's football leads to the fact that sponsors likewise take no interest in the sport, which in turn influences the game and

development, thus contributing generally to its marginalization (Hardin & Greer, 2009; Peeters & Sterkenburg, 2017; Kaelberer, 2019; Bevan et al., 2021). However, even any success does not change their secondary status in the club or increase the opportunities and sources allocated to the team (Öztürk & Koca, 2021). When young women players experience these barriers, such as training conditions, poor facilities, and underrepresentation of women players in media it is more likely that their involvement is of low quality which leads to greater sport drop-out (González et al., 2019).

It is similar to the immediate vicinity which Eccles et al. (1983) entitle as the cultural milieu in where family members, peers, teachers, and cultural beliefs live. Azra's experience is about the physical education teacher:

> *"During high school, our physical education teacher didn't consider me seriously when I asked his permission to come into the camp for the match at the weekend. He always answered me bitingly satirical and asked what the connection with me and football is."*

Demet, on the other hand, was discriminated against by her friends because she played football:

> *"I have often faced verbal discrimination or social barriers such as 'Can girls play football?', 'Is that the ball we know?', 'Do you play with your hand or foot?'. Sometimes, I have been exposed to sexist discourses as 'Guys kick the ball softly; don't you see, the goalkeeper is a girl!' Most of my friends have acted in similar ways."*

Gül also stated that her mother tried to steer her from football to basketball: *"I loved playing football, but my mom tried to change my mind. She would take a dim view of me for playing football. Because she thought my face doesn't fit with football. She wanted me to be basketball player."* In parallel with the experience of Azra, Demet and Gül above, in Turkey and other countries, physical education teachers, peers and mothers have lower expectations for girls and women in football (Bozlu, 2019; Nuhrat, 2020; Banerjee et al., 2018; Stirling & Schulz, 2011). Also, coaches and administrators in male-dominated sports have lower expectations for women athletes (Slater & Tiggemann, 2010; Eccles, 2011; Dixon et al., 2008; Öztürk & Koca, 2021). Briefly stated, sociocultural perceptions of socializers in society adversely affect women and they feel worthless in football. Women who were interviewed indicate a lack of (professional) athletic opportunities for themselves. Low expectancy of success, feeling insufficient, subordinate, alienation, or dropping out from their sport may occur for women due to cultural barriers and beliefs of significant others (Fredricks & Eccles, 2004, 2005; Simpkins et al., 2012; Boiché et al., 2014; González et al., 2019). Participant Gül, explains the reasons why women are left behind in football as follows:

"I think boys find an opportunity to participate in football at a very early age, simply just because boys' gender role norms are found acceptable to play football both at an early age and everywhere. That's why ninety percent of boys find a chance to play football while five percent of girls have access to play."

According to Gül, starting football at a very early age provides advantages for boys. On the other hand, girls generally start or specialize in football very late. Like many other activities in society, football has certainly been gendered as male (Peeters & Sterkenburg, 2017). Due to extreme cultural and sexist pressures against girls during childhood not to play football, women train, practice, and compete in their sport by coming from behind (Fredricks & Eccles, 2005; Svensson & Oppenheim, 2018; Mascarin et al., 2019; Öztürk & Koca, 2021). Multiple examples of stereotypes and barriers are commonly constructed in the football domain. For instance, women in South Africa haven't received equal remuneration compared to the men's national team. Lack of sponsorships, publicity, and recognition leave women players in disadvantaged positions. Also, they are faced with inequalities such as access to facilities/resources and quality sporting equipment (Engh, 2011; Pelak, 2005; Braciska, 2018). Notably, parents, peers, teachers, and other socializers encircle women football players with sociocultural barriers. Afore-mentioned examples function as a sociocultural barrier to inhibit women in the football domain (Bhalla & Weiss, 2010; Swanson, 2016).

Multidimensional Perceived Costs

Schoon and Eccles (2014) concluded that male-dominated fields work to reproduce inequalities which may be perceived as a cost. In Turkey, being a football player was a cost itself for women. Thus, we aim to reflect women's tough life in football, where there are lots of inequalities and discriminations that can be considered as costs. Participants emphasis on the cost of football demonstrates the existing structural inequalities. Meli talked about missing opportunities: *"I play football and earn barely. If I worked elsewhere, I would earn more; I could advance in my career and invest in the future."* Demet, on the other hand, mentioned that they were ignored: *"Neglect of clubs, the rarity of clubs, insufficient facilities of clubs, visionless club chairmen, professional unqualification of coaches. We have limited means and have nowhere to go in football for the future."* Emi, another participant, stated that after being injured, they were made to feel completely worthless and unnecessary: *"For clubs, if players get injured, they fall into oblivion. If you get better by yourself, it's ok. Otherwise, they say nothing. Injury is the most frightening and disappointing thing you are faced with."*

These quotes dramatically highlight the difficulties for women in football. Financial problems, concern for the future, and fear of injury are some of the perceived costs. Injury,

coach's care, future planning, and financial issues are uncertain issues for girls and women who don't benefit from many sports opportunities (Zdunek & Nowak, 2018; Öztürk & Koca, 2021). Clubs provide men with a chance to get into a career of sports. Also, Nuhrat's (2020) study in Turkey shows that women cannot consider pursuing football as a career since it offers them very low financial income (Nuhrat, 2020). In our study, women also share other types of costs. Bade points out the missing opportunities:

> *"You do lots of things but you think you can't be rewarded for your efforts. Hence, this situation discourages you. You start thinking you miss opportunities as educational, social and economic. You renounce from lots of things such as being with your friends."*

Meli conveys her opinions about her effort, and she is aware of being pissing into the wind:

> *"I care about football like men. I relinquish some things, even though I work harder than men but am seeing less value than men. I said to myself that I take pains with football but do not see the equal value."*

As is also understood from the examples, inegalitarian and tough experiences cause disappointment for women, and they perceive various types of costs such as missing opportunities (i.e. time, education, health, other socialization fields, occupation), renouncing (from friends or family), getting rejected (from clubs and society), taking pains and being emotionally hurt (Watkinson et al., 2005; Chen & Liu, 2009; Slater & Tiggemann, 2010; Dicke et al., 2019). However, another participant, Nil, expressed "cost" with feelings of hopelessness and worthlessness:

> *"Can you believe that when we became champions, during the celebrations, our only wish was to step on the grass of the team stadium, where we never played our matches. But the club managers did not allow it. When you see that all that effort, success, and happiness has no value in their eyes, you feel both worthless and hopeless. You think you have no future, and you don't want to continue the game."*

She and her teammates couldn't set foot on the pitch because of club management's discriminative policy. In Nuhrat's study (2020) in Turkey, women players have similar experiences. For example, the champion women football team wants the ceremony to be either at half-time or just before the game. In this way, the stadium will be full, and they will be able to greet the fans. This isn't allowed by club management. They enter the stadium before the men's team warm-up and raise the championship cup in the empty stadium. In England, Arsenal women's football team also can't play in the Arsenal stadium for similar discriminative reasons above (Peeters & Sterkenburg, 2017). Eccles also argues that women are faced with barriers that lead to various kinds of costs including dropping out because the

mechanisms of institutions -including organized sport- where all the conditions are identified for men (Eccles, 2011; Wegemer & Eccles, 2019). In our study, participants think to drop out due to similar reasons. For example, Gül who was deeply attached to football talked about the inevitability of quitting football.

> *"Sometimes I have the feeling of giving up football. Because you play every year and improve yourself, but football is a thankless job; you don't have two pennies to rub together. There is no tangible motivation towards your success; that's why, I think we make ourselves miserable by keeping on playing."*

Meli also stated that costs such as economic difficulties and injury are important reasons for not being able to continue playing football:

> *"I can play till I'm in my thirties, but now I don't want to due to the financial difficulties, club's poor support, especially in the process of injury. At first, I didn't care about material rights, but then you can't receive a recompense for your work; that's a problem. Also, it hinders me from my school and my lessons. When I consider all of these, it drives me to quit football."*

Gender and football stereotypes are deeply ingrained in sport culture. This culture normalizes gendered stereotypes that are significant predictors of dropping out, low self-perception, and a for women (Cress & Hart, 2009; Boiché et al., 2014). In football, cultural and structural inequalities cause women to face the reality such as financial difficulties, injuries, quitting football, and neglection of school (Stasi & Evans, 2013; Flake et al., 2015; Schoon & Eccles, 2014). These various kinds of costs prompt women to have negative thoughts about their football future. Especially, financial difficulties led them not to plan for their future. For instance, Gül and Meli frame these "financial costs" as not receiving a recompense for their work and not having a penny. These costs are similar in most countries. Women football players do not make a living from football (Williams, 2017). Even at the top level, the financial resources might not be enough for women's teams (Welford, 2018). Despite most women playing football in the first league in our sample, their economic resources are limited, and women cannot earn money from football (Nuhrat, 2020; Öztürk & Koca, 2021).

However, Wegemer and Eccles (2019) explicitly highlight that women's altruistic occupational values are stronger than men in most occupations or professions. These altruistic values and behaviors of women cause them to be weaker and underpaid in the already men-dominated football profession. Since women players are weak and statusless on football field, they do not claim their rights. Most of women players have second jobs as they don't get paid enough to rely solely on their income from football (Peeters & Sterkenburg, 2017). All these

gender-stereotyped dimensions are common and significant dimensions of cost. Eccles (2011) transparently declared that the cost women pay is often seen in their wages, their rate of advancement, and the stress they experience. Furthermore, the football community neither provides the types of services, supports, and employment policies nor rewards women's accomplishments and competencies appropriately (Zdunek & Nowak, 2018; Öztürk & Koca, 2021). Even when women succeed in men-dominated occupations, they are often paid less than men, despite having the same or higher-level qualifications and experience (Schoon & Eccles, 2014; Nuhrat, 2020). We can say that the cost women have gained in football cause them to diminish motivation, love, value of football, performance, and future expectations or plans. Thus, in general, women players' decisions about the future are strongly in the direction of quitting football.

CONCLUSION

Even today, the perception that women do not belong to their football "places" is very established (Nuhrat, 2020). In this regard, our study sought to demonstrate that women openly and frequently reported many impossibilities and inequalities in football. We noticed that the rules, norms, and priorities are identified for men, and it creates additional gendered barriers for girls and women to participate or persist in football. They aren't treated as equal football player peers of male ones. Despite being strong, competent, and independent, they are subordinated and made to conform to cultural stereotypes. As Bozlu (2019) said, the relations of female football players with their environment are an indication that the football field is under male dominance in Turkey.

Stereotypic messages, interactions, and endorsing gender stereotypes for the benefit of the men in football lead women to feel lower self-perceptions and incompetent. These feelings cause lower value of football and intentions to practice, and the more perceived cost and quitting football (Fredericks & Eccles, 2005; Boiché et al., 2014; Nuhrat, 2020). When we look through the world of football -England, South Africa, Malaysia, France, Mexica, Turkey, Israel, Germany, and so- it strictly and systematically has gendered discourse to the detriment of women (Pielichaty, 2019; Chin et al., 2009; Bois et al., 2005; Chalabaev et al., 2009; McHale et al., 2009; Bhalla & Weiss, 2010; Öztürk & Koca, 2021; Ben Porat, 2020; Kaelberer, 2019). As Caudwell (2011) suggests that there are not only official (institutional) but also unofficial (sociocultural) norms and legitimations. The reproduction of men-privileged ideology has a determinant role on the belief that the women athlete is subordinated in organized football (Messner, 1988; Cress & Hart, 2009; Pfister, 2010; Wegemer & Eccles, 2019).

Studies on women's participation in football describe a number of issues and barriers faced by women because of gender stereotypes and segregations (Mascarin et al., 2019; Williams, 2017). These issues are insufficient support from family and significant others from the beginning of a football career; the prejudice, label, and discredit regarding the involvement of women in football; the limited practice opportunities for girls who wish to practice football. For these reasons, gender stereotypes are institutionalized by the consequent naturalization of cultural barriers against women. This process of stereotyping creates barriers to women's participation in sports, reproducing a kind of men's symbolic domination, especially in sports such as football (Fredericks & Eccles, 2005; Mascarin et al., 2019; Welford, 2018). Besides, social agents play an important role in subordinating and trivializing women's positions in football instead of helping and supporting them (Nuhrat, 2020; Devonport et al., 2019). Thus, cultural discourse used by social agents mounts against women because men get more opportunities to play football from a young age onwards as structured in society's institutions and societal norms and values (Fredrciks & Eccles, 2005; Peeters & Sterkenburg, 2017).

Besides the significant others, football institutions such as clubs, federations, and sports media are equally responsible for the subordination of women. These institutions are complicit in the lack of publicity for women's football by underfunding it and paying them infrequently. The lack of financial support has an impact on their training, indeed training on a weekly basis is not always possible as well as their performance on the field. These institutions bear responsibility for the dire situation in which women footballers find themselves (Ben Porat, 2018; Nuhrat, 2020; Kaelberer, 2019). Due to these reasons, the intrinsic qualities of women football players are a kind of consolation that is not enough to continue.

The study clearly showed that women football players in Turkey experience more fundamental inequalities and costs related to financial (i.e., wages, facilities, accommodation, fixtures, health) and moral (i.e., being valued, supported, being considered an athlete) conditions. These moral conditions stem from media invisibility, poor advertising, and sponsorship, lack of recognition and public support, lack of guidance of coaches, and lack of support of clubs and awards. The fact remains that patriarchal values and thoughts such as 'football is the sport of men' or 'football is a man thing' have led to make it hard and fragile for women to be part of the 'game', to be accepted and empowered because of the historical, socio-cultural, and institutional barriers in football in Turkey. These gendered barriers and codes have been leading women to stay on the periphery or to be alienated from the football field (Öztürk & Koca, 2018). Consequently, we can say that it is still tough for women to crack the door open, come on in, play the game, and get empowered by football in Turkey.

As conclusion, this research will contribute to the inclusion of studies from the field of sports psychology with a gender perspective in the literature of women and football. A theoretical approach that has not been studied in the field of sports in Turkey before will be included in the sports literature of the country. It is also an important and empowering gain that it contains similarities with the studies conducted in Turkey in the field of sports sociology. Thus, these results will add both novelty and richness to the literature.

Limitations

The results of this study have some limitations. The players in our research were selected only from the province of Istanbul and those studying at the university. The fact that the number of qualitative studies conducted with Eccles' theory is quite low has created a limitation in feeding the discussion. Another limitation was that our interviews with women players lasted shorter. For future studies, it is proposed to carry out research that address the perspective of family, coaches, and managers in order to seek a broader understanding of women's football.

Acknowledgments

We sincerely thank Sait Tarakçıoğlu for his detailed feedback and comments on earlier versions of this manuscript.

Conflict of interest declaration

No potential conflict of interest was reported by the authors and no financial interest or benefit has arisen from the direct application of this research.

Author contributions

Authors were involved in all sections of the present research; including the stages of writing, data collection and analyses, discussion, and revision.

Notes on contributors

Safter Elmas is an assistant professor in the department of Psychology of Sport and Exercise at the University of Marmara. His specific research areas include abusing and hazing in sport with the perspective of hegemonic masculinity and gender. Also, he studies on social classes in sport.

F. Hülya Aşçı is a professor and she is working at the Sport Sciences Faculty of Fenerbahçe University in İstanbul, Turkey. She mainly studies physical self-perception and psychological effects of physical activity on psychological well-being. She has papers

published in refereed international journals such as Psychology of Sport and Exercise & Journal of Sport and Exercise Psychology. She is also an associate editor in Psychology of Sport and Exercise.

REFERENCES

Abadi, E., & Gill, D. L. (2020). The role of socializing agents on dropout and continuing participation of adolescent girls in masculine-typed sports. International Journal of *Kinesiology in Higher Education*, 4(3), 77-90. https://doi.org/10.1080/24711616.2019.1656118.

Adams, A., Anderson, E., & McCormack, M. (2010). Establishing and challenging masculinity: the influence of gendered discourses in organized sport. *Journal of Language and Social Psychology*, 29(3), 278-300. https://doi.org/10.1177/0261927X10368833.

Aktan, D. N. (2021). Sexuality politics on the football field: queering the field in Turkey. *New Perspectives on Turkey*, 64, 151-172, https://doi.org/10.1017/npt.2021.12.

Aspers, P., & Corte, U. (2019). What is qualitative in qualitative research. *Qualitative Sociology*, 42(2), 139-160. https://doi.org/10.1007/s11133-019-9413-7.

Banerjee, M., Schenke, K., Lam, A., & Eccles, J. S. (2018). The roles of teachers, classroom experiences, and finding balance: A qualitative perspective on the experiences and expectations of females within stem and non-stem careers. *International Journal of Gender, Science and Technology*, 10(2), 287-307. http://genderandset.open.ac.uk/index.php/genderandset/article/view/508/953.

