The Nutritional Status Profile of Physical Education Teachers

Bambang Priyono[a]*, Fatkhur Rozi[b], Jacklyn Anak Joseph[c]

[a]Universitas Negeri Semarang, Indonesia
[b]Universitas Islam Negeri Salatiga, Indonesia
[c]Universiti Putra Malaysia, Malaysia

Correspondence: bambangpriyono@mail.unnes.ac.id

Abstract

The purpose of this study was to describe the quality of the physical education teacher's nutritional status and its theoretical impact. The research data is qualitative in nature and is generated from filling out open questionnaires to informants. 124 informants voluntarily filled out the questionnaire and came from various regions in Indonesia, for this reason, informant data was protected. Data analysis was carried out in a qualitative descriptive manner by collecting data, reducing, presenting, verifying, and concluding. The results showed that 1 person was in the underweight category, 71 people were in the healthy weight (normal) category, 27 people were in the overweight category, and 25 people were in the obese category. The conclusions of this study indicate that only 59% of teachers have a healthy weight nutritional status and the rest are in an unhealthy (not ideal) position which will have an impact on their fitness and health levels, as well as showing the performance of personal and professional competencies that has not been maximized.

Keywords: Nutritional status; physical education; physical fitness; teacher

1. Introduction

The teacher is one of the important factors for the success of a physical education learning process. The quality of physical education teachers is not only related to pedagogic, cognitive, and practical aspects but also the quality of their health and fitness. A teacher who has a good level of health and fitness will make it easier for him to carry out his professional duties. Conversely, without having good fitness, the teacher will tire easily and be less than optimal in teaching. A low level of physical fitness causes obstacles in working, doing activities, or studying (Winda et al., 2019).

The level of physical fitness is influenced by various factors, including age (Juliansyah et al., 2021), gender (Oktriani et al., 2020), body posture (Kurniansyah, 2020), healthy and clean living (Wahana & Rochmania, 2018), sleep quality (Gunarsa & Wibowo, 2021), physical activity (Putro & Winarno, 2022), and nutritional intake (Yusuf et al., 2020). Body weight and nutritional intake of physical education teachers are factors that are closely related to the quality of their nutritional status. The nutritional status will simply describe the state of body weight and nutritional intake with the nutritional needs it has. Although nutritional status is different from the Basal Metabolism Index (BMI), BMI can be used to predict nutritional status. If we are in a normal BMI position it can be interpreted that our nutritional status is normal. This means showing a balance between what we eat and the energy needs we have to spend so that our BMI is in a normal position (healthy weight). Conversely, nutritional intake that is not balanced with nutritional needs will have an impact on abnormal status, namely: underweight or overweight. Even though in certain circumstances it is also

influenced by genetic factors, in general, nutritional status results from calculating a person's weight and height. Meanwhile, body weight is influenced by the difference between nutritional intake and nutritional needs.

Abnormal nutritional status for physical education teachers will pose a threat to their health. These problems can be back pain (Oliveira et al., 2020), blood vessel problems (Dadayeva et al., 2020), heart disease (Sato et al., 2015), and chronic diseases (Pharr et al., 2018) due to risk factors for overweight. While being underweight itself will have a risk impact in the form of bone mineral disease (Bone Mineral Central/BMC) (Coin et al., 2000), bone density, and muscle mass (Lim & Park, 2016). In addition, it is necessary to pay attention to other impacts in the form of poor visualization of the physical image of the physical education teacher. Supposedly, the teacher provides an overview of the ideal body shape to motivate students and is in line with pilots in achieving a good level of physical fitness. The teacher is a prime example, students will have a high level of trust in a teacher who is well-behaved. Meanwhile, if the teacher is obese, students can lack confidence in what is explained in the physical education learning process. Physical education teachers themselves currently have a central role as pioneers as well as supervisors of the healthy and active lifestyle movement in schools (Prusak et al., 2011).

Having a normal nutritional status, which means that you need an ideal body weight, is a reflection of personal and professional competence by physical education teachers. A good physical education teacher will try to display an ideal body profile to show a picture of personality and a level of professionalism appropriate to his profession. The profession as a physical education teacher demands to be able to teach how to have a culture of active movement, have a good level of fitness, have a healthy lifestyle and diet, and cultivate sports through learning to achieve educational goals. One of the manifestations of personal and professional competence is carried out by the teacher by showing an example of having good nutritional status.

