An exploration of different approaches used to monitor physical activity levels: A case study of females aged 13-18

Anika Leslie-Walker – anika.i.leslie-walker@stu.mmu.ac.uk
Manchester Metropolitan University

Introduction

The plethora of research surrounding female participation in physical activity, has increased significantly over the years (Flintoff and Scratton, 2001; Penney, 2002; Hargreaves, 2004; O'Sullivan & MacPhail, 2010). Globally, low physical activity levels are acknowledged as the fourth most common cause of mortality (Hallall et al., 2012).

This study observes female participants aged 13-18 who attend schools and colleges in Greater Manchester. Furthermore it gains an insight into physical activity preferences and the challenges encountered in respect to self-reporting questionnaires (SRQ). Participant's interpretation and understanding of questions on the SRQ, could influence a varied or none response therefore alternative qualitative methods are experimented within this study.

Walseth et al., (2015) suggest further inquiry is necessary towards the data collection approaches utilised when researching female adolescents. It is evident that alternative methods are necessary, to ensure responses to SRQ's are not misconstrued nor depict deceptive responses.

Objectives

- To investigate the female participation preferences in physical activity
- To explore the different methodological approaches used to monitor physical activity preferences, for adolescent females
- To suggest ways of implementing different approaches for monitoring female physical preferences

Methodology

The study utilises an explorative research paradigm, for a multimodal approach to increase the authenticity of data collection. A post-structural feminist perspective has been administered, whilst using a middle ground theory approach to correlate the differing methods.

An acknowledgement of existing qualitative approaches unravels the prevalent issues noted, within discourse surrounding physical activity preferences of female adolescents. The incorporation of contemporary qualitative methodology consisted of respondents undertaking varying methods, to diffuse enigmatic responses.

Method one consisted of a Self-Reporting Questionnaire (SRQ), Saunders et al., (2004) discusses the reliability and validity of completion. Method two utilised visual methodologies which included a combination of pictorial and video elicitation methods (Eprints.ncrm.ac.uk, 2012). These methods which are not unusual in research, were employed to promote expressive responses based on visual observation (Skareus, 2009). The pictorial and videos were inclusive of female representations, whom were of a similar age category of the respondents. Prosser (1998) explained how pictures may develop experiences and feelings of a subject.

There were 54 respondents included in the study; 13 years old (23%), 14 years old (18%), 15 years old (16%), 16 years old (20%), 17 years old (14%), 18 years old (9%). The education establishments were based in Greater Manchester. An arrangement of 18 physical activity opportunities were identified, of which were a blend of the most popular physical activities for females in the United Kingdom (Sportengland.org, 2018), with inclusion of curriculum based and geographically accessible based opportunities. The thematic process involved manual coding of the data collected, the codes were categorised depending on response and examined further to analyse patterns and differences which arose from the two methods. The responses were coded into physical activities relating to; curriculum, none-curricular and hard to reach.

Results

The study results indicate that the inclusion of visual qualitative methods, allowed the participants to be more expressive in their choice of physical activity preferences. The thematic analysis carried out, revealed changes in participant response patterns across the two methodology data sets. The multimodal method allowed new activities to be identified, interestingly these activities were usually risk or extreme activities such as rock climbing and snow sports. Such activities are generally becoming a phenomenon for females, thus challenging masculine hegemony (Wheaton, 2004).

The emphasis on pictures and videos is a significant indicator, in allowing adolescent females to have an awareness of none curriculum activities.

Furthermore results illustrated an increase in activities, particularly in the video elicitation. The majority of activities selected by the participants in the Self-Reporting Questionnaire (SRQ) stage were curriculum activities (netball/badminton), however an increased acknowledgment of the inclusion of none curricular (golf/martial arts) and hard to reach (rock climbing/snow sports) activities were identified in the following two stages.

Football	**Athletics**	**Gym**	**Martial Arts**	**Hockey**	**Trampolining**
Golf	**Basketball**	**Snow Sports**	**Badminton**	**Boxing**	**Volleyball**
Dance	**Cycling**	**Rock Climbing**	**Running**	**Netball**	**Weightlifting**

Conclusion

Previous researchers have utilised various methods including visual methodologies. Data analysis from this study identifies the need for visual methodologies to be employed, during data collection surrounding physical activity particularly with female adolescents.

Participant's demonstrated different responses within the self-reporting questionnaire and visual methods, this indicates the use of visual aids generate more information and allows an increased expression of the participants. Moreover this may be due to a lack of understanding of questions in the SRQ, which may deter respondents from acknowledging and completing the research to their full potential.

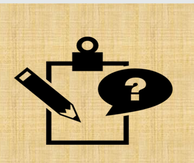
The atypical multi-modal outlined in this research will be utilised within future research. Albeit recommendations of ensuring the pictures and videos relate to the age group and context is essential, for the robustness and reliability of data extraction. This process requires preparation of resources and advanced logistics, as the participant's progress from one method to another.

Consequently the findings of the study, bestows evidence which supports the further development of a robust innovative visual methodological approach, within physical activity research.

Method

METHOD *1

Within sport sociological research; preferences, patterns and motivations towards physical activity are commonly measured initially, by the use of a self-reporting questionnaire (SRQ) and secondly via interviews or focus groups. It is noted in research, that SRQ's particularly when working with female adolescents may receive imprecise data and the inclusion of visual methodologies supplements an increased validity and reliability of data (Cabanas-Sanchez et al., 2018; Varea and Pang, 2016).



Participants were given a piece of paper which had 18 options of physical activity, the participant was instructed by the wording to 'number the top five activities, which you would like to take part in'. Participants were asked to choose five options and number them in priority of preference.

Pictorial

Participants were shown 18 pictures of females of a similar age, participating in physical activity. Participants were asked to choose five pictures and number them in priority of preference.

METHOD *2

Video Elicitation

Participants were shown 18 videos of females of a similar age participating in physical activity. Participants were asked to choose five videos and number them in priority of preference.

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