Barron, K. E., & Hulleman, C. S. (2015). Expectancy-value-cost model of motivation. *Psychology*, 84, 261-271. [Google Scholar]

Ben Porat, A. (2020). Cosi (non) Fan Tutte: women's football 'made in Israel'. *Soccer & Society*, 21(1), 39-49. https://doi.org/10.1080/14660970.2018.1487842.

Bevan, N., Drummond, C., Abery, L., Elliott, S., Pennesi, J. L., Prichard, I., ... & Drummond, M. (2021). More opportunities, same challenges: adolescent girls in sports that are traditionally constructed as masculine. *Sport, Education and Society*, 26(6), 592-605. https://doi.org/10.1080/13573322.2020.1768525.

Bhalla, J. A., & Weiss, M. R. (2010). A Cross-cultural perspective of parental influence on female adolescents' achievement beliefs and behaviours in sport and school domains. *Research Quarterly for Exercise and Sport*, 81(4), 494-505. https://doi.org/10.1080/02701367.2010.10599711.

Birkalan-Gedik, H. (2010). *Futbolun cinsiyeti, futbolun cinselliği: feminist bir imkan ve imkansızlık olarak futbol. (The gender and sexuality of football: football as a feminist possibility or impossibility).* In Ş. Öztürk (Ed.). Cogito: dünya gözüyle futbol (Cogito: worldly football) (pp. 137-48). İstanbul: Yapıkredi Yayınları

Boiché, J., Plaza, M., Chalabaev, A., Guillet-Descas, E., & Sarrazin, P. (2014). Social antecedents and consequences of gender-sport stereotypes during adolescence. *Psychology of Women Quarterly*, 38(2), 259-274. https://doi.org/10.1177/0361684313505844.

Bourke, A. (2003). Women's football in the Republic of Ireland: past events and future prospects. Soccer and Society, 4(2-3), 162-181. https://doi.org/10.1080/14660970512331390895.

Boxill, J. (2006). Football and feminism. *Journal of the Philosophy of Sport*, 33(2), 115-124. https://doi.org/10.1080/00948705.2006.9714696.

Bozlu, B. (2019). The Relational Analysis of Women Soccer Area. *Journal of Sociology*, (39), 53-80. Retrieved from https://dergipark.org.tr/en/pub/sosder/issue/64289/975827.

Braciska, A. O. (2018). One team: A historical analysis of inequalities between men's and women's professional soccer. *Gender, Sexuality and Women's Studies Student Scholarship*, 13. (Recommended Citation). https://crossworks.holycross.edu/gsw_stu_scholarship/13.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. https://doi.org/10.1191/1478088706qp063oa.

Braun, V., & Clarke, V. (2013). *Successful Qualitative Research: A Practical Guide for Beginners.* London: Sage

Caudwell, J. (2011). Gender, feminism and football studies. *Soccer and Society*, 12(3), 330-344. https://doi.org/10.1080/14660970.2011.568099.

Chalabaev, A., Sarrazin, P., & Fontayne, P. (2009). Stereotype endorsement and perceived ability as mediators of the girls' gender orientation-soccer performance relationship. *Psychology of Sport and Exercise*, 10, 297-299. https://doi.org/10.1016/j.psychsport.2008.08.002.

Chalabaev, A., Sarrazin, P., & Fontayne, P. Boiché, J., and Clement-Guillotin, C. (2013). The influence of sex stereotypes and gender roles on sport participation and performance: Review and future directions. *Psychology of Sport and Exercise*, 14, 136-144. https://doi.org/10.1016/j.psychsport.2012.10.005.

Chen, A., & Liu, X. (2009). Task values, cost, and choice decisions in college physical education. *Journal of Teaching in Physical Education*, 28(2), 192-213. https://doi.org/10.1123/jtpe.28.2.192.

Chin, N. S., Khoo, S., & Low, W. Y. (2009). Sex, age group and locality differences in adolescent athletes' beliefs, values and goal orientation in track and field. *Journal of Exercise Science & Fitness*, 7(2), 112-121. https://doi.org/10.1016/S1728-869X(09)60014-9.

Clarke, V. & Braun, V. (2013) Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist*, 26(2), 120-123. https://uwe-repository.worktribe.com/preview/937606/Teaching%20.

Corbin, J., & Strauss, A. (2014). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage.

Cox, A. E., & Whaley, D. E. (2004). The Influence of task value, expectancies for success, and identity on athletes' achievement behaviours. *Journal of Applied Sport Psychology*, 16(2), 103-117. https://doi.org/10.1080/10413200490437930.

Cress, C. M., & Hart, J. (2009). Playing soccer on the football field: the persistence of gender inequities for women faculty. *Equity and Excellence in Education*, 42(4), 473-488. https://doi.org/10.1080/10665680903284523.

Devonport, T. J., Russell, K., Leflay, K., & Conway, J. (2019). Gendered performances and identity construction among UK female soccer players and netballers: a comparative study. *Sport in Society*, 22(7), 1131-1147. https://doi.org/10.1080/17430437.2018.1504773.

Dicke, A. L., Safavian, N., & Eccles, J. S. (2019). Traditional gender role beliefs and career attainment in STEM: A gendered story?. *Frontiers in Psychology*, 10 (Article no: 1053), 1-14. https://doi.org/10.3389/fpsyg.2019.01053.

Dixon, M. A., Warner, S. M., & Bruening, J. E. (2008). More than just letting them play: Parental influence on women's lifetime sport involvement. *Sociology of Sport Journal*, 25(4), 538-559. https://doi.org/10.1123/ssj.25.4.538.

Drane, C. F., & Barber, B. L. (2016). Who gets more out of sport? the role of value and perceived ability in flow and identity-related experiences in adolescent sport. *Applied Developmental Science*, 20(4), 267-277. https://doi.org/10.1080/10888691.2015.1114889.

Eccles, J. S., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J. L., & Midgley, C. (1983). *Expectations, values and academic behaviours*. In J. Spence (Ed.). Achievement and achievement motives: Psychological and sociological approaches (pp. 75-146). San Francisco: Freeman.

Eccles, J. S., & Harold, R. D. (1991). Gender differences in sport involvement: Applying the eccles' expectancy-value model. *Journal of Applied Sport Psychology*, 3(1), 7-35. https://doi.org/10.1080/10413209108406432.

Eccles, J. S. (1994). Understanding women's educational and occupational choices: Applying the eccles et al. model of achievement-related choices. *Psychology of Women Quarterly*, 18(4), 585-609. https://doi.org/10.1111/j.1471-6402.1994.tb01049.x.

Eccles, J. S., Freedman-Doan, C., Frome, P., Jacobs, J., & Yoon, K. S. (2000). *Gender role socialization in the family: a longitudinal approach.* In T. Eckes and H. M. Turner (Eds.). The developmental social psychology of gender (pp. 333–360). Mahwah, NJ: La.

Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53(1), 109-132. https://doi.org/10.1146/annurev.psych.53.100901.135153.

Eccles, J. S. (2009). Who am I and what am I going to do with my life? personal and collective identities as motivators of action. *Educational Psychologist*, 44(2), 78-89. https://doi.org/10.1080/00461520902832368.

Eccles, J. S. (2011). Gendered educational and occupational choices: applying the Eccles et al. model of achievement-related choices. *International Journal of Behavioural Development*, 35(3), 195-201. https://doi.org/10.1177/0165025411398185.

Eccles, J. S. (2015). Gendered socialization of STEM interests in the family. *International Journal of Gender, Science and Technology*, 7(2), 116-132. http://genderandset.open.ac.uk/index.php/genderandset/article/view/419.

Eccles, J. S., & Wigfield, A. (2020). From expectancy-value theory to situated expectancy-value theory: A developmental, social cognitive, and sociocultural perspective on motivation. *Contemporary Educational Psychology*, 61, 101859. https://doi.org/10.1016/j.cedpsych.2020.101859.

Engh, M. H. (2011). Tackling femininity: The heterosexual paradigm and women's soccer in South Africa. *The International Journal of the History of Sport*, 28(1), 137-152. https://doi.org/10.1080/09523367.2011.525311.

Eriksen, I. M. (2021). Teens' Dreams of Becoming Professional Athletes: The Gender Gap in Youths' Sports Ambitions. *Sport in Society*, 1-15. (Published online). https://doi.org/10.1080/17430437.2021.1891044.

Fink, J. S., LaVoi, N. M., & Newhall, K. E. (2016). Challenging the gender binary? Male basketball practice players' views of female athletes and women's sports. *Sport in Society*, 19(8-9), 1316-133. https://doi.org/10.1080/17430437.2015.1096252.

Flake, J. K., Barron, K. E., Hulleman, C., McCoach, B. D., & Welsh, M. E. (2015). Measuring cost: the forgotten component of expectancy-value theory. *Contemporary Educational Psychology*, 41, 232-244. https://doi.org/10.1016/j.cedpsych.2015.03.002.

Fredricks, J. A., & Eccles, J. S. (2002). Children's competence and value beliefs from childhood through adolescence: growth trajectories in two male-sex-typed domains. *Developmental Psychology*, 38(4), 519-533. https://doi.org/10.1037/0012-1649.38.4.519.

Fredricks, J. A., Alfeld-Liro, C. J., Hruda, L. Z., Eccles, J. S., Patrick, H., & A. Ryan, M. (2002). A qualitative exploration of adolescents' commitment to athletics and the arts. *Journal of Adolescent Research*, 17(1), 68-97. https://doi.org/10.1177/0743558402171004.

Fredricks, J. A., & Eccles, J. S. (2004). *Parental influences on youth involvement in sports.* In M. Weiss (Ed.). Developmental sport and exercise psychology: A lifespan perspective (pp. 145-164). Morgantown, WV: Fitness Information Technology.

Fredricks, J. A., & Eccles, J. S. (2005). Family socialization, gender, and sport motivation and involvement. *Journal of Sport and Exercise Psychology*, 27(1), 3-31. https://doi.org/10.1123/jsep.27.1.3.

González, L., Castillo, I., & Balaguer, I. (2019). Exploring the role of resilience and basic psychological needs as antecedents of enjoyment and boredom in female sports. *Revista de Psicodidáctica* (English ed.), 24(2), 131-137. https://doi.org/10.1016/j.psicoe.2019.02.001.

Guillet, E., Sarrazin, P., Fontayne, P., & Brustad, R. J. (2006). Understanding female sport attrition in a stereotypical male sport within the framework of Eccles's expectancy–value model. *Psychology of Women Quarterly*, 30(4), 358-368. https://doi.org/10.1111/j.1471-6402.2006.00311.x.

Hardin, M., & Greer, J. D. (2009). The influence of gender-role socialization, media use and sports participation on perceptions of gender-appropriate sports. *Journal of Sport Behaviour*, 32(2), 1-20. https://www.proquest.com/docview/215875384?pq-origsite=gscholar&fromopenview=true.

Jain, A. (1985) Understanding a Presented Problem from a Phenomenological Perspective. *The Journal of Sociology & Social Welfare*, 12(2), 413-430. https://heinonline.org/HOL/Page?collection=journals&handle=hein.journals/jrlsasw12&id=423&men_tab=srchresults.

Jenkel, L. (2021). The FA's Ban of Women's Football 1921 in The Contemporary Press-A Historical Discourse Analysis. *Sport in History*, 41(2), 239-259. https://doi.org/10.1080/17460263.2020.1726441.

Joseph, L. J., & Anderson, E. (2016). The influence of gender segregation and teamsport experience on occupational discrimination in sport-based employment. *Journal of Gender Studies*, 25(5), 586-598. https://doi.org/10.1080/09589236.2015.1070712.

Kaelberer, M. (2019). Gender trouble on the German soccer field: can the growth of women's soccer challenge hegemonic masculinity?. *Journal of Gender Studies*, 28(3), 342-352. https://doi.org/10.1080/09589236.2018.1469973.

Kavasoğlu, İ., & Bozok, M. (2022). "Your Hair or the Team!" Body Politics and Possibilities of Resistance in Women's Football in Turkey. *Fe Journal*, 14(1), 92-106. https://doi.org/10.46655/federgi.1067184.

Koca, C. (2018). *Gender equality in sports: Mapping and monitoring study. Enhancement of participatory democracy in Turkey- Gender equality monitoring project.* Ankara: CEID Publications. ISBN: 978-605-69015-3-9.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.

Martínez-García, M. L., & Rodríguez-Menéndez, C. (2021). "They could be good players if they trained": exploring the football discourse of five-year-old boys and girls. *Journal of Gender Studies*, 30(6), 737-751. https://doi.org/10.1080/09589236.2020.1811652.

Mascarin, R. B., Vicentini, L., & Marques, R. F. R. (2019). Brazilian women elite futsal players' career development: diversified experiences and late sport specialization. *Motriz: Revista de Educação Física*, 25(2), 1-10. https://doi.org/10.1590/S1980-6574201900010014.

McCormack, C., & Walseth, K. (2013). Combining elite women's soccer and education: Norway and the NCAA. *Soccer and Society*, 14(6), 887-897. https://doi.org/10.1080/14660970.2013.843927.

McHale, S. M., Updegraff, K. A., Kim, J. Y., & Cansler, E. (2009). Cultural orientations, daily activities, and adjustment in Mexican American youth. *Journal of Youth and Adolescence*, 38(5), 627-641. https://doi.org/10.1007/s10964-008-9321-8.

Meier, H. E., Konjer, M., & Strauß, B. (2020). Identification with the women's national soccer in Germany: do gender role orientations matter?. *Soccer & Society*, 21(3), 299-315. https://doi.org/10.1080/14660970.2019.1629908.

Messner, M. A. (1988). Sports and Male domination: The female athlete as contested ideological terrain. *Sociology of Sport Journal*, 5(3), 197-211. https://doi.org/10.1123/ssj.5.3.197.

Metcalfe, S. (2018). Adolescent constructions of gendered identities: The role of sport and (physical) education. *Sport, Education and Society*, 23(7), 681–693. https://doi.org/10.1080/13573322.2018.1493574.

Myrold, R. L., & Ullrich-French, S. (2017). Expectancy-value theory outcomes of a school-based bicycling programme. *International Journal of Sport and Exercise Psychology*, 15(2), 207-220. https://doi.org/10.1080/1612197X.2015.1079922.

Nuhrat, Y. (2020). Women in Football in Turkey: Nonworkers Out of Place. *Fe Journal*, 12(2): 45-58. URL:http://cins.ankara.edu.tr/24_4.pdf

Nuhrat, Y. (2021). 'Girls on the field' in Turkey: negotiating gender anxieties and norms through football. *Sport in Society*, 1-17. https://doi.org/10.1080/17430437.2021.1904903.

Okholm-Kryger, K., Wang, A., Mehta, R., Impellizzeri, F. M., Massey, A., & McCall, A. (2021). Research on Women's Football: A Scoping Review. *Science and Medicine in Football*, 1-10. https://doi.org/10.1080/24733938.2020.1868560.

O'Halloran, L., Littlewood, M., Richardson, D., Tod, D., & Nesti, M. (2018). Doing descriptive phenomenological data collection in sport psychology research. *Sport in Society*, 21(2), 302-313. https://doi.org/10.1080/17430437.2016.1159199.

Öztürk, P. (2017). *The experiences of women footballers in the football. [Unpublished doctoral dissertation].* University of Hacettepe, Department of Sport Sciences and Technology.

Öztürk, P., & Koca, C. (2015). Women, the "other" of football, write fotonovela, the "other" of photography. *Moment Journal*, 2(2), 157-183. https://doi.org/10.17572/mj2015.2.157183.

Öztürk, P., & Koca, C. (2018). The women in the football: analysis of a women's football team as a social field. *Turkiye Klinikleri J Sports Sci*, 10(3), 150-163. doi:10.5336/sportsci.2018-61162.

Öztürk, P., & Koca, C. (2021). "The Club Management Ignores Us": Gender-Power Relations in Women's Football in Turkey. *Sociology of Sport Journal*, 38(3), 285-292. https://doi.org/10.1123/ssj.2019-0120.

Patton, M. Q. (2002). Two decades of developments in qualitative inquiry: A personal, experiential perspective. *Qualitative Social Work*, 1(3), 261-283. https://doi.org/10.1177/1473325002001003636.

Peeters, R., & Van Sterkenburg, J. (2017). Making sense of race/ethnicity and gender in televised football: reception research among British students. *Sport in Society*, 20(5-6), 701-715. https://doi.org/10.1080/17430437.2016.1158472.

Pelak, C. F. (2005). Negotiating gender/race/class constraints in the New South Africa: A case study of women's soccer. *International Review for the Sociology of Sport*, 40(1), 53-70. https://doi.org/10.1177/1012690205052165.