Previous research was about nutritional status in athletes which illustrated that it had an impact on the quality of their fitness. Nutritional status has a significant effect on the fitness of badminton athletes during the Covid-19 pandemic (Fitriyana, 2022). Another study described the level of nutritional status and nutritional adequacy of students. The result is that the level of adequacy of energy, protein, fat, and carbohydrates for most of the respondents is in the normal category and has nutritional status in the normal category. Still, the contribution of macronutrients from school lunches (energy, protein, fat, and carbohydrates) does not meet 30% of nutritional needs a day (Ningtyias et al., 2020). Previous studies described the implementation of research themes on nutritional status in athletes and students. Research with physical education teacher subjects had previously been found in Malang, the results showed 64% were overweight, 9% were obese, and only 27% were normal (Kusuma et al., 2022). It turns out that prospective physical education teachers also experience this problem of nutritional status. From the research sample of Sriwijaya University students, 17.89% were underweight, 7.72% were overweight, and 0.41% were in the obese category (Bayu et al., 2021). In contrast to the two studies, this research involved a diversity of informants from various regions in Indonesia, although the analysis used has similarities with BMI data.

This research is important to provide an empirical study of the nutritional status level profile of physical education teachers. Physical education teachers need normal nutritional status to support the achievement of good physical fitness. Although it cannot be generalized broadly to the quality of the nutritional status of physical education teachers throughout Indonesia. However, from the informant's representative data, a small picture was obtained of the nutritional quality of physical education teachers from various regions in Indonesia with data that corresponded to actual reality. Furthermore, this research is important because its position can provide an overview of physical education teachers

so that it can be used to motivate themselves in improving self-quality and performance that supports the learning process.

2. Method

This research was carried out using a qualitative method approach by collecting data that is qualitative from the results of the level of nutritional status. Primary data is data obtained directly in the field by researchers (Kaharuddin, 2021). The primary data of this study was generated from the BMI of the informants. Independently, informants voluntarily filled in data on weight and height in predetermined units to collecting the Body Mass Index (BMI). In order for the data provided by the informants to have validity, each informant attached evidence when measuring his height and weight, then filled it in the questionnaire. Furthermore, researchers took measurements and then analyzed the level of nutritional status. Data analysis was carried out in stages: data was collected, data was reduced, data was presented, data was verified, and concluded. Researchers obtained data from informants through questionnaires, which can be seen in Figure 1.
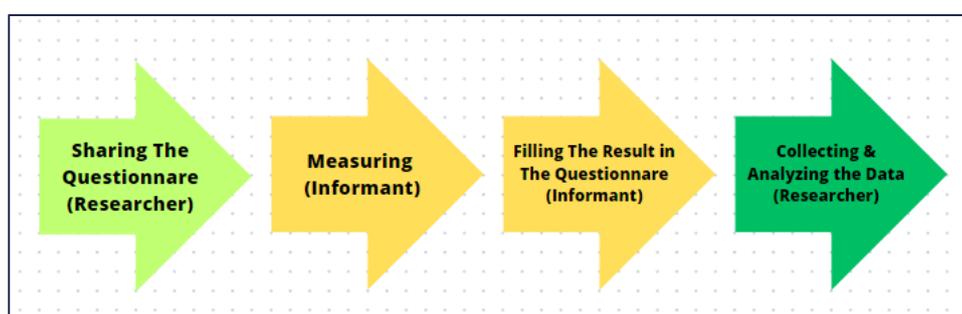

Figure 1. Collecting Data

The sample was not used in this study so the results cannot be generalized to all physical education teachers in Indonesia. It will only produce a description of the 124 informants who are willing to voluntarily fill in the data. Thus, the identity of the informant is hidden to provide privacy. However, it can be reported that these informants did not only come from one province in Indonesia but from 8 provinces. So that it can still provide a valid and objective picture of the quality of the level of nutritional status of physical education teachers.

This research resulted in qualitative research using a case study approach to several willing informants, namely: physical education teachers from primary school, secondary school, and higher school levels. The case discussed is about the nutritional status of physical education teachers in Indonesia.

