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Study Protocol

Weight Control Practices of Philippine National Wushu Sanda Athletes: A Study Protocol

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Abstract

Background: Combat sports are intense and physically demanding, and healthy weight control practices are necessary to ensure a safe and fair competition for all athletes involved. **Objective:** The study will determine the dietary and non-dietary weight control practices of Philippine National Wushu Sanda athletes. It will also aim to explore the perceived effects of these practices on performance and well-being. **Methodology:** A qualitative study using semi-structured interviews will be used to gain insights into the athletes' experiences, habits, and practices regarding their weight control practices. The semi-structured questionnaire will focus on daily food intake, weight control practices, and their effects on performance and well-being. Thematic data analysis will be used to analyze the data. **Expected Results:** Weight control practices of Wushu Sanda Athletes vary depending on the training phase. Both dietary practices, such as water intake, skipping meals, and food choices, and non-dietary practices, such as intense training and sweat suits, are expected to be observed to achieve their desired weight. These practices are anticipated to have been influenced by their coaches and senior athletes, having both positive and negative effects on the athlete's physical, mental, and psychological well-being.

Key Words: *combat sports, weight control practices, rapid weight loss techniques (RWLs), Wushu Sanda Athletes*

INTRODUCTION

Combat sports often include the presence of weight categories to classify athletes. These are created to group athletes based on parameters such as size and weight to ensure that athletes are not mismatched.[13] Athletes often strategize in choosing specific weight divisions based on different strategies, such as avoiding much larger opponents.[2,4] Weight divisions and weigh-in regulations can vary between different combat sports. Depending on the level of competition, the time between weigh-ins and the actual competition may differ. Athletes may be required to weigh in a week before the competition, a day before, or randomly.[16]

Pieces of literature have shown that some combat sports athletes engage in methods to make weight that are unsupervised and not recommended by medical professionals[7,8,15]. These practices pose a risk to athletes' health. Combat sports athletes have utilized Rapid Weight Loss techniques (RWLs) to meet the demands of their training schedule and forthcoming events despite the practice negatively impacting performance and health measures. They use various methods such as high-intensity exercise, diets, hypohydration, and/or hunger for rapid weight loss, which spans a short period.[3,12] Some athletes prefer to combine several methods (sauna, high-intensity exercise, food, and liquid diet) in a short period. Thus, they lose fluid and electrolytes and suffer from dehydration.[3] A study on weight loss in

combat sports reported that RWLs are prevalent among competitors, with rates in high school, collegiate, and international combat sports, such as wrestling, ranging from 60-90%, and among judo players, at around 90%.[2]

Weight control practices frequently start in youth, with athletes engaging in RWLs as young as 12 to 15, which may harm development and growth.[1] The extent of weight loss still varies, with many athletes losing between 5 and 10% of their body weight days before competitions.[2] Along with this, cultural and socioeconomic factors have also been found to influence weight control, with coaches, peers, and the personal desire to win being some of the factors influencing an athlete's weight control practices.[11,14]

Wushu Sanda has been a rising combat sport in the Philippines and other parts of the world. With the Wushu Federation of the Philippines (WFP) taking charge of the local development of the country's athletes, the country has produced competitive individuals who are frequent medal placers in competitions. Wushu Sanda is a combat sport that demands much physical activity and requires competitors to compete in specific weight divisions. Many weight loss methods are implemented without professional supervision, raising concerns about their consequences. Promoting safer, evidence-based weight control practices is essential for ensuring the athletes' overall wellness and sustainability. In a study on the prevalence and methods of RWLs in national-level Wushu Sanda, athletes reported that the most used methods for rapid weight loss include increased physical activity, fluid restriction, dieting without the assistance of a dietitian, and increased exercise volume before the weigh-in. Former athletes and physical trainers were influential people in their weight management practices.[18]

Knowledge Gap. A foundational understanding of common weight loss methods in combat sports includes dietary restrictions, fluid manipulation, and increased physical activity, as highlighted in the existing literature. However, there is a significant gap in clarifying the specific techniques and their combined application by Wushu athletes. Most research on weight regulation in combat sports focuses on disciplines such as Mixed Martial Arts (MMA), Taekwondo, judo, and wrestling. As a result, there is a lack of studies specifically examining the weight management strategies of individuals practicing Wushu, despite the sport's growing popularity. Addressing these knowledge gaps through targeted research will provide valuable insights into the weight control practices of Wushu athletes. This understanding can lead to the development of effective strategies that enhance performance, protect their health, and promote a positive and sustainable approach to weight management in the sport.