Pfister, G. (2010). Women in sport–gender relations and future perspectives. *Sport in Society*, 13(2), 234-248. https://doi.org/10.1080/17430430903522954.

Pfister, G. (2015). Assessing the Sociology of Sport: On Women and Football. *International Review for Sociology of Sport*, 50(4-5), 563-569. https://doi.org/10.1177/1012690214566646.

Pielichaty, H. (2019). Identity salience and the football self: a critical ethnographic study of women and girls in football. *Qualitative Research in Sport, Exercise and Health*, 11(4), 527-542. https://doi.org/10.1080/2159676X.2018.1549094.

Plaza, M., Boiché, J., Brunel, L., and Ruchaud, F. (2017). Sport = male… but not all sports: Investigating the gender stereotypes of sport activities at the explicit and implicit levels. *Sex Roles*, 76(3-4), 202-217. https://doi.org/10.1007/s11199-016-0650-x.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development and wellness.* New York, NY: Guilford Press. Retrieved from https://www.guilford.com/books/Self-Determination-Theory/Ryan-Deci/9781462538966.

Schoon, I., & Eccles, J. S. (2014). *Conceptualizing gender differences in aspirations and attainment.* In I. Schoon and J. S. Eccles (Eds.). Gender differences in aspirations and attainment: A life course perspective (pp. 3-26). Cambridge: Cambridge University Press.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. Education for Information, 22(2), 63–75. https://doi.org/10.3233/EFI-2004-22201.

Simpkins, S. D., Fredricks, J. A., & Eccles, J. S. (2012). Charting the Eccles' expectancy-value model from mothers' beliefs in childhood to youths' activities in adolescence. *Developmental Psychology*, 48(4), 1019-1032. https://doi.org/10.1037/a0027468.

Slater, A., & Tiggemann, M. (2010). Uncool to do sport": A focus group study of adolescent girls' reasons for withdrawing from physical activity. *Psychology of Sport and Exercise,* 11(6), 619-626. https://doi.org/10.1016/j.psychsport.2010.07.006.

Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology*, 11(1), 101-121. https://doi.org/10.1080/1750984X.2017.1317357.

Sobal, J., & Milgrim, M. (2019). Gendertyping sports: social representations of masculine, feminine, and neither-gendered sports among US university students. *Journal of Gender Studies,* 28(1), 29-44. https://doi.org/10.1080/09589236.2017.1386094.

Sparkes, A. C., & Smith, B. (2013). *Qualitative research methods in sport, exercise and health: From process to product.* Oxon: Routledge

Stasi, M., & Evans, A. (2013). Glitter (foot) ball tactics: Negotiating mainstream gender equality in Iceland. *Men and Masculinities*, 16(5), 560-578. https://doi.org/10.1177/1097184X13511251.

Staurowsky, E. J., DeSousa, M. J., Miller, K. E., Sabo, D., Shakib, S., Theberge, N., Veliz, P., Weaver, A., & Williams, N. (2015). H*er life depends on it III: Sport, physical activity, and the health and well-being of American girls and women.* East Meadow, NY: Women's Sport Foundation.

Stewart, K. R. (2012). A hobby or hobbling? Playing Palestinian women's soccer in Israel. *Soccer & Society*, 13(5-6), 739-763. https://doi.org/10.1080/14660970.2012.730776.

Stirling, L., & Schulz, J. (2011). Women's football: Still in the hands of men. *Choregia*, 7(2), 53-78.

Stuart, M. (2003). Sources of subjective task value in sport: An examination of adolescents with high or low value for sport. *Journal of Applied Sport Psychology*, 15(3), 239-255. https://doi.org/10.1080/10413200305388.

Svensson, D., & Oppenheim, F. (2018). Equalize It!: 'Sportification' and the transformation of gender boundaries in emerging Swedish women's football, 1966-1999. *The International Journal of the History of Sport*, 35(6), 575-590. https://doi.org/10.1080/09523367.2018.1543273.

Swanson, L. (2016). A Generational divide within the class-based production of girls in American youth soccer. *Soccer and Society*, 17(6), 898-909. https://doi.org/10.1080/14660970.2015.1100898.

Timulak, L., & Elliott, R. (2019). Taking stock of descriptive–interpretative qualitative psychotherapy research: Issues and observations from the front line. *Counselling and Psychotherapy Research*, 19(1), 8-15. https://doi.org/10.1002/capr.12197.

Watkinson, E. J., Dwyer, S. A., & Nielsen, A. B. (2005). Children theorize about reasons for recess engagement: Does expectancy-value theory apply? *Adapted Physical Activity Quarterly*, 22(2), 179-197. doi:10.1123/apaq.22.2.179.

Wegemer, C. M., & Eccles, J. S. (2019). Gendered STEM career choices: Altruistic values, beliefs, and identity. *Journal of Vocational Behavior*, 110, 28-42. https://doi.org/10.1016/j.jvb.2018.10.020.

Welford, J. (2018). Outsiders on the inside: Integrating women's and men's football clubs in England. In G. Pfister & S. Pope (Eds.), Female football players and fans, intruding into a man's world (pp. 103-124). London, UK: Palgrave Macmillan.

Wigfield, A., & Eccles, J. S. (2000). Expectancy–value theory of achievement motivation. *Contemporary Educational Psychology*, 25(1), 68-81. https://doi.org/10.1006/ceps.1999.1015.

Williams, J. (2017). "*The girls of the period playing ball": The hidden history of women's football, 1869–2015.* In J. Hughson, K. Moore, R. Spaaij, & J. Maguire (Eds.), Routledge handbook of football studies (pp. 40–49). Oxon, UK: Routledge.

Yenilmez, M. I., & Celik, O. B. (2020). The Difference between Male and Female Sport Participation in Turkey: "Determination Always Finds a Way". *Sport Mont*, 18(2), 107-112. https://doi.org/10.26773/smj.200601.

Zhu, X. (2009). *Examining the relation between student expectancy-value motivation, achievement in middle-school physical education, and after-school physical activity participation.* [Unpublished doctoral dissertation]. University of Maryland.

Zdunek, B., & Nowak, M. A. (2018). The Conditions of Practicing Association Football by Women. *Central European Journal of Sport Sciences and Medicine*, 22(2), 39-50. https://doi.org/10.18276/cej.2018.2-05.

doi.org/10.54141/psbd.1089417

PAMUKKALE JOURNAL OF SPORT SCIENCES
ISSN: 1309-0356 dergipark.org.tr/en/pub/psbd

Pamukkale J Sport Sci, 13(3), 174-190, 2022 Research Article

Analysis of Teacher Candidates' Attitudes Towards the School Experience Course

Murat KANGALGİL[1] Fatih ÖZGÜL[*2] Serdar KOCAEKŞİ[3] Kürşad Han DÖNMEZ[4]

[1]*Dept. of Recreation, Necat Hepkon Sport Sciences Faculty, Dokuz Eylül University, İzmir, Türkiye.*
[2]*Dept. of Coaching Education, Faculty of Sports Sciences, Giresun University, Giresun, Türkiye.*
[3]*Dept. of Physical Education and Sports, Sport Sciences Faculty, Eskişehir Technical University Eskişehir, Türkiye.*
[4]*Dept. of Physical Education and Sports, Sport Sciences Faculty, Giresun University, Giresun, Türkiye.*

Keywords
Attitudes,
Preservice Teachers,
School Experience Course

Article History
Received 17 March 2022
Revised 17 October 2022
Accepted 01 November 2022
Available Online 20 December 2022

[*] **Corresponding Author**:
Fatih ÖZGÜL
E-mail Address:
fatih.ozgul@giresun.edu.tr

ABSTRACT

The study aimed to determine the attitudes of the preservice teachers who have taken the school experience course. The participants consist of 3rd and 4th-grade students who studied at the Faculty of Education and Faculty of Sport Sciences during the 2017-2018 academic year at Sivas Cumhuriyet University. A total of 303 (60.6%) female and 197 (39.4%) male preservice teachers participated in the study. "Attitude Scale Towards School Experience Courses" developed by Kılınç and Salman (2007) was used for data collection. Descriptive statistics and One Way Analysis of Variance (ANOVA) tests were used to analyze the data. According to the findings, the total scores of the preservice teachers' attitudes towards the school experience scale were high, and the preservice teachers reported positive attitudes towards the school experience course. As a result, preservice teachers showed a positive attitude towards the school experience course, and the learning outcomes of the school experience course have been reached. In line with the findings obtained as a result of the study, suggestions were made to teachers and researchers.

Citation: Kangalgil, M., Özgül, F., Kocaekşi S., and Dönmez, K.H. (2022). Analysis of Teacher Candidates' Attitudes Towards the School Experience Course. *Pamukkale Journal of Sport Sciences*, 13(3), 174-190. doi.org/10.54141/psbd.1089417

INTRODUCTION

Learning occurs through lived experiences. The more a student spends rich lives by doing and living, the more s/he becomes ready for life and learns to discover effective and productive learning ways. In today's World of the information age, the challenge of being among the developed countries continues at full speed. The developed countries see the basic condition of being ahead in this struggle as increasing the quality of education with the support and investment provided in education (Tekeli, 2004). Education is primarily a process of raising good, moral, virtuous people; the main actors are teachers. First, decreasing humanitarian, cultural, and moral crises and problems faced by the world and our country will be possible with teachers and educators who are role models in these issues (High Education Council [HEC], 2018).

The basic institutions that meet the educational needs of societies are schools. The definition of the teaching profession, which is the most crucial element fulfilling this function, is "a set of activities whose rules are determined by the society based on systematic knowledge and skills gained through a certain education to produce useful goods and services and earn money in return" (Kuzgun, 2000). The definition of National Education in the Fundamental Law of National Education; is expressed as a specialization profession that takes the state's education, training, and related administrative duties (Ministry of National Education [MNE], 2006). The teacher should create the desired behavioural change in the students in line with the programs by organizing planned educational activities within the framework of a certain program against the people they will serve (Erden, 2005). The most crucial element of an education system is the teacher. No matter how well the goals are determined in education and training and how functionally the content of the course is selected and organized, it is impossible to achieve the expected result from education unless it is conducted in the hands of teachers with those goals and understanding (Sünbül, 2001).

The main purpose of teacher training institutions is to make preservice teachers have the knowledge, skills, and attitudes to fulfill the professional requirements of their age. Preservice teachers acquire this knowledge and skills based on two primary sources. The first is the education they receive at the faculty, and the second is the education they receive in practice schools. Teacher training; is a systematic program designed to increase teachers' knowledge, skills, and attitudes about education and classroom activities (Rıza, 1996). It is of great importance for social development that teachers are trained to meet the needs of the age. This importance necessitates teachers to undertake various roles in the development and

socialization of the individual. The most important of these roles is the role of guiding the acquisition of knowledge by the student. With this role, the teacher creates the desired behavioural changes in the student, gives him good relations, and makes him competent (Gürses et al., 2005). In this context, teacher training is a multidimensional and comprehensive subject. Almost every country has education-related problems, and teacher training is one of the issues at the centre of discussions about education. Issues include integrating theory and practice in the teacher training process, establishing strong inter-institutional cooperation, and providing expert/guidance teacher support in the implementation process. Research and practice-based teacher education and training more qualified and well-equipped teachers are at the centre of discussions worldwide. A critical issue in teacher education is ensuring the balance between theory and practice and integrating them. The definition of the work done in institutions that train preservice teachers is to prepare them for the profession. However, the training and development of teachers in practice are as important as preparatory education or even more (HEC, 2018). Subjects include the selection of preservice teachers, pre-service training, application (internship) period, monitoring and evaluation studies, and in-service training, all included in the teacher training concept. Qualified teachers can provide a good and qualified education because teachers have the most significant role in raising qualified human resources in society (Yıldız, 2006). Therefore, "A school is only as good as its teachers" (Kavcar, 2002). It is possible to train individuals at all levels and institutions that will direct society if teachers have the competencies to raise these individuals (Arı & Kiraz, 1999). Pre-service education is very important in determining, training, and developing qualified teachers (Yeşilyurt, 2010). Increasing the qualifications of the teaching profession is possible by first knowing the competencies teachers should have and then gaining these competencies for teachers and preservice teachers through pre-service and in-service training programs. The fact that education and training have a dynamic structure in all their dimensions makes it necessary to constantly question and develop the teacher's duty, who has a key role in this process, and the qualifications required by this task (HEC, 1998; 2006; MNE, 2006).

School experience course is an important course that improves teacher qualifications, especially general and special field competencies required by profession, and contributes to their becoming experienced and equipped (Şaşmaz Ören et al., 2009). According to Gökçe (2005), the most important function of school practices in teacher training programs is to introduce the teaching profession and to contribute to the professional development of preservice teachers by practising teachers working in schools in cooperation with participants.

Pre-service education is critical in terms of gaining professional knowledge, skills, and behaviour for teachers to be qualified to meet their needs.

Pre-service teachers can make their theoretical knowledge meaningful with application activities thanks to pre-service education and put it into practice with applications (Yeşilyurt, 2010). While preparing the preservice teachers for the teaching profession, it is essential to do practical work with the teachers and students in the classroom environment. Prepare preservice teachers for the teaching profession better, to enable them to gain the competence to use the knowledge, skills, attitudes, and habits related to the general culture, special field education, and the teaching profession in a real educational environment. The National Education in our country in 1998 was based on the relevant provisions of the Basic Law, the Law on the Organization and Duties of the Ministry of National Education (MNE), and the Law on Higher Education (HEC) to gain the teaching profession culture. school experience courses have been introduced in teacher training institutions. The school experience course, one of the practical studies to be carried out in schools, consists of planned observations and activities that introduce many tasks that make up the teaching profession for pre-service teachers. Although the aim here is effective for preservice teachers to gain new knowledge and skills. Preservice teachers need to use their knowledge of the faculty effectively in their professional lives. This is possible if preservice teachers do these practices in pre-service education sufficiently (Demir, 2012). The school experience course is an important course that contributes to developing preservice teachers' teacher qualifications and becoming experienced and equipped, especially in the general and special field competencies required by profession. In the context of this course, the activities and tasks performed by preservice teachers in practice schools enable them to observe experienced teachers on duty, to work individually and with small groups, and to gain teaching experience for short periods (Ergüneş, 2005). However, with the Council of Higher Education updated in the teacher training undergraduate programs in 2018, the school experience courses were removed from the 2018-2019 academic year and the teaching practice course was spread over two terms, and the school experience course was included in this course. For this reason, it is thought that the opinions of preservice teachers about how effective practice courses are on preservice teachers, what the problems they encounter in practice courses, and what can be suggested for solutions can be beneficial.

The school experience course is based on observation and interviews so preservice teachers can get to know the school, students, program, and teachers. Based on all this information, this study aims to determine the opinions of preservice teachers about the school

experience course. In this direction, it is aimed to determine the opinions of preservice teachers about the school experience course according to their gender, the program they are studying, and the questions on the scale.

METHODS

The research is a descriptive field study. Field research includes people's views and evaluations on any topic. The scientific nature of field research stems from its inclusion of variables related to society and the individual (Karasar, 2018).

Study Group

This research is about determining the views of students who have taken the school experience course. The research group consists of 3rd and 4th-grade students studying in Sivas province Cumhuriyet University Faculty of Education and Faculty of Sports. 4th-grade students with pedagogical formation and students from 12 different branches in total who graduated with the same qualifications participated in this study. This study was applied to 500 randomly selected students who took school experience courses in 66 schools in Sivas city. Three hundred three (303) (60.6%) of the preservice teachers participating in the study were female and 197 (39.4%) were male. Table 1 shows the number of participants according to their departments.

Table 1
Distribution of the Sample Group by Gender and Departments

Gender	**f**	%
Female	303	60.6
Male	197	39.4
Department	**f**	%
Pre-school Teaching	84	16.8
Physical Education and Sports Teaching	83	16.6
Classroom Teaching	81	16.2
Psychological Counseling and Guidance Teaching	55	11.0
Maths Teaching	51	10.2
Arts Teaching	40	8.0
Turkish Teaching	37	7.4
Science Teaching	20	4.0
Music Teaching	18	3.6
Religious Culture and Ethics Teaching	12	2.4
Social Studies Teaching	11	2.2
History Teaching	8	1.6
Total	500	100.0

Data Collection Tools

The research data were collected using the "Attitude Scale Towards School Experience Courses" developed by Kılınç and Salman (2007). The scale was designed in two parts including demographic information and determining attitudes towards school experience course. Demographic information is in the form of multiple choice and filling the gap and the items in the scale to determine the attitudes towards the school experience course are 5-point Likert type. Fourteen of which are positive and six are negative. Positive item expressions in the scale are rated as Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), Strongly Disagree (1) and negative items are scored opposite. The lowest score that can be obtained from the scale is 20 and the highest score is 100. The Cronbach Alpha internal consistency coefficient of the scale was 0.94.