3. Result

The results of this study are qualitative data generated from several informants who are willing to be involved in the research. Informants are willing to fill in the data and are willing to fill in the questionnaire provided by the researcher. Characteristics of informants amounted to 124 people classified according to gender and level of education taught. Informants are physical education teachers with an average teaching experience of more than 5 years and are adults. Informants come from 8 provinces in Indonesia. The classification of informants can be seen in figure 2 & 3.

Table 1. The nutritional status classification

Classification	Cut off Point
Extremely underweight	< 17.00
Underweight	17.10 - 18.40
Ideal/Healthy weight	18.50 - 25.00
Overweight	25.10 - 27.00
Obese	> 27.00

Teaching Place

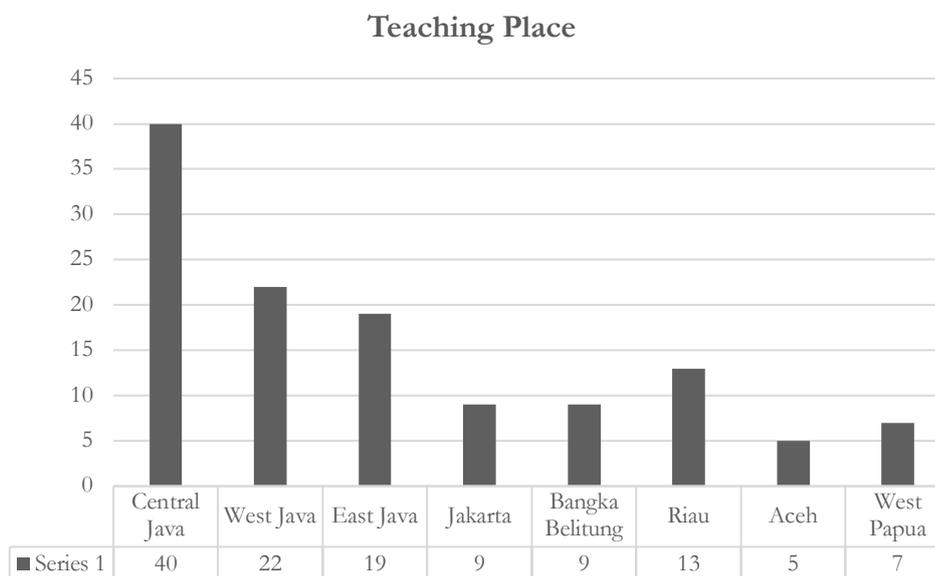| Series 1	Central Java	West Java	East Java	Jakarta	Bangka Belitung	Riau	Aceh	West Papua
	40	22	19	9	9	13	5	7

Figure 2. Informant Classification by The Teaching Place

The results obtained from measuring nutritional status by informants are classified according to the regulations of the Ministry of Health of the Republic of Indonesia (table 1), namely: extremely underweight, underweight, normal, overweight, and obese. The results of the data on the nutritional status of physical education teachers (informants) showed that there were nutritional status res

ults in the abnormal category (under/overweight), differentiated by gender. More details are depicted in Figure 4. Being underweight is caused by a lack of food intake compared to energy requirements, but genetics also influences certain factors. Whereas in cases of overweight and obesity, it is caused by a large amount of food intake compared to their needs, resulting in excessive body weight.
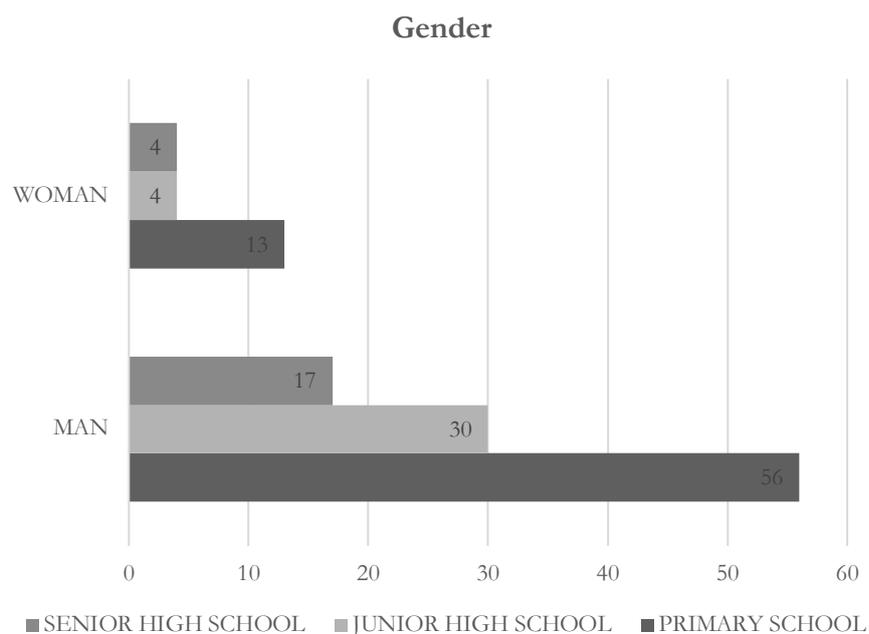
Gender

