



INSTRUMENT FOR VERIFICATION OF ETHICAL THEORIES IN PHYSICAL CULTURE

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SUMMARY

This study tested an instrument entitled “Physical Culture and Ethics” which consisted of 44 statements to which subjects responded on a Likert-type five-point scale. The statements reflected the ethical theories of Aristotle (14 statements), Kant (14 statements) and Mill (16 statements).

The hypothetical model of ethical theories was verified on a sample of 163 students at the Faculty of Sport and Physical Education in Belgrade (119 male students and 44 female students), attending all years of study (n1=22, n2=34, n3=36, n4=48, n5=23). We hypothesized that students would display greater maturity in terms of education and reaffirm their positions towards ethical issues in physical culture as they progressed in their studies, and also that the male and the female students had their specific moral outlooks on the reality of physical culture.

When comparing the basic statistical indicators of students’ responses to statements reflecting the ethical theories (Aristotle, Kant, Mill) against the year of study students were in (mean value and standard deviation) – certain variation in values from the first to the fifth year of study was observed, thus confirming the hypothesis.

When comparing the basic statistical indicators of male and female students’ responses to statements reflecting the ethical theories (Aristotle, Kant, Mill) – female students’ results were better on all scales, and Aristotle’s ethical theory showed a statistical significance, thus confirming the second hypothesis as well.

Keywords: Ethics, Aristotle, Kant, Mill, physical culture

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INTRODUCTION

Ethics is a discipline of philosophy that studies moral, ethical values, moral phenomena and criteria of morality, and it is also a theory of the good, and of what is good for us, i.e. what we should do and what actions we should take (Babic, 2008).

The relationship between ethics (as a discipline of philosophy) and physical cultural studies (as a professional and scientific discipline) has not been sufficiently studied, which is specifically one of the reasons to research this topic in more depth and produce the *Physical Culture and Ethics* instrument.

Moral issues determine a degree of “moral concern” that is expressed by many social individuals with regard to physical culture. Some of those issues are related to sports that is encompassed by physical culture, and where we may frequently encounter events beyond what we perceive as expected moral behavioral norms.

Nowadays we are witnesses of a global moral crisis that reflects upon the social life and on the physical culture as its integral part. Developing moral and ethical awareness and understanding what correct behavior is becomes increasingly important and is recognized as an imperative by the society and educational institutions.

These facts demonstrate that we are supposed to introduce all present and prospective subjects involved in the physical culture into professional ethics, and we should instruct them in moral behavior, moral responsibility and ethical values in general.

Not many Serbian and international authors have thus far touched the subject of physical culture and ethics. Studies in the field, although scarce, can be classified into three categories depending how broad their approach is:

a) Studies that define physical exercise as a value on the most general philosophical level, making historical correlations with fair play as a basic value that applies to sports in particular, and defining an ethical approach in sports as the ethics of maxima and that in recreation as the ethics of moderation (Brkljacic, 2007; Leskosek, 1981; Tomic, 1982; Hosta, 2007).

b) Studies that have shed light on the logical relation between the philosophy of ethics and the theory of physical culture in terms of establishing the ethical values of physical activity (exercise) as own values. The studies imply that the physical activity is the fundamental ethical value of the physical culture, a purposeful effort which is immanent in creation and self-creation, as well as that the humanization of the physical culture is possible if greater attention is paid to moral education in all aspects of the physical culture, most specifically in sports

where we may observe the highest level of alienation with regard to ethical values (Matic, 1982; Polic, 1967).

c) Studies that empirically assessed positions on moral values among students, professional and recreational athletes, which provided base knowledge on moral concepts in physical culture. The most important limitation to such empirical approach were the instruments that were not designed to fully meet the methodological requirements, due to which the results of those studies could not have general scientific application (Brkljacic Zagrovic et al., 2011; Markovic, Bokan, & Kukolj, 2016; Markovic & Bokan, 2014)

The results of the studies mentioned above were used to carry out a study on a sample comprised of students at the University of Belgrade Faculty of Sport and Physical Education in order to evaluate a new instrument entitled *Physical Culture and Ethics* based on philosophical, theoretical and empirical knowledge.

The instrument *Physical Culture and Ethics* consists of statements that reflect the theories of Aristotle, Kant and Mill and therefore the three theories will be discussed in more detail in the chapter that follows.

THEORETICAL FRAMEWORK OF STUDY

Aristotle's Ethical Theory

Aristotle elaborated on the concept of ethics in his work *Nicomachean Ethics*. This work is also the first work in Ethics that has survived until today. This treatise conceptualizes mores and customs rooted in the lives of Hellenic people of the era. The *Nicomachean Ethics* consists of ten books (further subdivided into chapters), of which the first two are the most important for this study and they discuss *The Good* and *The Virtue – Moral*. This theory is in practice often referred to as the *virtue ethics*.