Data Analysis

Descriptive statistics such as frequency (n), percentage (%), mean (X), and standard deviation (Ss) were used in the analysis of the data. An Independent Sample T-Test was used to determine whether there was a difference between two independent variables, and One Way Analysis of Variance (ANOVA) test was applied to determine whether there were differences between the two or more independent variables.

Ethical Considerations

All participants were informed about the possible risks and benefits of the study, and written consent was obtained from them at the beginning of the study. The study was conducted in accordance with the Helsinki Declaration which protocol conforms to the ethical guidelines of the 1975 Declaration of Helsinki. In addition, written consent forms were obtained from all participants, who were completely informed about the study.

RESULTS

In this section, findings were presented according to students' attitudes toward school experience course.

In Table 2, the total attitude scores of the pre-service teachers obtained from the scale were compared according to gender variable and significant differences were found in favor of female preservice teachers ($p < 0.05$). According to this research, it can be stated that female preservice teachers developed more positive attitudes towards the school experience course than male preservice teachers'.

Table 2
Comparison of Pre-Service Teachers' Scale Total Attitude Scores by Gender

Gender	n	Mean	Sd	Min.	Max.	Result
Female	303	65.01	6.78	32.00	83.00	t= 0.962
Male	197	64.35	8.58	32.00	92.00	**p= 0.029***
Total	500	64.75	7.54	32.00	92.00	

**p<0.05*

In Table 3, the total attitude scores of the preservice teachers obtained from the scale were compared according to the variable of the department and significant differences were found among them (p <0.05). When the groups are compared by two; a significant difference was found between the Mathematics Teaching and Classroom Teaching departments in favor of preservice teachers of the Mathematics Teaching department. Between Art Teaching and Classroom Teaching departments, significant differences were found in favor of preservice teachers of the Classroom Teaching Department. According to this, it is seen that preservice teachers of the Mathematics Teaching department have a higher level of positive attitudes towards the school experience course than preservice teachers in Classroom Teaching and preservice teachers in Classroom Teaching than preservice teachers at the Art Teaching department.

Table 3
Comparison of Pre-Service Teachers' Scale Total Attitude Scores According to Their Departments (ANOVA)

Department	N	Mean	SS	Min.	Max.	p
Physical Education and Sports Teaching	83	65.44	8.67	40.00	92.00	
Turkish Teaching	37	63.83	6.46	43.00	76.00	
Maths Teaching	51	62.07	10.27	32.00	78.00	
Arts Teaching	40	62.12	9.58	34.00	77.00	
Science Teaching	20	63.95	8.25	37.00	76.00	
Music Teaching	18	61.44	7.39	36.00	69.00	F= 2.518
Social Studies Teaching	11	65.00	6.78	52.00	73.00	**p=0.004***
Classroom Teaching	81	66.97	7.16	44.00	83.00	
Religious Culture and Ethics Teaching	12	66.58	6.24	57.00	77.00	
Pre-school Teaching	84	65.45	4.24	56.00	76.00	
Psychological Counseling and Guidance Teaching	55	65.76	5.08	54.00	76.00	
History Teaching	8	61.87	5.89	50.00	70.00	
Total	500	64.75	7.54	32.00	92.00	

**p<0.05*

In the Table 4, the distribution of the participants according to the answers given to the questions in the scale is examined with frequencies and percentages.

Table 4
Distribution of the Participants According to Their Answers to the Questions in the Scale

EXPRESSIONS	Strongly Not Agree		Not Agree		Undecided		Agree		Strongly Agree	
	f	%	f	%	f	%	f	%	f	%
1. I think school experience courses are necessary	50	10	32	6.4	32	6.4	140	28	**246**	**49.2**
2. I think there are breaks in the faculty-school cooperation	44	8.8	89	17.8	104	20.8	**152**	**30.4**	111	22.2
3. I liked the teaching profession thanks to the school experience courses	34	6.8	45	9	87	17.4	**181**	**36.2**	151	30.2
4. The negative attitudes of students in internship schools reduced my interest in these courses	146	29.2	**187**	**37.4**	86	17.2	56	11.2	25	5
5. I believe lecture. teacher and student observations are useful	26	5.2	45	9	54	10.8	176	35.2	**195**	**39**
6. I'm looking for ways to escape from class in internship schools	**213**	**42.6**	129	25.8	60	12	52	10.4	43	8.6
7. I think internship teachers do not know the content and purpose of the courses	82	16.4	101	20.2	**135**	**27**	111	22.2	67	13.4
8. I find the time set for the school experience course long	95	19	**133**	**26.6**	102	20.4	95	19	73	14.6
9. I believe I have gained teaching experience	36	7.2	32	6.4	85	17	**194**	**38.8**	147	29.4
10. I'm bored with the observations in the school experience courses	116	23.2	**149**	**29.8**	93	18.6	75	15	64	12.8
11. I think I have improved in assessment and evaluation	33	6.6	59	11.8	**122**	**24.4**	196	39.2	87	17.4
12. I encountered good examples in school experience courses	25	5	49	9.8	89	17.8	**218**	**43.6**	118	23.6
13. I think that some of my skills that I did not notice in undergraduate education improved with the school experience	25	5	46	9.2	81	16.2	**225**	**45**	123	24.6
14. Thanks to my school experience. I have turned away from the teaching profession	**217**	**43.4**	153	30.6	56	11.2	33	6.6	37	7.4
15. I believe I beat my excitement in the classroom thanks to the school experience	41	8.2	69	13.8	77	15.4	**198**	**39.6**	110	22.2
16. I think school teachers are supportive and encouraging	41	8.2	53	10.6	96	19.2	**186**	**37.2**	122	24.4
17. I am happy to transfer what I have learned to daily life	20	4	39	7.8	92	18.4	**210**	**42**	135	27
18. I learned that field knowledge alone will not be enough to be a teacher	25	5	45	9	50	10	**190**	**38**	189	37.8
19. I think the school experience course is unnecessary	**241**	**48.2**	117	23.4	52	10.4	38	7.6	50	10
20. I benefited from the constructive suggestions and criticisms of the school. administration and teachers about the activities	46	9.2	74	14.8	93	18.6	**206**	**41.2**	80	16

As seen in Table 4, in the first question 246 (49.2%) students answered "strongly agree"; in the second question 152 (30.4%) students indicated that they "agree"; in the third question answered 181 (36.4%) students were "agree"; in the fourth question 187 (37.4%) students marked "not agree"; in fifth question 195 (39.0%) students answered "strongly agree"; in the sixth question 213 (42.6%) students answered "strongly disagree"; in the seventh question 135 (27.0%) students were "undecided"; in the eighth question 133 (26.6%) students answered "not agree"; in the ninth question 194 (38.8%) students answered "agree"; in the tenth question 149 (29.8%) students answered "not agree"; in the eleventh question 122 (24.4%) students were undecided; in the twelfth question 218 (43.6%) students answered "agree"; in the thirteenth question 225 (45%) students answered "agree"; in the fourteenth question 217 (43.4%) students answered strongly not agree"; in the fifteenth question 198 (39.6%) students answered "agree"; in the sixteenth question 186 (37.2%) students answered "agree"; in the seventeenth question 210 (42%) students answered "agree"; in the eighteenth question 190 (38%) students answered "agree"; in the nineteenth question 241 (48.2) students answered "strongly not agree"; in the twentieth question 206 (41.2%) students answered "agree".

DISCUSSION

In this research, the attitudes of preservice teachers who are studying in different departments towards school experience courses were examined. According to the research findings, female preservice teachers' attitude scores towards school experience were high in terms of gender variable and the difference in favor of female preservice teachers was significant ($p<0.05$). When the literature was examined, similar and different studies were found with the research results. In their study, Şaşmaz-Ören et al. (2009) determined preservice teachers' attitudes towards School Experience Course I and School Experience Course II. The results of their study revealed that the attitudes of the preservice teachers towards the school experience courses were positive, there was no significant difference in terms of attitude between the male and female preservice teachers. It was observed that their attitudes towards the department did not differ according to the variables of education type (primary and secondary education), age, the type of high school graduated from, and the source of the problem encountered in the practice school. According to Demir et al. (2015),

classroom preservice teachers' attitudes towards school experience courses do not differ significantly according to gender (p>0.05). Although the attitudes of male classroom preservice teachers towards school experience courses are higher than female classroom preservice teachers' attitudes towards school experience courses, this difference between them is not significant. In the studies of Şaşmaz-Ören et al. (2009), preservice teachers' attitudes towards school experience courses do not differ significantly according to gender (p> 0.05). Although the attitudes of female preservice teachers (X = 70.815) are more positive than male preservice teachers (X = 69.479), this result is not at a level that would make a significant difference. Sarıtaş (2007), evaluated the school experience course in terms of teacher and student dimensions in his study. According to this; the School Experience Course I application is more beneficial for male preservice teachers than female preservice teachers in terms of gender. According to the evaluations of pre-service teachers in terms of gender, female pre-service teachers find the School Experience course I application more beneficial for pre-service teachers than male pre-service teachers**.**

According to our research findings, the total attitude scores of the preservice teachers obtained from the scale were compared according to the department variable and significant differences were found between them (p<0.05). When the research is examined; Şaşmaz-Ören et al. (2009), found that there is no significant difference between the attitudes of preservice teachers towards school experience courses and the department variable (p> 0.05). In other words, students' attitudes do not change significantly according to their departments. Saraç (2004), examined the interests and expectations of the students of the Fine Arts Education Department for the School Experience Course I. When the researcher compared the interest and expectation levels of the students in the Art and Music Teaching programs, no significant difference was found (p>0.05) between them. Sarıtaş (2007), investigated the school experience course in terms of teachers and students and the faculty they graduated from. According to this, the teachers who graduated from the faculty of science and literature, took the School Experience Course I application more useful for preservice teachers than teachers working in the field of social sciences than the teachers who graduated from the education faculty; In terms of two basic sciences, teachers who work in the field of science. According to the preservice teachers who graduated from the field of social

sciences found the School Experience I course application more useful for them than preservice teachers who graduated from the field of science.

In our study, when the distribution of the participants' answers to the questions in the scale is examined with frequencies and percentages; it is seen that the attitude rates towards the School Experience course are generally high and positive. When similar studies are examined; In the study of Güven (2004), which she applied to preservice teachers, it was revealed that all of the preservice teachers found school practices very useful and would positively affect their professional development. Bilgin Aksu & Demirtaş (2006) state that preservice teachers found the course useful and that practice and cooperation should be developed in order for the course to be more effective. According to Aydın et al. (2007), it can be said that the School Experience application is significantly useful for preservice teachers. These practices caused preservice teachers to feel like teachers and positively change their opinions towards the teaching profession. However, some preservice teachers realized that the teaching profession was more difficult than anticipated. However, their interest in the teaching profession increased significantly with the practice courses. Many preservice teachers gained experience with the application work and had the opportunity to see their shortcomings before the service. However, the coordination between the Faculty - Practice School, the communication with the school administrators, and the counseling skills of some application teachers were insufficient compared to the preservice teachers. According to Saracaloğlu et al.'s (2011) study, preservice teachers generally had a positive opinion about the school experience course and this opinion did not differ according to gender and socio-economic level of the school they attended for school experience. According to the study of Oğuz (2004), it is seen that the School Experience I course positively affects the pre-service teachers' views towards the profession. Participants think that the School Experience course I is particularly important in terms of giving the opportunity to get to know the teaching profession, which requires responsibility, patience, and dedication. Baştürk (2009), aimed to reveal the views of mentor teachers about School Experience / Teaching Practice courses and preservice teachers in their study. The scanning model was used in the study conducted with six application teachers working in three different provinces

and having intern students. According to the data obtained from the semi-structured interviews, it was concluded that the mentor teachers wanted to receive training in mentoring and found this job beneficial in terms of professional development. But the activities of the preservice teachers within the scope of the School Experience were not fully known by the mentor teachers. Yapıcı & Yapıcı (2004), tried to determine the opinions of the preservice teachers about the School Experience course I in their study. The study, in which descriptive analysis was used was conducted with preservice teachers who were studying in the Department of Clasroom Teaching and taking the School Experience Course I. In the light of the data obtained from the activity reports and activity evaluation and analysis reports; It was concluded that the School Experience course I is a useful and functional course. But there are serious problems that need to be solved in practice.

It is very important for preservice teachers to be educated especially in terms of professional knowledge. That is to have sufficiently developed motor, cognitive and affective characteristics related to the field they will teach. It has been found that especially teachers who are new to the profession have basic problems such as not being able to provide classroom discipline, not being able to evaluate student work, not being able to use appropriate materials, not knowing questioning techniques, not being able to motivate their students and perceive individual differences (Azar, 2003). In addition, in the study conducted by Şaşmaz-Ören et al. (2009); preservice teachers state that the mentor teachers do not know the aims of this course sufficiently. According to the study of Akkoç (2003), approximately 12% of the sample group had adaptation problems with the mentor teachers. In another study, it is seen that preservice teachers generally think negatively about mentor teachers and are not satisfied with mentor teachers (Yıldız, 2006). According to the research findings of Kocatürk (2006), the preservice teachers think the mentor teachers and application instructors do not adequately guide them. According to our research results, 27% of the participants stated that they were undecided.

Considering the number of courses and the time dimension, it is seen that the preservice teachers generally think that the hour and number of this course should be increased. Almost half of the participants in the research of Kudu et al. (2006), similarly

state that the duration of the school experience program is insufficient to understand the school and students. Preservice teachers see school experience courses as both useful and necessary. Students describe these courses as; "very important, useful, must be an indispensable part of the profession in terms of gaining experience". According to Demir et al. (2015), the first three items that classroom preservice teachers have the highest positive attitude are "I think school experience courses are necessary", "I think courses, school. teacher and student observations are useful" and "I believe that I overcome my excitement in front of the classroom thanks to the school experience". The first three items on which they had the lowest positive attitude were "I got away from the teaching profession thanks to my school experience", "I realized that the teaching practice courses were not for me thanks to my teaching experience" and "The negative attitudes of students in internship schools reduced my interest in these courses". According to the studies of Oğuz (2004) and Köse (2014), it is seen that the School Experience course I positively affects the attitude of preservice teachers towards the profession.

Participants think that the School Experience course I is particularly important in providing an opportunity to get to know the teaching profession and teaching that the profession requires responsibility, patience, and dedication. Kara & Altuntaş (2013), concluded in their study that preservice teachers liked the teaching profession more thanks to the School Experience course. Similarly, almost all of the participants (96.5%) in the research of Kudu et al. (2006), stated that the school experience course was a useful study and most of them (about 90%) gained teaching experience with these practices. In our study, almost half of them (49.2%) stated that the school experience course was necessary and thanks to this course, they liked the teaching profession, gained teaching experience, and developed their skills that they did not notice during undergraduate education. Similar results were found with the statement; "I think the school experience course is unnecessary" (48%). As a result, it is seen that the School Experience Course I and School Experience Course II; which are currently removed from the curriculum have achieved their purpose as long as they remain in practice. On the other hand, there should be strong communication between the practice school, the teacher candidate, and the instructor triangle for the future

regarding this course that has spread throughout the teaching practice. In this way, many problems faced by students in the practice school can be solved easily and in a short time. According to the recent study of Kırçiçek & Yüksel (2019), when we look at the theme of the place of the school experience course in the program, the majority of the academicians stated that the course should not be cancelled, and this course is necessary to get to know the school environment.

CONCLUSION

As a result, although different results have been obtained in different studies about the school experience course, it is of great importance when a teacher starts the profession, and it can be said that this course gives students many experiences before starting the profession and makes them ready for the profession.

Acknowledgments

No funding was received for the preparation of the submitted manuscript.

Authors' contributions

All authors carried out the research design together. The first and second author was involved in the data collection process. The third and fourth authors took responsibility for data analysis and interpretation of the data. All authors contributed to the discussion of the results and the manuscript's preparation.

Conflict of interest declaration

The authors have no conflicts of interest to declare.

REFERENCES

Akkoç, V. (2003). *Physical education and sports preservice teachers studying in high school students' school experience I. II and identification of problems they encounter in their teaching practice courses and solutions in Turkey*. Unpublished Master's Thesis. Dumlupınar University Institute of Social Sciences. Kütahya.

Arcagök, S., Demir, M.K., & Şahin, Ç. (2015). Evaluation of Classroom Preservice Teachers' Attitudes towards School Experience Courses. *Dicle University Journal of Ziya Gökalp Education Faculty*. 25. 136-156. Retrieved June, 10, 2020, from https://dergipark.org.tr/en/pub/zgefd/issue/47936/606387

Arı, A., & Kiraz, E. (1999). Problems Encountered in School Experience Practices. *3rd National Science Education Symposium,* Trabzon, National Education Press, 307-311.