Objectives. The study aims to determine the dietary and non-dietary weight control practices of Philippine National Wushu Sanda athletes. It also aims to explore the perceived effects of these practices on performance and well-being.

Methodology

Study Design. A descriptive qualitative design would be employed, aiming to gain insights into the weight control practices of Philippine National Wushu Sanda athletes. The descriptive qualitative design, with the use of one-on-one semi-structured interviews for the methodology, would allow the researchers to obtain detailed information that would explore various factors that influence a combat sport athlete's weight control practices, such as the participants' subjective experiences, behaviors, and perspectives regarding weight control.

A comparable study used a descriptive qualitative approach to better understand the many components of weight control practices or dietary strategies used by professional combat sports athletes before, during, and after competitions.[10] The descriptive character of the study, as evidenced by the use of semi-structured one-on-one interviews, highlighted not only the practical scope of weight management practice but also potential impacts.

Overall, with the study mainly centering around combat sports athletes with various practices in terms of weight control, the use of a qualitative descriptive study design prioritizes components that mainly allow for the exploration of their

views, practices, and experiences, which may influence the development of future research in terms of focusing on interventions which may affect competition performance.

Ethical Consideration. The study complied with all the international and national ethical guidelines and was approved by the UST-CRS-Ethics Review Committee SI-2024-002 before the start of the data gathering.

Participants. This study will include Philippine National Wushu Sanda athletes who will meet the specific criteria (Table 1). The inclusion criteria include those aged 21 and above, Male and Female national athletes, athletes who have competed in both international and local level competitions, those who have gone through 2 or more weight divisions in their current sport, and those residing in the Philippines. The exclusion criteria include paralympic athletes, athletes who are part of the training pool, those competing at the collegiate level only, athletes who have not been actively competing within the past year, and athletes with clinically diagnosed medical health conditions that may affect their food intake. Specified criteria were adopted from previous literature.[2,4,14,]

The study will use purposive sampling to assess similar characteristics such as age, gender, sports participation, and weight divisions within the sample. This sampling technique will allow the researchers to focus on investigating the weight control strategies of these selected individuals. In line with the primary intention of reducing variation and simplifying the analysis, deliberately selecting a sample that meets the criteria ensures maximum perception and understanding of the subject matter.

With the given figures based on a peer-reviewed article suggesting that saturation may be reached with a relatively small sample size, the study aimed to utilize the range of 9-17 participants based on a specified set of criteria identified by the researchers, gathered from existing literature[5]. However, the research team may decide to stop data collection earlier if they agree that further interviews are unlikely to uncover additional relevant information, ensuring both sufficient depth and efficient use of resources.

Recruitment Process. A request for approval to conduct the study will be sent in writing to the Philippine Sports Commission (PSC). Once approval is granted, the coach will be notified as a matter of courtesy. The Secretary-General's office of the Wushu Sanda team will provide the contact information of the athletes to the researchers, who will then contact them by email or phone to provide relevant information about the interview process. The athletes who wish to participate in the study will be given an orientation and asked to read and sign consent forms prior to the interview.

Setting. The study will be carried out in the Philippine Sports Commission, and the researchers will collect data mostly through semi-structured individual interviews. weight control practices. The semi-structured interviews will be performed in person, taking into account the participants' location and availability.

Table 1. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
• Ages 21 and above • Male and Female National Athletes • Have competed in both international and local level competitions. • Have gone through 2 or more weight divisions in their current sport. • Currently residing in the Philippines	• Paralympic Athletes • Training Pool Athletes • Collegiate Level Athletes • National Athletes currently not actively competing within the year • People with clinically diagnosed medical health conditions that may affect their food intake.