Figure 3. Informant Classification Based on Gender

Informants were dominated by men and the highest frequency was at the primary school level if we look at Figure 3. In general, female informants had normal nutritional status with a total of 57%, only 19% were in the overweight category and 24% were in the obese category. Meanwhile, 57% of the male informants were in the normal category, 22% were in the overweight category, 19% were in the obese category, and the rest were underweight (only 1 person).
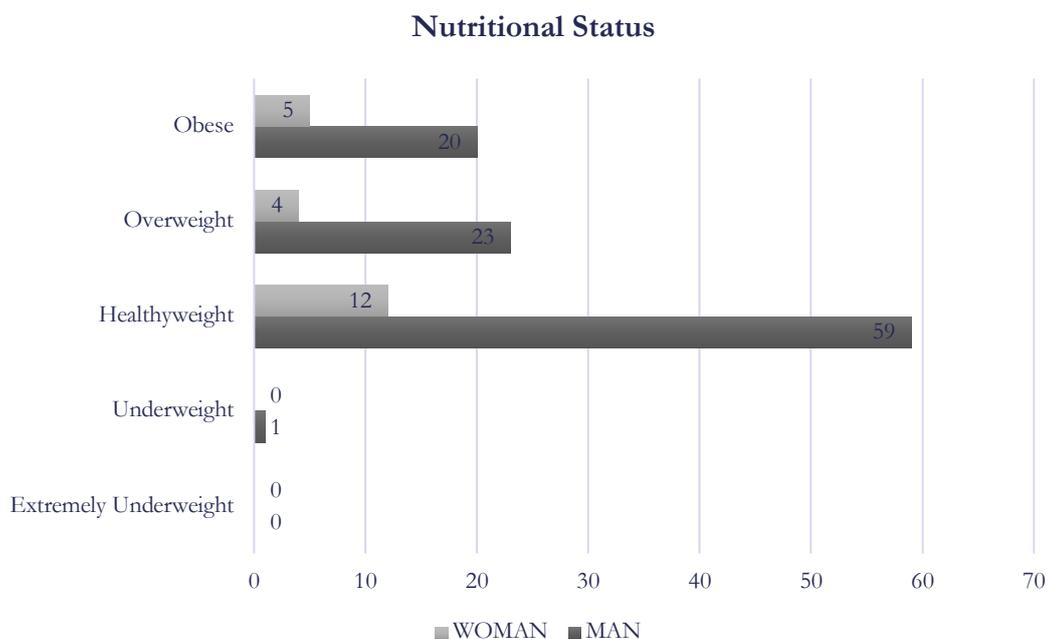
Nutritional Status

Figure 4. Nutritional Status of The Physical Education Teacher

4. Discussion

Nutritional status describes the state of the human body after consuming food and using its nutrients as a source of energy (Almatsier, 2010). Nutritional status is important for work productivity and the comparison is straight (Ramadhanti, 2020). Good work productivity is needed by physical education teachers whose function is to support learning effectiveness. By fulfilling normal levels of nutritional status, physical education teachers are more productive at work. Also pay attention to the effect of age and nutritional status on work fatigue (Amin et al., 2019). The informant is an adult who is of course over 18 years old, so it is important to pay attention to this. Normal nutritional status is needed according to the health needs of physical education teachers. However, unfortunately, based on the results of this study, only 59% had a normal level of nutritional status (based on calculations in Figure 4).