Aydın, S., Selçuk, A., & Yesilyurt, M. (2007). Pre-service Teachers' Opinions on "School Experience II" Course (The Case of Yüzüncü Yıl University) *Yüzüncü Yıl University. Journal of the Faculty of Education.* IV (II). 75-90. Retrieved January, 11, 2020, from https://dergipark.org.tr/tr/pub/yyuefd/issue/13716/166050

Azar, A. (2003). Reflections of their views on School Experience and Teaching Practice Courses. *Journal of National Education.* 159. Accessed on 2 July 2020 from http://yayim.meb.gov.tr/dergiler/159/azar.htm.

Baştürk, S. (2009). Investigating Teaching Practice Course According to Student Teachers' Opinions. *Elementary Education Online*. 8 (2). s. 439-456. Accessed on 2 July 2020 from https://www.ilkogretim-online.org/?mno=121462

Bilgin Aksu, M., & Demirtaş, H. (2006). Opinions of Preservice teachers on School Experience Course II, *Journal of İnönü University Faculty of Education*, 7 (11). 3-21 Accessed on 11 July 2020 from http://abakus.inonu.edu.tr/xmlui/handle/11616/18275

Demir, Y. (2012). Problems faced by social studies preservice teachers within the scope of the school experience course and solutions. Unpublished Master's thesis. Abant İzzet Baysal University. Bolu.

Erden, M. (2005). *Introduction to the Teaching Profession* (Third edition). Istanbul: Epsilon Publishing.

Ergüneş, Y. (2005). Evaluation of Whether "School Experience" Course Application is Made by The Pre-service Teacher in Accordance With Its Purpose. *Balıkesir University Journal of Social Sciences Institute*. 8 (13). 106-128. Retrieved June, 12, 2020, from https://dergipark.org.tr/tr/pub/baunsobed/issue/50339/651857

Gökçe, E. (2005). Teacher Candidates and Supervising Teachers' Opinions about Activities of Teaching Practice in Elementary Schools . *Ankara University Journal of Faculty of Educational Sciences* (JFES), 38 (1), 43-72. https://doi.org/10.1501/Egifak_0000000108

Gürses, A., Bayrak, R., Yalçın, M., Açıkyıldız, M., & Doğan, Ç. (2005). Examining the Effectiveness of Microteaching Method in Teaching Practices. *Gazi Üniversitesi Kastamonu Journal of Education Faculty*, 13 (1), 1-10.

Güven, İ. (2004). A Qualitative Study of Perceptions Of Pre-service Social Studies Teachers Towards School Practices. *Educational Sciences in Theory and Practice*, 4 (2), 291-300. https://www.researchgate.net/publication/291350753_A_Qualitative_Study_of_Perceptions_of_Prospective_Social_Studies_Teachers_towards_School_Practices. Retrieved on November 2. 2019.

HEC. (High Education Council) (1998). *Rearrangement of Teacher Training Programs in Education Faculties. Faculty-School Collaboration Booklet*. Ankara: HEC publications.

HEC. (High Education Council) (2006). *Higher Education Council*. http: //www.HEC.gov.tr/documents /10279/49665/HEC_ogretmen_kitabi Retrieved on May 2. 2018.

HEC. (High Education Council) (2018). *Teacher Training Undergraduate Programs* https://www.HEC.gov.tr/ Access Date: 11.03.2020.

Kara, Ö.T., & Altuntaş, İ. (2013). Turkish Preservice Teachers' Attitudes Towards School Experience Course (The Case of Çukurova and Adıyaman Universities). *Mersin University Journal of Education Faculty*. 9 (3). 115-132. Retrieved June, 12, 2020, from https://dergipark.org.tr/tr/pub/mersinefd/issue/17384/181651

Karasar, N. (2018). *Scientific Research Methods.* Ankara: Nobel Publishing.

Kavcar, C. (2002). Republic Period Branch Teacher Training. *Ankara University Faculty of Educational Sciences Journal*. 35 (1) 1-14. https://doi.org/10.1501/Egifak_0000000058

Kılınç, A., & Salman, S. (2007). Developing an Attitude Scale Towards School Experience Courses. *Gazi University Journal of Gazi Education Faculty*. 27 (1). 23-35. Retrieved July, 4, 2020 from https://dergipark.org.tr/en/pub/gefad/issue/6751/90776

Kırçiçek, H., & Yüksel, H. (2019). Opinions of Academicians About School Experience and Teaching Practice Course. *Journal of Gazi University Faculty of Education,* 39 (3), 1319-1345. https://doi.org/10.17152/gefad.556268

Kocatürk, F. (2006). Opinions of application lecturers. mentor teachers and preservice teachers about School Experience II course. Unpublished Master's Thesis. Hacettepe University Institute of Social Sciences. Ankara.

Köse, E. (2014). Student and Teacher-Instructor Attitudes Towards School Experience and Teaching Practice Courses (Erzurum Example) *Dicle University Journal of Ziya Gökalp Education Faculty.* 22. 1-17. Retrieved July 2, 2020, from https://dergipark.org.tr/en/pub/zgefd/issue/47939/606449

Kudu, M., Özbek, R., & Bindak, R. (2006). Student Perceptions Regarding School Experience-I Application (Dicle University Example). *Electronic Journal of Social Sciences*. 5 (15). 99–109. Retrieved November 2, 2019, from https://dergipark.org.tr/en/pub/esosder/issue/6129/82207

Kuzgun, Y. (2000). *Vocational Counseling-Theories Applications*. Ankara: Nobel Publishing.

MNE (Ministry of National Education) (2006). *General Directorate of Teacher Training.* http://oyegm.meb.gov.tr/yet Access Date: 23.03.2019.

Oğuz, A. (2004). The effects of School Experience I Course on Pre-service Teachers. *Dumlupınar University Journal of Social Sciences*. 11. 141–163. Retrieved December 17, 2019, from https://dergipark.org.tr/en/pub/dpusbe/issue/4753/65298

Rıza, E. (1996). Teacher Characteristics and Training, (Ed. Galip Karagözoğlu) *Teacher Training for the Twenty First Century,* Dokuz Eylül University, Buca Education Faculty Publications, İzmir.

Saracaloğlu, A. S., Yılmaz, S., Çöğmen, S., & Şahin, Ü. (2011). Views of Primary Preservice teachers on the School Experience Course. *Mehmet Akif Ersoy University Journal of the Faculty of Education,* 11 (22), 15 - 32. Retrieved June 20, 2020, from https://dergipark.org.tr/tr/pub/maeuefd/issue/19395/205959

Saraç, G. (2004). The interests and expectations of fine arts education students towards the school experience I course. Retrieved June 1, 2020 from http://www.muzikegitimcileri.net/bilimsel/notifier/G-Sarac.pdf

Sarıtaş, M. (2007). Evaluation of Views on the Benefits of School Experience I Application to Pre-service Teachers. *Uludağ University Journal of Education Faculty* XX (1). 121-143. Retrieved February 12, 2020, from https://dergipark.org.tr/tr/pub/uefad/issue/16685/173387

Sünbül, A.M. (2001) *Teaching as a Profession. Introduction to the Teaching Profession*. (Editor: Ö. Demirel-Z. Kaya) Ankara: Pegem Publishing.

Şaşmaz-Ören, F., Sevinç, Ö.S. & Erdoğmuş, E. (2009). Evaluation of Pre-service Teachers' Attitudes and Opinions Towards School Experience Courses. *Educational Administration: Theory and Practice*. 15. (58). 217-246. Retrieved January 4, 2020, from https://dergipark.org.tr/tr/pub/kuey/issue/10339/126682

Tekeli, I. (2004). *Thinking about education*. Turkish Academy of Sciences Publications. Turkish Academy of Sciences Press, 2nd edition. The Scientific and Technological Research Council of Turkey (TÜBİTAK.) Publishing House, Ankara.

Yapıcı, Ş., & Yapıcı, M. (2004). The Views of the Preservice Teachers About the School Experience I Course. *İlkögretim-Online*. 3 (2). 54-59. Retrieved January 5, 2020, from https://dergipark.org.tr/tr/pub/ilkonline/issue/8610/107252

Yesilyurt, E. (2010). *Evaluation of Teaching Practice Curriculum in the Light of Standard-Based and Responsive Models.* Unpublished doctoral dissertation. Fırat Üniversitesi. Elazığ.

Yıldız, H. (2006). *Evaluation of school experience II activities within the scope of HEC / World Bank national education development project (Sivas Province Cumhuriyet University Example).* Unpublished Master's thesis. Cumhuriyet University. Sivas.

doi.org/10.54141/psbd.1166034

PAMUKKALE JOURNAL OF SPORT SCIENCES
ISSN: 1309-0356 dergipark.org.tr/en/pub/psbd

Pamukkale J Sport Sci, 13(3), 191-216, 2022 Research Article

Restructuring a University Health-Related Physical Activity Course with Technology: A Design-Based Research

Kıvanç SEMİZ*[1] Evrim BARAN[2] Mustafa Levent İNCE[3]

[1]*Depaartment of Coaching Education, Faculty of Sports Sciences, Giresun University, Giresun, Türkiye*
[2]*Educational Technology and Human-Computer Education, School of Education, Iowa State University, Ames, Iowa, USA.*
[3]*Department of Physical Education and Sports, Faculty of Education, Middle East Technical University, Ankara, Türkiye.*

Keywords
Health-Related Fitness, Technology Integration, The Design-Based Research

Article History
Received 23 August 2022
Revised 29 September 2022
Accepted 15 October 2022
Available Online 08 November 2022

* **Corresponding Author**:
Kıvanç SEMİZ
E-mail Address:
kivancsemiz@gmail.com

ABSTRACT

The purpose of this study was to investigate the restructuring process of a university health-related physical activity course with technology and its impact on teaching & learning practices. Using a design-based research approach, data were collected in five semesters by applying the technology integration strategies iteratively. Beginning with the needs assessment, the longitudinal study continued with the first and second pilots, and the process ended with improvements in the design and implementation phases. Data were collected through class observations, field notes, and interviews with the students and the instructor. Thematic content analyses were carried out with Nvivo software. Data and researcher triangulation were done for reliability and validity. Findings indicated that technology enhancement would contribute to the quality of health-related physical activity courses and the impact of technology integration was documented in detail. Implications and recommendations were given to stakeholders of the education environment; researchers, practitioners, administrators, technology coaches, and policymakers.

Citation: Semiz K., Baran E., and Ince ML. (2022). Restructuring a University Health-Related Physical Activity Course with Technology: A Design-Based Research. *Pamukkale Journal of Sport Sciences*, 13(3), 191-216. doi.org/10.54141/psbd.1166034

INTRODUCTION

Universities have included health-related fitness (HRF) courses and physical activity classes in their curriculum encouraging undergraduate students to develop healthy lifestyles and positive attitudes toward lifelong physical activity for a couple of decades (Hensley, 2000; Kulinna et al., 2009; Corbin et al., 2020). An HRF course usually focuses on providing students with the knowledge and skills related to four components: (1) body composition, (2) cardiovascular endurance, (3) muscular strength & endurance, and (4) flexibility (American College of Sports Medicine - ACSM, 2014). Research supported that gaining HRF knowledge improved the physical activity levels of university students (Ferkel et al., 2014; Maldari et al., 2021; Zhang et al., 2016). An HRF course also improved 'students' physical, psychological, and emotional well-being (Annesi, et al., 2017; Li et al., 2009). Since offering HRF courses in university are essential, the content and design of these courses should be evaluated. Keating et al. (2012) indicated that the focus of HRF courses at the university level remained on just mastering knowledge. According to Strand et al. (2010), nearly half of the HRF courses offered in USA universities are web-enhanced, and their effectiveness in ensuring students learning is not studied enough. However, Milroy et al. (2013) found that students with higher perceived psychological, emotional, intellectual, and social wellness prefer online and blended HRF courses rather than face-to-face HRF courses.

The design of HRF courses has been increasingly influenced by emerging health-related fitness technologies and instructional technologies. For example, heart rate monitors, pedometers, accelerometers, GPS watches, multimedia technologies (Mohnsen, 2012), and recently mobile apps have provided physical education teachers with a wide range of options to enrich their classes and create authentic learning experiences (Roth, 2014). Physical activity monitors offer opportunities for students to track and monitor their fitness levels (Ransdell et al., 2008). Also, web-based tools have evolved in the last decade to a more collaborative and efficient form. At first, the World Wide Web, also called web 1.0, was used to provide information. Later on, web 2.0 emerged, a platform where people could collaborate, create and publish their information using social media, blogs, wikis, and other media platforms (Jimoyiannis et al.,2013). This innovation in web technologies leads teachers to use web 2.0 tools within their classrooms, often to enhance learning and teaching (Wankel & Blessinger, 2013). Integrating online learning experiences with face-to-face class meetings have provided rich environments for meaningful learning (Garrison & Vaughan, 2008). This type of instructional design is also called web-enhanced instruction or blended learning. With

appropriate planning and support, blended learning could lead to an encouraging transformation for faculty development and students' satisfaction with their learning experiences (Moskal et al., 2013). To effectively organize and administer online course information and assignments, universities provide online delivery mediums also referred to as Learning Management Systems (LMS) (Luke & Morrissey, 2014).

Designing, developing, implementing, and testing technology-enhanced lessons can be a substantial challenge (Marttinen et al., 2019). As Armour et al. (2020) emphasized a digital challenge addressing to support young people for health and physical activity with an expectation to change the content and the pedagogy to meet their needs. Baert (2011) found that Physical Education Teacher Education (PETE) faculty did not feel confident in using technology, often have low proficiency and integration levels, and used primarily traditional computer technologies. Technology coaches have an essential role in supporting instructional environments. Sugar (2005) found that technology coaches helped teachers to gain confidence in using technology in their classrooms. Baran et al. (2013) mentioned that reshaping the higher education 'teachers' perspectives on technology integration, listening to their views, giving the teachers a participatory role, and using their experiences appeared to be critical when enhancing their online teaching practices.

The researcher of this study selected a physical activity course in a metropolitan university in Turkey and questioned the extent to which online instruction should be combined with traditional instruction, how technology could support course activities, and which technology should be selected when deciding on appropriate instructional strategies. The university physical activity course that is mentioned focused on developing healthy behaviors and promoting lifelong physical activity, and it has shown positive effects on undergraduate students. Various theoretical perspectives were used to investigate the impact of this course. For example, a social cognitive theory-based intervention was carried out to develop self-regulatory skills, social support, and self-assessment of health-related fitness (Ince, 2008). The exercise stages of the change model were investigated to understand the health-promoting behaviors of individuals at various physical activity levels (Ince & Ebem, 2009). And lastly, the trans-contextual model was used to understand individuals' autonomous behavioral control over leisure-time physical activity (Muftuler & Ince, 2015). The results showed increased health-promoting behaviors (e.g., nutrition behavior, health responsibility, social support, stress management), physical activity engagement, and perceived autonomous support for leisure time physical activity.

To implement the appropriate strategies based on students' needs and to be able to design a technology-enhanced HRF course, a framework such as Technological Pedagogical Content Knowledge (TPACK) can be used (Koehler & Mishra, 2009). The design-based research (DBR) approach was believed to be the perfect fit for monitoring and evaluating the process of designing a technology-enhanced course. A DBR approach can gain insight into how technology has influenced the university HRF course, the teacher, and the students. Even though teachers' understanding, evaluating, and developing TPACK skills have been studied substantially, knowledge of which design principles should be considered to restructure and develop a university physical activity course remains scarce. The flexibility offered by the DBR can provide insight into which elements should be noted for technology integration, what impact they have on this process, and which barriers they create. Therefore, the purpose of this study was to investigate the design process and the impact of restructuring a university Health-Related Fitness course with technology. The following questions were addressed:

1. What are the design principles for restructuring a university HRF course with technology?

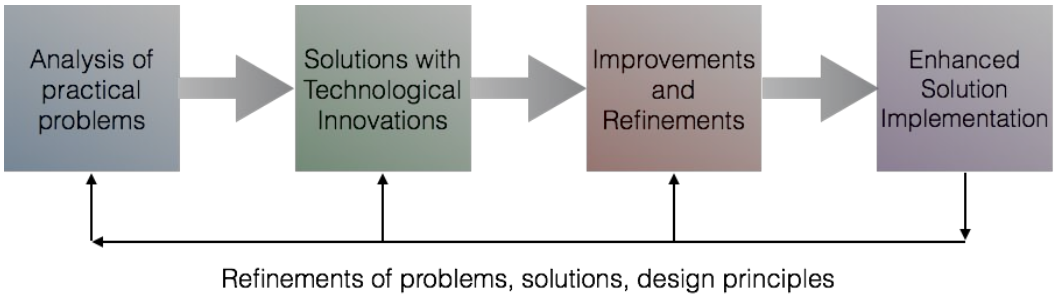
2. What were the challenges when restructuring a university HRF course with technology?