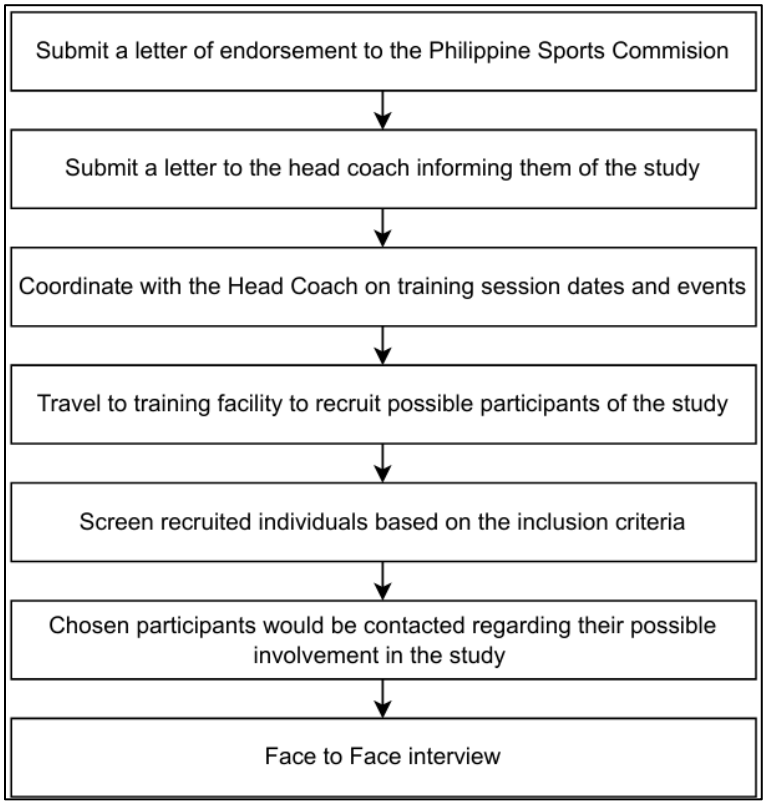

Figure 1. Recruitment Process.

This technique will enable them to collect complete information and data, allowing for an in-depth discussion of the participants' perspectives, thoughts, and experiences with The researchers will protect the participants' privacy and safety during face-to-face interviews by holding them in unoccupied open rooms within the PSC building or muted rooms nearby, devoid of noise and bias.

Data Gathering Tools. The study will use semi-structured one-on-one interviews that will be performed in person. The interviews will include open-ended questions designed to promote a full discussion of the participants' weight control behaviors, experiences, techniques, and influences. Furthermore, one-on-one interviews will create a confidential and comfortable environment for participants, potentially increasing the authenticity and sincerity of the acquired data. This research method will offer better confidentiality and anonymity than other methods of collecting qualitative data, such as Focus Group Discussions. This will be especially significant because some athletes may be hesitant to share their weight-control strategies with other athletes. This strategy will allow participants to freely engage and interact with numerous notions, promoting the production of new ideas and replies.

Prior to conducting the interviews, the researchers will get interview training from their university to ensure the interviewer's reliability and ability to obtain unbiased data. To ensure the accuracy and efficacy of the semi-structured one-on-one interviews, a pilot test will be done. This will include the Liaison Officer as the main interviewer and the other co-authors who will act as interviewees. This will also aid the researchers in identifying potential issues and making necessary adjustments before conducting the interviews. The researchers will conduct a pilot test

The following list of questions will be administered to the participants, which will be approved by the Ethics Review Committee and validated by content experts. The tool will

include open-ended questions on daily food intake, dietary weight control practices, non-dietary weight control practices, weight management strategies, and effects of weight control on their performance and well-being to facilitate a detailed discussion on the participants' behaviors, experiences, strategies, and influences related to their weight control practices.

Data Gathering Procedures

A one-on-one interview will be conducted with seven athletes to gather information about their weight control practices. The interview will be semi-structured, consisting of a set of open-ended questions. There will be thirteen questions, and each interview will last approximately twenty minutes. The questions used in the interview will be based on the available literature. These questions will be validated by an expert (see Supplementary Material A). The data collected during the interview will be documented through audio recording transcription, then transcribed into Google Docs.