Abnormal nutritional status categories, including extremely underweight, underweight, overweight, and obese will have an impact on physical education teachers. Various diseases will be at risk. In the case of this study, only one teacher was found in the underweight category (figure 4). Most of the teachers experienced the problem of being overweight with several 27 people and 25 other people experiencing obesity (figure 4). This needs to be considered because up to 41% of teachers in this study experienced nutritional status problems. Teachers who are underweight will be at risk of several diseases. Someone who is underweight is at risk of developing stroke at a young age due to neurological problems (Polivka et al., 2019). Not only that, other risks haunt someone underweight, to the point where it affects their reproduction.

A teacher who is underweight will experience a risk of disease complications such as abnormal nutritional problems resulting in low body fat, low muscle mass, and muscle atrophy (Park et al., 2017), problems due to cardiovascular disorders (Funada et al., 2008), risk of impaired metastatic disease and cancer (Bubnov et al., 2017; Kim et al., 2019), as well as metabolic and microbiome problems(Avishai et al., 2017; Stolzenburg-Veeser & Golubnitschaja, 2018). In other cases, problems with sleep patterns and quality were found (Konieczka et al., 2014; Kunin et al., 2018, 2020), stress levels (Konieczka et al., 2016), and reproductive problems (O'Brien et al., 2017); for example in women the opportunity for ovulatory dysfunction (Witchel & Azziz, 2010). Some of the facts of this previous study illustrate that being underweight needs to be a normal nutritional status. Physical education teachers who are underweight need to pay attention to this (figure 4).

Teachers with above-normal nutritional status (overweight or obese) will also be at risk for their health. The problem for overweight and obese people is the high risk of high blood pressure and diabetes (Azarbal et al., 2016). Furthermore, clinical trials found a positive relationship between overweight and prostate cancer (Zhao et al., 2016). Someone who is overweight is also found to often have problems with the knee joints with the main disease being osteoarthritis (Gustina et al., 2020; Husnah et al., 2019). Obesity causes a decrease in lung compliance, lung volume, and peripheral airway diameter which affects blood volume in the lungs and ventilation perfusion (Berawi & Ningrum, 2017). Overweight and obese increase the risk of Low Back Pain (LBP) (Armiza, 2019). It is clear that ideal nutritional status is needed to avoid various health threats for physical education teachers, especially in this study the results showed that a total of 52 teachers were overweight and obese (figure 4).

Nutritional status for physical education teachers besides playing a role in work productivity and health, also has an impact on their fitness level. Previous research illustrates the strong relevance between nutritional status and nutritional intake on achieving a level of physical fitness (Yusuf et al., 2020). Conversely, other studies explain that the built environment and physical fitness will be related to one's health (Frehlich et al., 2022). Good health through the fulfillment of physical activity will not

only have an impact on fitness, bone health, and nutritional status, but will also have an impact on improving emotional health and social health (Kapoor et al., 2022). Some of these things can support the performance of physical education teachers in teaching.

Another problem that arises for informants with abnormal nutritional status is the problem of personality and professional competence. As a physical education teacher, you must have good personal and professional competence. Personality competence is related to personality abilities, identity as an educator who is a role model for students (Oviyanti, 2017). Meanwhile, professional competence is related to the level of professionalism of teacher work according to their area of expertise (Shidiq et al., 2022). In this condition, a physical education teacher, one of whose main tasks is to make students healthy and fit, of course, must be able to become a role model for these students. Physical education teachers with ideal nutritional status will certainly provide more confidence and motivation for their students to be able to follow the example or material provided in learning (one of which is related to physical fitness). Personal competence (Kartika & Ambara, 2021) and professionals (Krisnawati et al., 2022; Kurniadi et al., 2020) have an influence on student learning motivation.

5. Conclusion and Recommendation

The conclusion that can be drawn from this study is that there are still physical education teachers with nutritional status problems in the underweight, overweight and obese categories. Only 59% have the ideal level of nutritional status. Theoretically and previous empirical data, for physical education teachers who are not in the ideal category will be at risk of experiencing health problems, decreasing fitness levels, and showing profiles of personal competence and professional competence that have not been maximized.

In particular, it was recommended for informants with abnormal levels of nutritional status to adjust their eating patterns and levels of physical activity in order to obtain normal nutritional status and support their fitness levels. In general, other physical education teachers can measure nutritional status regularly and try to keep it in the normal category (healthy weight). Further research can be carried out quantitatively to see the impact of nutritional status on physical fitness (other related variables) for physical education teachers.

Acknowledgement

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