3. What was the impact of restructuring the University HRF course with technology on students and the instructor?

METHODS

Based on the experiences of a university instructor about the issues he faced in a current HRF course, this research used a DBR approach that focused on restructuring the design of a university HRF course with technology. The main focus of the study was to offer the instructor solution-oriented strategies that met his teaching needs and investigated the impact of technology-integrated HRF courses on students' and the instructor's experiences. DBR is defined as *"an emerging paradigm for studying learning in context through the systematic design and study of instructional strategies and tools"* (Design-Based Research Collective, 2003, p. 5). As shown in Figure 1 below, DBR starts with an analysis of practical problems. It continues with solutions and refinements of these solutions until the enhanced solutions are implemented. It is an iterative process and can repeat the cycles as needed.

Figure 1
Design-Based Research

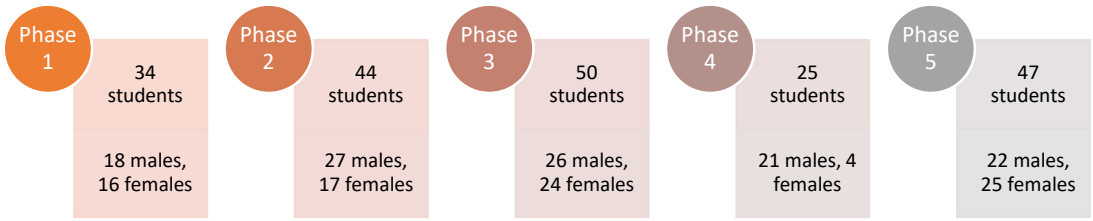


During these iterations, there are certain decisions to be made to form, improve, change, and apply the instructional designs one after another semester, respectively. The design elements emerge during and after this process (Van den Akker et al., 2006). The literature portrays two general types of DBR (Richey et al., 2004; Wang & Hanafin, 2005). In Type I DBR, activities are performed to evaluate a specific product or a program design. On the other hand, a Type II DBR focuses on the design, development, or evaluation processes. Therefore, to determine design principles and understand their impact on teaching and learning practices, this study can be categorized as a Type II DBR. Additionally, with a focus on understanding the impact of an instructional design on students and the teacher, this study is qualitative in nature. Understanding the world as it is, discovering the beliefs and motivations of certain individuals reflectively, and documenting an education environment that has various social interactions, qualitative research was selected as a way of the design of the study. In an attempt to answer questions about participants and context, understand the participants' perspective, and in-debt analysis of an unknown phenomenon, qualitative research is considered very useful (Patton, 2002).

Study Group

Throughout five semesters, 200 university students (114 males, and 86 females) participated in the study (Figure 2). With the convention of research ethics about participants, the real identities were confidential within this research. The researcher was the assistant for the first four semesters. Only the last semester, there was one more course assistant. Hence the researcher concentrated on the video recording of the classes as a participant observer. The instructor who had 20 years of field experience, offered the classes. The students from various departments with different backgrounds had taken the course as an elective course in their program.

Figure 2
Participants



Data Collection Tools

Re-designing process of the HRF course with technology had taken a complete five phases. Beginning with a needs analysis, an online medium between the instructor and the students were considered useful for the course. In the second phase, A Facebook group was created and tested to serve the online course medium role. However, according to the views of the instructor and researcher's field notes, the Facebook group was not maintained for the following semesters. Instead, a Learning Management System (LMS), an online course management system provided by the university, was chosen as a course medium in the 3rd, 4th and 5th phases of the study. Certain technologies were added to the course in each phase. For example, a tablet PC was provided to the instructor to help with classroom management. Lots of course materials were digitalized as e-portfolios. Online discussions were created and managed in LMS to increase collaborative learning. Some classes were recorded with a camera and attached to the LMS for student use. GPS-based mobile applications were used for tracking and promoting physical activity. Heart-rate monitors allowed students to understand the object by living and experiencing it. Exergame with XBOX Kinect used in a dance class for motivational purposes.

Data Analysis

The researcher's field notes and, reflection reports, interviews with the instructor and students were used as the primary sources of data collection. Throughout the five phases of the study, the researcher collected qualitative data and managed it with QSR NVivo 11 software (Table 1). All the documents were analyzed with a thematic analysis approach, which is explained by Willig (2013, p. 178) as a "method for recognizing and organizing patterns in content and meaning in qualitative data". Various descriptive codes were identified within the documents. The codes are assembled into categories and subcategories, which lead them to themes. In the end, specific themes emerged for answering research questions.

Table 1
Phases of the Study

Dates	*Phases*	*Procedures*	**Data (Number of Documents)**
2012-2013 Spring Semester	Needs Analysis	Observation of the learning environment and determining the course-related problems	Field notes (1), Expert opinion (1)
2013-2014 Fall Semester	First Pilot Study	Testing Facebook as a course medium, online collaboration, podcasts, and online videos. Tablet PC for the instructor.	Field notes (1), Instructor Reflections (1)
2013-2014 Spring Semester	Second Pilot Study	Testing LMS as a course medium with the digitalization of course materials. Recording and sharing lab sessions. Mobile application for students.	Field notes (1), Instructor Reflections (1)
2013-2014 Summer School	Improvements of Design	Refinements of the course design by adding online communication and collaboration. Exergaming (XBOX).	Instructor Reflections (1), Instructor Interview (1), Student Interviews (6), Student Online Surveys (12)
2014-2015 Fall Semester	Design Implementation	Improved LMS interface. Heart-rate monitors & accelerometers. Webinars. Class videos.	Field notes (1), Instructor Reflections (1), Students Reflections (3), Student Interviews (6)

Trustworthiness

Both the data triangulation and the investigator triangulation were used to provide trustworthiness in this research. In order to triangulate the findings, various sources were used for data collection. Concerning the quality and accuracy of the data that was gathered, data triangulation was used by combining different data sources in an attempt to answer research questions consistently. Patton (2002, p.554) indicates data triangulation as "*comparing and cross-checking the consistency of information derived in different times and by different means*". Those are expert opinions, interviews with instructor and students, researcher's field notes, instructor and students' reflections, and students' open-ended surveys derived from different times throughout five different periods (phases as the researcher dubbed it). For the investigator triangulation, the researcher had continuous discussions and negotiations with another specialist in the physical education field to create and refine the codes separately and then together. The data was reviewed line by line, and eventually, specific themes emerged with mutual understanding for the inter-coder reliability (Miles & Huberman, 1994).

Researcher's Role

Developing the standards of excellence with technology for students, teachers,

administrators, coaches, and computer science educators, the International Society for Technology in Education (ISTE) defines the skills, knowledge, and goals for teaching and learning with technology (ISTE, 2015). Being a technology coach, the researcher acted in the current research according to the second standard of ISTE Standards for Coaches (ISTE, 2015); which is "Teaching, Learning, and Assessments": "*Technology Coaches assist teachers in using technology effectively for assessing student learning, differentiating instruction, and providing rigorous, relevant, and engaging learning experiences for all students.*"

In the current research, for the needs of a university physical education instructor in Turkey to transform his lesson into a more effective form, the researcher generates a variety of solutions by employing different instructional approaches integrated with technology. The researcher, a Ph.D. candidate during the data collection, first observed the field and took notes on the problems that the instructor confronted. Beginning with a needs analysis, the university HRF course was restructured in line with the problems. The researcher was responsible for monitoring and recording the class, taking notes about the whole instruction process, conducting interviews, and collecting and analyzing the data. The Instructor was assisted and supported by the delivery of a technology-oriented environment. There was no involvement from the researcher in any instruction processes throughout the semesters.

RESULTS

Research Question 1

What are the design principles for restructuring the university HRF course with technology? After the needs assessment in the first semester, five design principles were applied from the second semester to the end of the fifth semester. Throughout this time, certain decisions had taken into consideration according to the needs and perceptions of the instructor and the students.

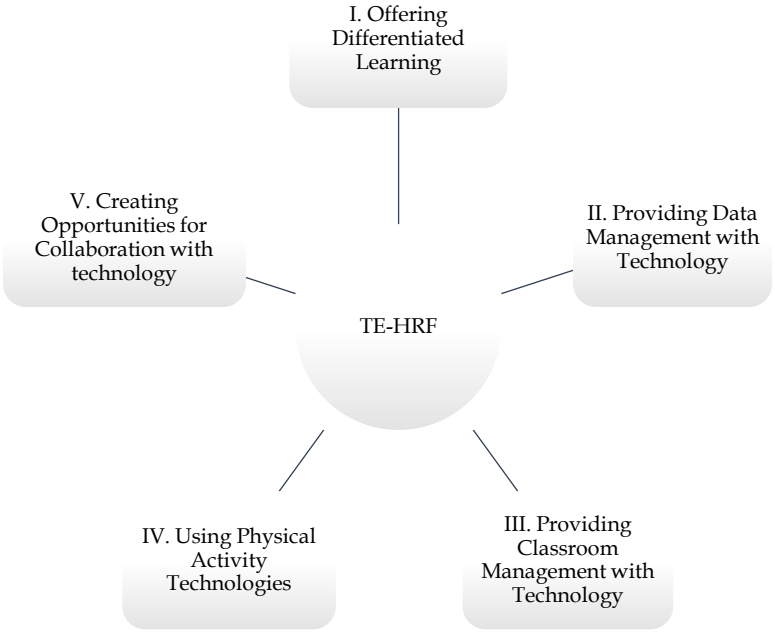
An expectation for an online platform to be integrated into the course had emerged within time as the instructor mentioned the exhaustion and boredom of lecturing in Phase 1: *"I get bored doing lecturing. I do lecturing for 5 hours. It's meaningless. On the other way, you shall tell just check this, read the questions and come again, with only 5 minutes of lecturing, right?"* The paper consumption and managing all the course materials were also other issues: *"We are consuming too much paper. Managing this much paper is also very difficult. I am sick of storing the portfolios in my room."*

According to the researchers' field notes, after determining and creating an online delivery medium (LMS), online content was improved and organized. The researcher

digitalized the portfolio materials on LMS. The portfolio comprised 40% of the course grades, and it required the students to prepare it at the end of the semester. The interface of the LMS has improved with posters week by week, which showed the location and date of the classes. More videos were added (the Introduction video and Lab video were recorded and uploaded, exercise physiology video was shared). Physical activity-related technologies also became an important facet of the course as a mobile GPS tracking application (Endomondo), and exergaming (XBOX Kinect) were added to the course activities besides pedometers. The instructor started to use a Tablet PC to record the movements and give instant feedback. Through the end of the semester, students were categorized according to their physical activity stage, and webinars were organized with these groups separately.

The course activities were thought, created, and matched those five design principles mentioned below (Figure 3). Each course activity includes at least one design principle. With the possibility that the other characteristics might be recognized in different research findings, the principles derived from the literature are considered the most decisive components for restructuring a university health-related physical activity course with technology.

Figure 3
Technology-Enhanced Health-Related Fitness Course Design Principles



The first principle is offering differentiated learning. Technology integration can help teachers to differentiate or individualize the learning process according to the learners' readiness level and personal needs (Davies et al., 2013; Harris et al., 2009). Relevant technologies chosen for specific pedagogical purposes allow teachers to understand each

individual with critical feedback. The second principle is data management with technology. Students value learning management systems as they can monitor and control their educational progress (Chung & Ackerman, 2015). The third principle is providing classroom management with technology. Educational technology skills are directly related to classroom management skills in literature (Bester & Brand, 2013; Varank & Ilhan, 2013). Technology affects classroom management by computing grades, tracking attendance, communicating with students, and storing course-related content (Emmer et al., 2013). The fourth principle is using physical activity technologies. There are lots of emerging technologies that can be used to promote physical activity, such as pedometers (Cayir et al., 2015), physical activity trackers (Diaz et al., 2015), and heart rate monitors (Ignico & Corson, 2006). The fifth principle is creating opportunities for collaboration with technology. Working together to improve and gather knowledge via technology has great potential (Carroll et al., 2013; Goodyear et al., 2014; Junco et al., 2013). Learning Management Systems also enables instructors to present course-related information to students and let them engage in forums, discussions, and chats (Romero et al., 2008). The design principles-related course activities are presented below (Table 2).

Table 2
Design Principles Matched with Course Activities

Design Principles	Course Activities with technology
1. **Offering Differentiated Learning**	Online Assignments on LMS, heart rate monitor, pedometer, web-based sources
2. **Providing Data Management with Technology**	Using LMS for the course medium, Online Assignments on LMS
3. **Providing Classroom Management with Technology**	Using LMS for the course medium, Digitalization of the hardcopy materials, Instructor used Tablet PC
4. **Using Physical Activity Technologies**	Using pedometers, mobile app (Endomondo), Exergaming (XBOX Kinect), heart rate monitor, accelerometers
5. **Creating Opportunities for Collaboration with Technology**	mobile app (endomondo), online forum on LMS, webinar

Research Question 2

What were the challenges when restructuring the university HRF course with technology?

The thematic content analysis of expert opinions, student and instructor interviews and reflections, field notes, and open-ended online student surveys revealed five main challenges encountered during the restructuring process. These were 1) Ethical Considerations, 2) Attitudes toward Technology, 3) Need for Technology Helper, 4) Need for Time to adapt, and 5) University Policies for Technology Integration.

As for attitude toward technology; although there was a need and will to integrate technology in his HRF course, the instructor raised concerns about the quality of the course at the beginning of the process: "*The quality of this course is already at a certain level. When we integrate technology into the course, where will be the position of the course?*"

On the other hand, students' attitude toward technology is another challenge faced during the technology integration process. The uncertainty of whether or not the students watched the videos and what they could get from them raised another issue as Student 7 reflects in Phase 2: "*I think the face-to-face class is more effective. There were two videos, and I do not remember the videos 90 percent. I just remembered the video, and there was something about the treadmill.*"

For the ethical issues; specific considerations can be seen in the researcher's field observation as quoted in Phase 1: "*A Facebook Group for the health-related physical activity course was created. Yet, there were some students who hesitated to combine their personal life and academic life. This raised ethical issues.*"

On the other hand, the researcher observed discomfort among some students last semester due to having a camera taking shots in the gym or weight room. Additionally, since the problems occurred viewing LMS in different browsers, the videos about classes had to be uploaded on YouTube. Although these videos were hidden, there were questions from students about if the videos and the pictures on LMS might be seen by any other person out of the class or not. There have been some issues that emerged as the technology integration process carried on. These issues were mainly around device management and software issues, and accessibility. The instructor claimed in the last phase that having an assistant for technological devices could be convenient:

> "*It seems difficult to walk with a tablet PC and take notes. Last year, I tried it in a few classes, and I saw that it would not be that difficult. If you can know when to take the tablet PC in your hand and when you put it back, and if you have a helper like an assistant, I understood that it would work.*"

On the other hand, when providing lots of technological devices to students, managing those emerged as another issue. One of the assistants, for instance, prepared a name list, and the students signed this list when they took and brought back the devices. Still, according to field notes from the fall of 2014-2015, two pedometers were lost. The Instructor pointed out another important issue about the need for a helper that the technology assistant should know the context:

"The responsible individual should know the gym environment since we are going there for the classes, and I do not think that an individual from outside of this context can give this service. It is important the existence of the sport-related technologies but also the environments related to sports."

University strategies for technology integration are another important topic. As an expert opinion, providing tech support to instructors should be taken into consideration:

"Every instructor in the university should have a technology supervisor. I mean, it is the kind of person who helps to design technology-integrated courses. Essentially, this position should be created and supported by the CEIT (Computer Education and Instructional Technology) departments of the universities. If such positions do not exist, there is no chance of following the emerging developments in the instructional technology area."

The instructor also stated in the phase 4 that the role of architects when designing gyms and the role of the university in the professional development of its staff:

"Gyms are not constructed well according to technology integration, and the architecture is not flexible to changes, and the staff, too. We saw these as instructors and newly started to argue about it, and the management of the university is not aware of such needs. Even though our school has a good wireless Internet system, the gyms are not covered well."

The researcher pointed out an important consideration about time and effort to create and sustain online materials in the beginning. According to the researcher's field notes in Phase 3, s DBR provides flexibility, digitalizing the course materials and designing the LMS as a course delivery medium took a while: "The digitalization of the course materials took considerable time and effort. Once created, they can be copied, improved, and used for the upcoming semesters but still, creating and developing the online materials takes time." A need for an adaptation period was emphasized by another student in phase 4:

"The content is loaded I mean you can see a lot of details, but still there is a structure that is confusing to me. Therefore, I did not go into it other than my needs like where is what, etc. Maybe it's just because of me, I don't know."