To ensure rigor and trustworthiness in this study, strategies based on Lincoln and Guba's criteria will be employed.[6] To help readers evaluate the credibility of the researcher's interpretations, triangulation of data sources will be used, including in-depth interviews with athletes about their weight management techniques, information sources, and health effects. For transferability, Wushu Sanda athletes will face challenges in weight management, including the pressure to meet weight limits, rapid weight-cutting methods, and the impact on their mental and physical health. These issues will likely be similar in other combat sports, helping readers understand the broader applicability of our findings. While dependability will be ensured through consistent data collection. Semi-structured interviews with Wushu Sanda athletes about weight control practices will follow a standardized guide, with flexibility for emerging themes. A single researcher will conduct all interviews to minimize bias and maintain rapport. Lastly, confirmability will be addressed from all interview transcripts and researcher field notes that will be meticulously reviewed by an independent auditor with expertise in qualitative research methods and sports science.

Data analysis. Upon completion of data collection, an independent transcriptionist will be invited to transcribe each interview. As part of the data analysis process, interviewee triangulation and data saturation will be checked to ensure validity. This method will involve returning interview transcripts and debriefing the analytical results to the participants for their review and input. Cross-referencing with existing literature will also be ensured for data validity.

The study will use thematic analysis, a methodological approach commonly used to identify patterns in qualitative data. This method will allow for a comprehensive analysis through processes such as familiarization of data, creation of codes, grouping into themes, reviewing, and defining them.

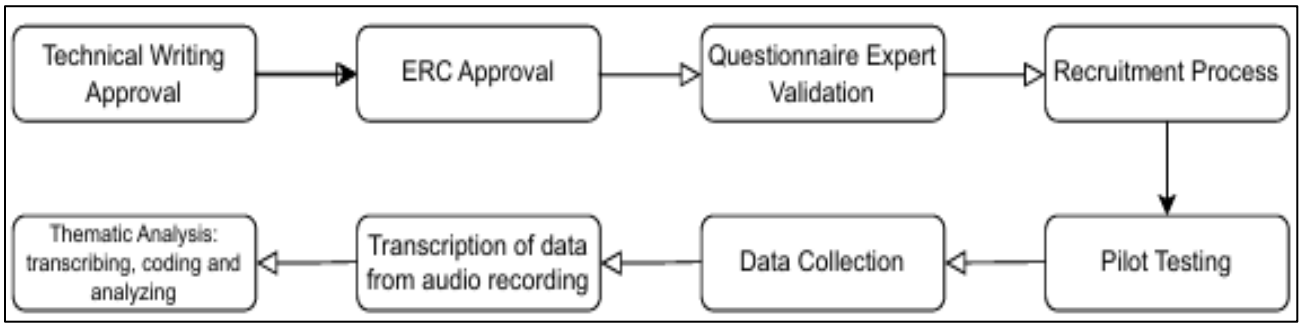

Figure 2. Data Gathering Procedures

A total of five coders will be present, where content validation, once initial themes and codes are created, will be checked by a content expert to ensure the validity of the codes presented.

Methodological Rigor. Data triangulation will be conducted to generate a comprehensive understanding of every spoken word and nuance exchanged on the subject matter. Ensuring methodological rigor in this process, all sources of data will be meticulously cross-checked. Both discrepancies as well as inconsistencies will be investigated, with conclusions drawn after a meticulous review and exhaustion of all relevant data.

EXPECTED RESULTS

It is anticipated that the differences in the weight control practices during both the off-season and pre-competition period will be identified. Weight control practices such as RWLS are expected to be present in both competition periods, but with a significant presence in the pre-competition period. Common weight loss practices during the pre-competition period would be the use of sweat suits and intensive training for non-dietary practices and food choices, water consumption, and skipping meals for dietary weight control practices.

Social interactions play a huge role in how participants approach food. The influence of team culture and tradition would also be reported. It is expected that coaches, family, and senior athletes may have influenced their weight control practices. Lastly, it is expected that both positive and negative experiences will be shared regarding the impact of weight control practices on one's overall performance and well-being.

Individual Author's Contributions

All authors contributed equally to this study protocol.

Disclosure Statement

The authors will self-fund this review.

Conflicts of Interest

Author KP is part of the PJAHS Editorial Board.

Supplementary Materials

Supplementary Material A. Semi-Structured Interview

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