Book I deals with *the Good*. In the opening section Aristotle asserts that everything, and thereby everyone, has an aim, and the purpose of everyone's actions is some *good*, specifically the good that they achieve through their activities (Aristotle, 2003). In his work, Aristotle offers this very important perspective: *Every art and every inquiry, and similarly every action and pursuit, is thought to aim at some good; and for this reason the good has rightly been declared to be that at which all things aim. But a certain difference is found among ends; some are activities, others are products apart from the activities that produce them* (Aristotle, 2003, p. 3 [1094a I - 1 and 2]).

If every human activity has a certain final end to it, it inherently represents the good that should be aimed at, so Aristotle asserts: *Now such a thing happiness*

[εὐδαιμονία], above all else, is held to be; for this we choose always for self and never for the sake of something else (p. 12 [10976 VII-5]), an further that: ...he is happy who is active in accordance with complete virtue (Aristotle, 2003, p. 19 [11006 X-9] - sic M.M.).

At the end of this book, Aristotle offers the subdivisions of goods and virtues. He divides **goods** into *external goods*, *goods of the soul* and *goods of the body*, considering goods of the soul the true goods, i.e. the goods in their supreme sense. After the subdivision of goods, Aristotle divides **virtues** into *dianoetic* and *ethical*. The group of **dianoetic(intellectual) virtues** comprises *knowledge*, *intelligence* and *wisdom*. **Ethical (moral) virtues** are *magnanimity* and *prudence* (Aristotle, 2003).

Book II goes on to elaborate on *Virtue – Moral*. Having subdivided all virtues into intellectual and moral ones, Aristotle explains: *Intellectual virtue in the main owes both its birth and its growth to teaching, for which reason it requires experience and time, while moral virtue comes about as a result of habit. (...) From this it is also plain that none of the moral virtues arises in us by nature; for nothing that exists by nature can form a habit contrary to its nature.(...) Neither by nature, then, nor contrary to nature do the virtues arise in us; rather we are adapted by nature to receive them, and are made perfect by habit.(...) Of all the things that come to us by nature we first acquire the potentiality and later exhibit the activity* (Aristotle, 2003, p. 26 [11036 I - 1 - 4]).

In comparing virtues and arts, Aristotle points out that those have to be nurtured by habit through appropriate activity since the early age, which is of extreme importance for pedagogy on the whole, and also for teaching methods in physical education. Aristotle adds: *This is why the activities we exhibit must be of a certain kind; it is because the states of character correspond to the differences between these. It makes no small difference, then, whether we form habits of one kind or of another from our very youth; it makes a very great difference, or rather all the difference.* (Aristotle, 2003, p. 27 [10036 I - 8]). The children's capability to take pride in good actions and feel embarrassed because of bad and shameful acts is of key importance for moral education as defined by Aristotle. While children practice sharing toys with their friends or coping with disappointments, they are praised by their parents when they do well, and conversely they are reprimanded when they do not. Taking criticism is a painful experience and over time children develop a sense of shame which prevents them from behaving inappropriately. From the perspective of self-love, it is more important for a moral human being to appreciate the beauty of their actions than it may seem initially (Lear, 2008).

Kant's Ethical Theory

Kant's ethical theory is based on the principle of universalizability and it is more often known as *deontological ethics*. Kant sets out his ethical theory in his work *Groundwork of the Metaphysic of Morals* which is broken into three sections: the first is *Transition from the common rational knowledge to the philosophical*, the second is *Transition from popular moral philosophy to the metaphysic of morals*, and the third is *Transition from the metaphysic of morals to the critique of pure practical reason*. The first two sections are of relevance for this study, so we will look into them more closely.

In section one, *Transition from the common rational knowledge to the philosophical*, Kant argues about a single good thing – good will. This Kantian perspective is best illustrated at the very beginning of this section where he asserts that: *Nothing can possibly be conceived in the world, or even out of it, which can be called good, without qualification, except a good will* (Kant, 2008, p. 15). Kant highlights the value of good will and he goes on to say that it is not good because of what it performs or effects, but it is good by virtue of volition, that is it is good in itself.

He further cites other good things like talents of the mind (intelligence, wit, judgment) or qualities of temperament (courage, resolution, perseverance), but all these qualities, in the words of Kant, may also become extremely bad and mischievous if the will which is to make use of them is not good. According to Kant, everything except good will represents conditional goods, i.e. conditional values (Babic, 2007).

Further in section one, Kant introduces the idea of *duty*, which he explains by stating that: *An action done from duty derives its moral worth, not from the purpose which is to be attained by it, but from the maxim by which it is determined, and therefore does not depend on the realization of the object of the action, but merely on the principle of volition by which the action has taken place, without regard to any object of desire* (Kant, 2008, p. 26). Kant further claims: *Worth cannot lie anywhere but in the principle of the will without regard to the ends which can be attained by the action.* (Kant, 2008, p. 26). Based on the above statements Kant comes to the following conclusion: *Duty is the necessity of acting from respect for the law* (Kant, 2008, p. 27). The moral worth of an action based on duty does not lie in the effect or the consequence expected from it, but in the maxim that encouraged an individual to take action.

In section two, *Transition from popular moral philosophy to the metaphysic of morals*, Kant states that it is only possible for the rational beings to act according to the conception of law and principles and he asserts that: *Everything in nature works according to laws. Rational beings alone have the faculty of acting*

according to the conception of laws, that is according to principles, i.e. have a will (Kant, 2004, p. 46).