In the upcoming semester in Phase 5, the instructor also mentioned the focal points for the adaptation period: *"Firstly, understanding the technology itself, then meet it with the content of the class and understand how to use it meaningfully, later on applying it. All of these processes need a certain amount of time."*

Research Question 3

What was the impact of restructuring the university HRF course with technology on students and the instructor?

As a result of the thematic content analysis of expert opinions, student and instructor interviews and reflections, researcher's field notes, and open-ended online student surveys revealed, a total of 5 themes emerged: 1) Classroom Management, 2) Data Management, 3) Differentiated Learning, 4) Motivation and 5) Workload.

During the restructuring process, one of the most significant impacts is classroom management. As expert opinion noted as: "*The focus would be describing the process more than the result. In-debt study of a design is the point. What happens if the classroom ecology is changed? Affordances of technology for certain pedagogy and content are crucial.*" The instructor reflected on an issue about recognizing students and matching related feedback with them without missing any:

"*Even if I do not know their names, there is a system created now to be able to take notes about students. Within an application on this Tablet PC, I can take notes for a student for specific things, which helps me not forget feedback about them personally.*"

The LMS spread out the portfolio items throughout the weeks by the researcher. Instructor attributes this issue in Phase 4:

> "*Obtaining the product files part by part each week, which I took at the end of the course previously, is beneficial for me. You know, to understand how is the class going, what is their level, which direction are they going, got easier.*"

The students also gave positive feedback for having the semester week by week before their eyes online in Phase 5: "*The information about where the class is and which topic will be was prepared quite fun and nicely with illustrations.*" For the benefits of having an online medium for classroom interaction, another student in Phase 5 stated his thoughts as:

> "*I think it has a big plus for communication with the instructor and the class because, in other classes, we generally don't have much communication with the instructor. They give lectures and go. There is also few things on the Internet. Therefore, I think it improves our connection with the instructor and let us get to know our friends more easily and visually. I think it was beneficial.*"

As for data management, the answers to the questionnaires helped the instructor to behave accordingly. For instance, the most preferred physical activities from students were already shown in LMS. The students who have health problems have shown there too. The

physical activity stages of students also can be seen on LMS. How many of them are on the preparation or contemplation stage at a physical activity level. They were all statistically ready and stored online after students filled out the questionnaires. The instructor was happy to see all the information about every individual online in Phase 5:

> *"When students answer online the tools and materials, I can have transcriptions about each individual. With this, it takes a huge burden off my shoulders. Ahmet or Ayşe, it is personally identifiable data. When s/he enters the data, the elements that I should focus on are coming to me with already analyzed."*

Students used the advantage of having their data online as student 6 in Phase 5 said:

> *"I checked my previous physical activity programs to see what I wrote and compare them. Then, I wrote a program accordingly. It was good to write after checking my drawbacks. Because I happened to monitor my improvement in the semester. I saw what I want to do."*

As for differentiated learning, previously, the instructor had to give students lots of feedback on their heart rates, like "slow down!" or "go a little bit faster!" to reach or stay in the heart rate zones. On the other hand, now, we can see each student continuously checking their heart rate monitor watches, and they are all around in the gym separately while doing their activity. Heart rate monitors made the learning experiences individual. The Instructor reflected in Phase 3 as: "*I effectively used individual feedback. It worked well… Based on the self-reflection reports (from the portfolio materials) I learned the needs of each individual.*" A GPS-tracking physical activity application called Endomondo was promoted in the class. The students had their individual learning opportunities as Student 4 in Phase 4 said:

> *"Then, when I used Endomondo, it was given information like how much distance I ran and how much water an average person loses. The nice thing was you could arrange a pace like how you can run for a certain amount of time. For example, when I was running around the house, I did it on 2 min 10 sec. But in Endomondo, I was checking the clock and knew that one tour is 400 meters long. I saw that I ran 6min for a km. A mobile application like Endomondo serves the purpose well."*

The Instructor's motivation can be seen in Phase 2 during the reflection and interview on consecutive semesters for using tablet PC and LMS:

> *"I liked Tablet PC. I need some time to try it at the gym and look at how it makes me feel walking around with a tablet pc in my hand as a teacher. Within an application on this*

Tablet PC, I can take notes for a student for specific things. That helps me not to forget feedback about them personally."

Some activity classes were recorded and uploaded on LMS to let the students watch themselves. Lots of them enjoyed themselves and had fun watching themselves on videos. They said that they could identify their mistakes, or it's good to see them from the outside in an activity. Student 3 in Phase 5 reflected as:

"The videos about our activities were fun. Opening it and laughing at us is fun. I watched the activity videos with my roommates and commented, "oh god how bad I played or I could not catch this ball" But it was nice I had a lot of fun."

According to the Instructor's view in Phase 5, using exergaming was one of the most fun parts of this course:

"I saw that some students try to escape from rhythm education. I assume that some students will think and try to explore exergames in their life after we successfully use them in the gym. I saw such benefits, and these were not decreased the motivation of the students."

During the restructuring process, whether it brings extra workload or not is another issue for the Instructor's point in Phase 4:

"I asked someone to set up the XBOX Kinect in a dance class. I am thinking if I spend that amount of energy doing it myself. Because it is an extra workload like whether the technological tool works or not, make you vacant or not… For instance, if the speaker is not working effectively or if there is no electricity these can be problematic. The batteries of the heart rate monitors can run out so I should check all of them. I cannot say this lesson does not solve my needs but new problem areas appeared."

Student 11 from Phase 4 also pointed out the same issue as follows:

"I think the workload of the course is appropriate. Even when filling out the forms, we have information about many topics for our physical conditions. Since these forms were designed not to take so much time of students, it does not make any difficulties."

DISCUSSION

The Health-Related Fitness course that was mentioned to be integrated with technology was normally designed to make university students become familiar with fundamentals in health, wellness, and fitness concepts. The instructor used a limited number of technological devices, such as a body fat analyzer (bio-impedance) and pedometers in the

traditional class. There were eight main intended outcomes (cognitive, affective, and psychomotor) for the course:

1. Understand the relationship between health, wellness, and physical fitness.
2. List the fundamentals of health-related physical fitness.
3. Comprehend the basic anatomy, exercise physiology, and exercise psychology knowledge.
4. Practice and evaluate health-related physical fitness tests.
5. Choose the correct methods to improve physical fitness based on personal needs.
6. Practice different physical activity choices.
7. Be a critical consumer of physical education and sport.
8. Appreciate physical fitness and healthy lifestyles.

Assessment procedures include portfolios (i.e. Resting Heart Rate and Blood Pressure, Caloric Intake Record), fitness tests (i.e. 20 m shuttle run, 1 min. Sit-up and push-up), and mid-term & final exams.

Restructuring a university physical activity course with technology and its impact on students and the instructor was the main focus of current research. With the help of physical activity technologies such as heart rate monitors, pedometers, and mobile applications, students reported having their own feedback highlight the offered differentiated learning opportunities. Students reported that they could check their previous physical activity goals and their current situation on LMS. Keating et al. (2012) found that physical activity goal setting and planning were only included in approximately one-third of the schools which offer physical activity courses in the USA sample. They also suggested that most physical activity courses remain at the knowledge level; however, solving students' daily life problems should be the focus. With the instant and continuing feedback from physical activity technologies like heart rate monitors and smartphone applications, students also reported connecting the knowledge they learned in class to normal life situations. Goodyear et al. (2019) stated that wearable apps and mobile applications help young people to learn about health-related issues.

The instructor in the current study was highly satisfied with the student-specific feedback from LMS. One of the things that made the instructor happiest was that all things went online, and all the hardcopy materials piled up at the instructor's office were gone. The instructor was also happy for another reason: he did not have to read and analyze all the assignments anymore because as soon as students completed and submitted the online assignments, they were already analyzed and categorized before his eyes on LMS. Literature

was also in line with these findings, as teachers were reported to be able to differentiate or individualize the learning process according to the learners' readiness level and personal needs (Davies et al., 2013; Harris et al., 2009; Rosen & Beck-hill, 2012). Data management and classroom management with technology were one of the main advantages of this study. Chung and Ackerman's (2014) findings were also parallel with this study as they stated that students valued LMS because they can monitor and control their educational progress. Dias & Diniz (2014) also mentioned that the most significant advantage of LMS was its content repository feature, as it involves documents, slides, study notes, and subject contents in one medium.

Technology affects classroom management in several ways, such as computing grades, tracking attendance, communicating with students, and storing course-related content (Emmer et al., 2013). Online physical activity courses could decrease seat time and allow students to be more active (Sargent & Casey, 2020; Strand et al., 2010). Still, one of the instructor's hesitations in the current research was decreasing the course quality. However, results showed technology integrated health-related physical activity courses offered already analyzed and categorized data to the instructor whenever the students do their assignments. The more educational technology teachers demonstrate, the more classroom management skills they have (Bester & Brand, 2013; Varank & Ilhan, 2013). Students reported their satisfaction with the online forum on LMS to get to know people in the class. They also liked the online videos of classes to see each other from an outside perspective. LMS has also offered students to check how they were doing throughout the semester. Chou and colleagues (2010) stated that students could monitor and track their progress through course management systems. The instructor mentioned the importance of the webinar that he administered last semester according to the physical activity levels of students. Literature was also in line with these aspects as it emphasized the potential of collaboration to improve and gather knowledge via technology (Carroll et al., 2013; Goodyear et al., 2014; Junco et al., 2013) and engagement in forums, discussions, chats (Romero et al., 2008).

Attitudes toward technology both from the instructor and the students emerged as a challenge. The instructor's hesitation in decreasing the course quality and dissatisfaction with using Facebook as a medium was among the first notable issues. Baert's findings (2011) were parallel with this result as most of the physical education faculty in the USA did not feel confident in using technology, they often have low proficiency and integration levels, and they remain using mostly traditional computer technologies. Ertmer et al. (2012) also have similar findings that existing attitudes and beliefs toward technology and current levels of knowledge

and skills are the most substantial barriers to preventing teachers from using technology. Although social media could be used as a medium for an informal tool to provide HRF knowledge (Goodyear & Armour, 2021) some of the students didn't want to combine their personal life and academic life with using Facebook for educational purposes in this research. The instructor also mentioned his displeasure with using Facebook as he thought it was a little bit informal and may cause problems. Similarly, in literature, while students reported that Facebook is important for socialization in university and can be integrated into education, some faculty members thought Facebook is not suitable for educational purposes (Madge et al., 2009; Roblyer et al., 2010).

In order to overcome the problems that the instructors experienced, listening to their views, giving them a participatory role, and using their experiences appeared to be critical to reshape the higher education teachers' perspectives on technology integration (Baran et al., 2013). University instructors need technical support because they think digital tools are complex (Schoonenboom, 2014). Benson and Ward (2013) evaluated three professors' teaching expertise through the lens of the TPACK framework. They found that technological knowledge alone is not enough for developing TPACK skills. One should have adequate pedagogical knowledge first (Birch and Burnett, 2009). Adopting the technology integration process required time. Creating and organizing the online content took time. University policy for technology integration was raised as another issue. As universities provide online delivery mediums for organizing and administering online course information and assignments (Luke & Morrissey, 2014), support mechanisms should also be developed for blended learning opportunities such as organizational infrastructure, faculty development, and course development (Moskal et al., 2013). Research showed that training instructors for LMS make them more assessment and grade-oriented (Chow et al., 2018). Also, the role of social influence and ease of use are significant factors for the acceptance of an LMS by university instructors (Garone et al., 2019).

Motivation was another theme that emerged from the findings. Research with GPS devices indicated that acceptability and ease of use rates were high, and wear-related concerns were low. The young participants with higher education backgrounds found that the GPS device made the study enjoyable (Zenk et al., 2012). Sun (2012) stated that although it is questionable to increase the physical activity of children, exergames could help to improve physical activity motivation. Douglas and his colleagues (2019) also reported that e-portfolios affect higher education students' confidence and motivation. Workload emerged as another area in which the technology-integrated health-related physical activity course impacted.

Milroy and colleagues (2013) found that students prefer online lifetime physical activity and wellness lectures rather than face-to-face courses. They suggested that instructional activities could be designed accordingly. Hence, university students can be challenged in online lectures more. Sidman and colleagues (2011) found that students select online physical activity courses to balance their social responsibilities and work. The academic workload was found to be one of the barriers since adopting and integrating technology in education takes time (Birch & Burnett, 2009). However, online technology integration with physical activity courses should be carried out carefully because most of the students and instructors concentrate more on the enjoyment of the class while improving health and wellness than on online assessments and assignments (Beaudoin, et al., 2018). Cerezo and colleagues (2016) investigated the learning management system interaction patterns of 140 undergraduate students, and they defined four different patterns with two categories named Task-oriented groups (socially focused & individually focused) and Non-Task-oriented groups (procrastinators & non- procrastinators).

CONCLUSION

During the Covid-19 pandemic, the digital spaces for learning expanded from schools to homes. As more evidence is needed for the connection between learning outcomes and digital spaces (Kraftl et al., 2022), current research would help stakeholders to understand the technology and education relationship. The results of the current research shed new light on restructuring the traditionally designed university physical activity courses with technology. The potential of the design principles in this research for the instructor and the students can be a good example for other university physical activity classes. All the stakeholders in the university physical education setting can benefit from the implications of this research. As the current study emphasized, the main challenges that were faced during the restructuring process such 1. Attitudes toward Technology (Instructor's and Students' attitudes), 2. Ethical Considerations (Confidentiality), 3. Need for Tech Support (Accessibility, Device Management, Software Issues), 4. Need for Time to adapt (Adaptation Period), and lastly, 5. University Policies for Technology Integration (University Regulations) should be considered.

Additionally, the impact of re-designing A HRF course with technology contributed to 1. Classroom Management (Classroom Interaction, Planning, Teaching Strategies), 2. Data Management (Cost-effectiveness), 3. Differentiated Learning (Using technology to understand the content, Meaningful Feedback), 4. Motivation (Students' and Instructor's motivation, appreciation for technology) and 5 Workload (Instructor's and Students' workload).

In conclusion, the restructuring process with technology was successful. The transition from traditional learning to the blended learning environment in a university health-related physical activity context constitutes a valuable example.

Limitations

In qualitative research, researcher bias is considered one of the main threads of the studies. In the current research, this thread was decreased to the minimum by implementing the triangulation technique to analyze the data. Another thread in qualitative research is researcher might be perceived as intrusive and disruptive by the participants, and the environment can be affected by this situation. The researcher was the course assistant throughout the five semesters in the role of participant observer. According to the reflections with the instructor, students were thought to embrace the researcher as a natural part of the class (Creswell, 2014).

The findings of qualitative research can represent only a small part of a context and cannot be generalized to the population. The focus of qualitative research is transferability, rather than generalizability, essentially. Whether the findings of certain research could be applied to different settings. The strength of this type of research is that it helps to understand the -debt of a phenomenon (Patton, 2002). Being longitudinal research spread out over five semesters, repeated interviewing with the same person (Instructor) threads the study as changing his behavior, yet it gives an in-depth and comprehensive understanding of the process (Creswell, 2014).

PRACTICAL IMPLICATIONS

Regarding the results of this study, there are certain implications as follows:

1. A total of five design principles for a technology-enhanced health-related physical activity course was generated as an example for counterparts and stakeholders.
2. The impact of a technology-enhanced health-related physical activity course was shown.
3. Physical activity technologies are influential for students to promote and motivate for physical activity.
4. Instructor's job got easier with a technology assistant beside a course assistant.
5. Students can manage, monitor, and follow their progress with a well-designed course medium

Authors' contributions

Authors were involved in all sections of the present research; including the stages of writing, data collection and analyses, discussion, and revision.

Conflict of interest declaration

To the author's concerns, there is not any conflict of interest in this study.

REFERENCES

ACSM (2014). *ACSM's Health-Related Physical Fitness Assessment Manual (4thed)*. Philadelphia: Walters Kluwer Health/Lippincott Williams & Wilkins Health.

Annesi, J. J., Porter, K. J., Hill, G. M., & Goldfine, B. D. (2017). Effects of instructional physical activity courses on overall physical activity and mood in university students. Research *Quarterly for Exercise and Sport*, 88(3), 358-364. https://doi.org/10.1080/02701367.2017.1336280

Armour, K. M., Goodyear, V. A., & Sandford, R. (2020). *The digital age challenge: preparing physical and health educators to understand and support "online" youth. In School Physical Education and Teacher Education* (pp. 92-102). Routledge.

Baert, H. (2011). *The integration of technology within physical education teacher education: Perceptions of the faculty*. (Dissertation) University of Arkansas.

Baran, E., Correia, A.P. & Thompson, A. (2013). Tracing successful online teaching in higher education: voices of exemplary online teachers. *Teachers College Record Volume* 115(3), 1-41. https://doi.org/10.1177/016146811311500309

Beaudoin, C., Parker, T., Tiemersma, K., & Lewis, C. (2018). Evaluating university physical activity courses from student and instructor perspectives. *Journal of Physical Education, Recreation & Dance*, 89(1), 7-11. https://doi.org/10.1080/07303084.2017.1390508

Benson, S. N. K., & Ward, C. L. (2013). Teaching with technology: Using TPACK to understand teaching expertise in online higher education. J*ournal of Educational Computing Research,* 48(2), 153–172. https://doi.org/10.2190/EC.48.2.c

Bester, G., & Brand, L. (2013). The effect of technology on learner attention and achievement in the classroom. *South African Journal of Education*, 33, 1–15.

Birch, D., & Burnett, B. (2009). Bringing academics on board : Encouraging institution- wide diffusion of e-learning environments Institutional context for the Research. *Australasian Journal of Educational Technology*, 25(1), 117–134. https://doi.org/10.14742/ajet.1184

Carroll, J. A., Diaz, A., Meiklejohn, J., Newcomb, M., & Adkins, B. (2013). Collaboration and competition on a wiki: The praxis of online social learning to improve academic writing and Research in under-graduate students. *Australasian Journal of Educational Technology,* 29(4), 513–525. https://doi.org/10.14742/ajet.154

Cayir, Y., Aslan, S. M., & Akturk, Z. (2015). The effect of pedometer use on physical activity and body weight in obese women. *European Journal of Sport Science*, 15(4), 351-356. https://doi.org/10.1080/17461391.2014.940558

Cerezo, R., Sanchez-Santillan, M., Paule-Ruiz, M. P., & Nunez, J. C. (2016). Students' LMS interaction patterns and their relationship with achievement: A case study in higher

education. *Computers and Education*, 96, 42–54. https://doi.org/10.1016/j.compedu.2016.02.006

Chow, J., Tse, A., & Armatas, C. (2018). Comparing trained and untrained teachers on their use of LMS tools using the Rasch analysis. *Computers & Education*, 123, 124-137. https://doi.org/10.1016/j.compedu.2018.04.009

Chung, C., & Ackerman, D. (2015). Student Reactions to Classroom Management Technology: Learning Styles and Attitudes Toward Moodle. *Journal of Education for Business*, 90(4), 217–223. https://doi.org/10.1080/08832323.2015.1019818

Corbin, C. B., Kulinna, P. H., & Yu, H. (2020). Conceptual physical education: A secondary innovation. *Quest*, 72(1), 33-56. https://doi.org/10.1080/00336297.2019.1602780

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Method approaches (4th ed.)*. SAGE: Los Angeles.

Davies, R. S., Dean, D. L., & Ball, N. (2013). Flipping the classroom and instructional technology integration in a college-level information systems spreadsheet course. *Educational Technology Research and Development*, 61(4), 563–580. https://doi.org/10.1007/s11423-013-9305-6

Design-Based Research Collective. (2003). Design-based Research: An emerging paradigm for educational inquiry. *Educational Researcher,* 32(1), 5–8. https://doi.org/10.3102/0013189X03200100

Dias, S. B., & Diniz, J. A. (2014). Towards an enhanced learning management system for blended learning in higher education incorporating distant learners' profiles. *Educational Technology & Society*, 17(2), 307-319. https://www.jstor.org/stable/jeductechsoci.17.1.307

Diaz, K. M., Krupka, D. J., Chang, M. J., Peacock, J., Ma, Y., Goldsmith, J., Davidson, K. W. (2015). Fitbit®: An accurate and reliable device for wireless physical activity tracking. *International Journal of Cardiology*, 185, 138—140. https://doi.org/10.1016/j.ijcard.2015.03.038

Douglas, M. E., Peecksen, S., Rogers, J., & Simmons, M. (2019). College Students' Motivation and Confidence for ePortfolio Use. *International Journal of ePortfolio*, 9(1), 1-16. https://eric.ed.gov/?id=EJ1214509

Emmer, E., Sabornie, E., Evertson, C. M., & Weinstein, C. S. (2013). *Handbook of Classroom Management: Research, Practice, and Contemporary Issues.* Taylor & Francis.

Ferkel, R.C., Judge, L.W., Stodden, D.F. & Griffin, K. (2014). Importance of health-related fitness knowledge to increasing physical activity and physical fitness. *The Physical Educator*, 71, 218-233. https://js.sagamorepub.com/pe/article/view/2813

Garone, A., Pynoo, B., Tondeur, J., Cocquyt, C., Vanslambrouck, S., Bruggeman, B., & Struyven, K. (2019). Clustering university teaching staff through UTAUT: Implications for the acceptance of a new learning management system. *British Journal of Educational Technology*, 50(5), 2466-2483. https://doi.org/10.1111/bjet.12867

Garrison, D. R. & Vaughan, N. D. (2008). *Blended learning in higher education: framework, principles, and guidelines.* Jossey-bass: San Francisco, CA.

Goodyear, P., Jones, C., & Thompson, K. (2014). *Computer-Supported Collaborative Learning: Instructional Approaches, Group Processes and Educational Designs.* In M. J. Spector, D. M. Merrill, J. Elen, & J. M. Bishop (Eds.), *Handbook of Research on Educational*

Communications and Technology (pp. 439–451). New York, NY: Springer New York. doi:10.1007/978-1-4614-3185-5_35

Goodyear, V. A., & Armour, K. M. (2021). Young People's health-related learning through social media: What do teachers need to know?. *Teaching and Teacher Education*, 102, 103340. https://doi.org/10.1016/j.tate.2021.103340

Goodyear, V. A., Armour, K. M., & Wood, H. (2019). Young people learning about health: the role of apps and wearable devices. *Learning, Media and Technology*, 44(2), 193-210. https://doi.org/10.1080/17439884.2019.1539011

Harris, J., Mishra, P., & Koehler, M. (2009). Teachers' Technological Pedagogical Content Knowledge and Learning Activity Types : Curriculum-based Technology Integration Reframed. *Journal of Research on Technology in Education*, 41(4), 393–416. https://doi.org/10.1080/15391523.2009.10782536

Hensley, L. (2000). Current status of basic instruction programs in physical education at American colleges and universities. *Journal of Physical Education, Recreation, and Dance*, 71(9), 30-36. https://doi.org/10.1080/07303084.2000.10605719

Ignico, A., Corson, A., & Vidoni, C. (2006). The effects of an intervention strategy on children's heart rates and skill performance. *Early Child Development and Care*, 176(7), 753-761. https://doi.org/10.1080/03004430500232615

Ince, M. L. (2008). Use of a social cognitive theory-based physical-activity intervention on health-promoting behaviors of university students. *Perceptual & Motor Skills*, 107(3), 833–836. https://doi.org/10.2466/pms.107.3.833-836

Ince, M. L., & Ebem, Z. (2009). Role of exercise stages in self-reported health-promoting behaviors of a group of Turkish adolescents at transition to university. *Perceptual & Motor Skills*, 108(2), 399-404. https://doi.org/10.2466/pms.108.2.399-404

ISTE. (2015). *International Society for Technology in Education (ISTE) Standards: Learning, teaching and leading in the digital age.* Retrieved May 20, 2015, from http://www.iste.org/standards.

Jimoyiannis, A., Tsiotakis, P., Roussinos, D. & Siorenta, A. (2013). Preparing teachers to integrate web 2.0 in school practice: toward a framework for pedagogy 2.0. *Australasian Journal of Educational Technology*, 29(2), 248-267. https://doi.org/10.14742/ajet.157

Junco, R., Elavsky, C. M., & Heiberger, G. (2013). Putting twitter to the test: Assessing outcomes for student collaboration, engagement and success. *British Journal of Educational Technology*, 44(2), 273–287. https://doi.org/10.1111/j.1467-8535.2012.01284.x

Keating, X. D., Wallace, J., Schafer, J., O'Connor, M., Shangguan, R., & Guan, J. (2012). Analyses of higher education conceptual physical education courses. Journal of Research in Health, *Physical Education, Recreation, Sport & Dance*, 7(2), 38-44. https://eric.ed.gov/?id=EJ993568

Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge. *Contemporary issues in technology and teacher education*, 9(1), 60-70. https://www.learntechlib.org/primary/p/29544

Kraftl, P., McKenzie, M., Gulson, K., Accioly, I., Blackmore, J., Burke, C., Clarke, D., Daniels, H., Fregoso Bailon, R. O., Goodyear, P., Goodyear, V., Gunasekara, I., Hartong, S., Hickman Dunne, J., Howard, S., Lupinacci, J., Mcphie, J., Mannion, G., Nxumalo, F., ...

Wood, A. (2022). *Learning spaces: built, natural and digital considerations for learning and learners.* In S. Bugden, & G. Borst (Eds.), *Education and the learning experience in Reimagining education: The International Science and Evidence based Education Assessment* (pp. 452-547). https://mgiep.unesco.org/iseeareport

Kulinna, P.H., Warfield, W.W., Jonaitis, S., Dean, M. & Corbin, C. (2009). The progression and characteristics of conceptually based fitness/wellness courses at American universities and colleges Journal of American College Health, 58(2), 127-131. https://doi.org/10.1080/07448480903221327

Li, G.S.F., Lu, F.J.H., & Wang, A.H.H. (2009). Exploring the relationships of physical activity, emotional intelligence and health in Taiwan college students. *Journal of Exercise Science & Fitness*, 7(1), 55-63. https://doi.org/10.1016/S1728-869X(09)60008-3

Luke, J.K. & Morrissey, J.L. (2014). Integrating online pedagogy into kinesiology: service learning for kinesiology majors. *Kinesiology Review*, 3, 258-262. http://dx.doi.org/10.1123/kr.2014-0064

Madge, C., Meek, J., Wellens, J., & Hooley, T. (2009). Facebook, social integration and informal learning at university: It is more for socializing and talking to friends about work than for actually doing work. Learning, *Media and Technology*, 34(2), 141–155. https://doi.org/10.1080/17439880902923606

Maldari, M. M., Garcia, J. M., & Rice, D. J. (2021). The impact of health education on physical activity correlates in college students. *Journal of American College Health*, 1-6. https://doi.org/10.1080/07448481.2021.1879812

Marttinen, R., Daum, D., Fredrick III, R. N., Santiago, J., & Silverman, S. (2019). Students' perceptions of technology integration during the FIT unit. *Research Quarterly for Exercise and Sport*, 90(2), 206-216. https://doi.org/10.1080/02701367.2019.1578328

Miles, M. B., Huberman, A. M. (1994). *An Expanded sourcebook: Qualitative data analysis.* (2nd edition). Thousand Oaks, California: SAGE Publications, Inc.

Milroy, J. J., Orsini, M. M., D'Abundo, M. L., & Sidman, C. L. (2013). College Students' Perceived Wellness Among Online, Face-to-Face, and Hybrid Formats of a Lifetime Physical Activity and Wellness Course. *American Journal of Health Education*, 44(5), 252–258. https://doi.org/10.1080/19325037.2013.807754

Mohnsen, B. (2012). *Using Technology in Physical Education (8th ed.).* Bonnies Fitware Inc.

Moskal, P., Dziuban, C., & Hartman, J. (2013). Blended learning: A dangerous idea? *Internet and Higher Education,* 18, 15–23. https://doi.org/10.1016/j.iheduc.2012.12.001

Müftüler, M., & İnce, M. L. (2015). Use of trans-contextual model-based physical activity course in developing leisure-time physical activity behavior of university students. *Perceptual and Motor Skills*, 121(1), 31–55. https://doi.org/10.2466/06.PMS.121c13x1

Patton, M. Q. (2002). *Qualitative Research and Evaluation Methods (3rd ed.).* Sage Publication: Thousand Oaks.

Ransdell, L.B., Rice, K., Snelson, C. & Decola, J. (2008). Online health-related fitness courses a wolf in sheep's clothing or a solution to some common problems? *Journal of Physical Education Recreation and Dance*, 79(1), 45-52. https://doi.org/10.1080/07303084.2008.10598119

Reeves, T. C. (2006). *Design research from a technology perspective.* In J. van den Akker, K. Gravemeijer, S. McKenney & N. Nieveen (Eds.), Educational design research (pp. 52-66). London: Routledge.

Richey, R.C., Klein, J.D. & Nelson, W.A. (2004). *Development research: Studies of Instructional Design and Development.* In D. Jonassen, Handbook of Research for Educational Communications and Technology (2nd ed., pp. 1094-1130). Hillsdale: NJ: Lawrence Erbaum Associates.

Roblyer, M., McDaniel, M., Webb, M., Herman, J., & Witty, J. (2010). Findings on Facebook in higher education: A comparison of college faculty and student uses and perceptions of social networking sites. *The Internet and Higher Education*, 13(3), 134–140. https://doi.org/10.1016/j.iheduc.2010.03.002

Romero, C., Ventura, S., & García, E. (2008). Data mining in course management systems: Moodle case study and tutorial. *Computers and Education*, 51(1), 368–384. https://doi.org/10.1016/j.compedu.2007.05.016

Rosen, Y., & Beck-hill, D. (2012). Intertwining digital content and a one-to-one laptop environment in teaching and learning: Lessons from the time to know program. *Journal of Research on Technology in Education*, 44(3), 225–241. https://doi.org/10.1080/15391523.2012.10782588

Roth, K. (2014). Technology for Tomorrow's Teachers. *The Journal of Physical Education, Recreation & Dance*, 85(4), 3–5. https://doi.org/10.1080/07303084.2014.884420

Sargent, J., & Casey, A. (2020). Flipped learning, pedagogy and digital technology: Establishing consistent practice to optimise lesson time. *European Physical Education Review*, 26(1), 70-84. https://doi.org/10.1177/1356336X19826603

Schoonenboom, J. (2014). Using an adapted, task-level technology acceptance model to explain why instructors in higher education intend to use some learning management system tools more than others. *Computers and Education*, 71, 247–256. https://doi.org/10.1016/j.compedu.2013.09.016

Sidman, C.L., Fiala, K.A. & D'Abundo, M.L. (2011). Exercise motivation of college students in online, face-to-face, and blended basic studies physical activity and wellness course delivery formats. *Journal of American College Health*, 59(7), 662-664. https://doi.org/10.1080/07448481.2010.524683

Strand, B., Egeberg, J., & Mozumdar, A. (2010). Health-related fitness and physical activity courses in US colleges and universities. *Journal of Research in Health, Physical Education, Recreation, Sport & Dance*, 5(2), 17-20. https://eric.ed.gov/?id=EJ913327

Sugar, W. (2005). Instructional technologist as a coach: Impact of a situated professional development program on teachers' technology use. *Journal of Technology and Teacher Education*, 13(4), 547. https://www.learntechlib.org/primary/p/4888/

Sun, H. (2013). Impact of exergames on physical activity and motivation in elementary school students: A follow-up study. *Journal of Sport and Health Science*, 2(3), 138–145. https://doi.org/10.1016/j.jshs.2013.02.003

Van den Akker, J., Gravemeijer, K., & McKenney, S. (2006). Introducing educational design research. *In Educational Design Research* (pp. 15-19). Routledge.

Varank, I., & Ilhan, S. (2013). The Effects of Teachers' Educational Technology Skills on Their Classroom Management Skills. *Online Submission*, 3(4), 138-146. http://dx.doi.org/10.13054/mije.13.60.3.4

Wang, F. & Hanafin, M.J. (2005). Design-based research and technology enhanced learning environment. *Educational Technology Research and Development*, 53(4), p.5-23. https://link.springer.com/content/pdf/10.1007/BF02504682

Wankel, C., & Blessinger, P. (2013). *Increasing student engagement and retention in e-learning environments: Web 2.0 and blended learning technologies (Vol. 6)*. Emerald Group Publishing.

Willig, C. (2013). *Introducing Qualitative Research in Psychology 3rd ed.* McGraw-Hill, NY.

Zenk, S. N., Schulz, A. J., Odoms-Young, A., Wilbur, J., Matthews, S. A., Gamboa, C. & Stokes, C. (2012). Feasibility of using global positioning systems (GPS) with diverse urban adults: Before and after data on perceived acceptability, barriers, and ease of use. *Journal of Physical Activity & Health,* 9(7), 924. https://doi.org/10.1123/jpah.9.7.924

Zhang, T., Xiang, P., Gu, X., & Rose, M. (2016). College students' physical activity and health-related quality of life: An achievement goal perspective. *Research Quarterly for Exercise and Sport*, 87(2), 182-190. https://doi.org/10.1080/02701367.2016.1159279