According to Kant, the conception of an objective principle, insofar as it is obligatory for a will, is called a command (of reason), and the formula of the command is called an imperative. Here Kant provides an important explanation of what an imperative is: *All imperatives are expressed by the word ought [or shall], and thereby indicate the relation of an objective law of reason to a will, which from its subjective constitution is not necessarily determined by it (an obligation). They say that something would be good to do or to forbear, but they say it to a will which does not always do a thing because it is conceived to be good to do it* (Kant, 2008, p. 48). Kant goes on to argue about how the imperative and good will are related, stating that a perfectly good will would be subject to objective laws of good, but could not be conceived as obliged thereby to act lawfully, because it can only be determined by the conception of good.

Kant asserts that all imperatives command either hypothetically or categorically. Hypothetical imperatives represent the practical necessity of a possible action as means to something else that is willed, whilst the categorical imperative would be that which represented an action as necessary of itself without reference to another end. Kant further clarifies the concept of hypothetical and categorical imperatives, stating that: *If now the action is good only as a means to something else, then the imperative is hypothetical; if it is conceived as good in itself and consequently as being necessarily the principle of a will which of itself conforms to reason, then it is categorical* (Kant, 2004, p. 49). For the purpose of this study, we need to understand in particular the categorical imperative, which, as Kant puts it: *concerns not the matter of the action, or its intended result, but its form and the principle of which it is itself a result* (Kant, 2008, p. 52). This imperative may be called the imperative of morality.

Kant states that the primary duty is to strictly abide by the moral law, i.e. the categorical imperative. The general formula of the Kantian categorical imperative (Kant, 2008, p. 60) is: *Act according to a maxim which can at the same time make itself a universal law*. This is a request to raise that which is purely subjective to a level of an objective, general principle that is binding to everyone and everything.

In further elaborating on this idea, Kant (2008, p. 61) argues that: *Since the validity of the will as a universal law for possible actions is analogous to the universal connection of the existence of things by general laws, which is the formal notion of nature in general, the categorical imperative can also be expressed thus: Act on maxims which can at the same time have for their object themselves as universal laws of nature*. Kant goes on to assert that everyone should command to themselves, if they want to become a moral being, which means a true human

being. According to him, arguing about a man as a human being means discussing about how a man is (yet) to become, and still has not arrived there.

Mill's Ethical Theory

An example of a teleological or consequentialist ethical theory is the Utilitarianism established by Jeremy Bentham, and subsequently expanded on by his prolific follower John Stuart Mill (*Utilitarianism*, 2003). *Utilitarianism* (ethical theory of utility) is one of the best developed contemporary ethical theories. According to Babic (2008, p. 44), in establishing his utilitarianist theory Bentham started from the following conclusion: *A new, scientific approach to questions of moral and legislation should be founded in order to improve the state of mankind. Humans are egoists by nature and they are placed under the governance of two masters, pain and pleasure, which point out what we ought to do as well as determine what we shall do. Hedonism is what drives people in their actions. Rational capacity allows humans to differentiate between more or less pleasure (or pain), and this capacity is the basis of moral calculation.*

In describing the basic features of utilitarianism, Mill (2003, crp. 33) states that: *The creed which accepts as the foundation of morals, Utility, or the Greatest Happiness Principle, holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness. By happiness is intended pleasure, and the absence of pain; by unhappiness, pain, and the privation of pleasure.* In the fourth chapter of "Utilitarianism", Mill further explains the principle of utility and asserts that: *The utilitarian doctrine is, that happiness is desirable, and the only thing desirable, as an end; all other things being only desirable as means to that end.* (Mill, 2003, p. 83). According to West, the relationship between this idea and morality is reflected in Mill's position that the promotion of happiness is a unit of measure based on which any action is to be evaluated, which implies that it has to be a criterion of morality, since it is a part of the whole (West, 2004).

In further developing the ethical theory of utilitarianism, Mill tries to "mitigate" certain conclusions made by Bentham by introducing a difference between the "quantitative" and "qualitative" hedonism based on the difference between "higher" and "lower" pleasures. Mill asserts that those who are equally acquainted with both beast's pleasures and the pleasures attributed strictly to humans and who are equally capable of appreciating and enjoying both, give preference to "the manner of existence which employs their higher faculties" (Mill, 2003, p. 36).

In arguing about the relationship between greater and lesser good, Mill points out that those of weak character are prone to choose lesser good only because it is nearer to them. This is best illustrated by Mill stating that: *Men often,*

from infirmity of character, make their election for the nearer good, though they know it to be the less valuable; and this no less when the choice is between two bodily pleasures, than when it is between bodily and mental. They pursue sensual indulgences to the injury of health, though perfectly aware that health is the greater good(Mill, 2003, p. 39).

According to Babic (2008, p. 45), Mill's theory has one very important feature: *What is the most attractive feature of utilitarianism is the principle of general comparability: in utilitarianism, it is possible to determine which of any two actions is better.* Since the right actions in utilitarianism are those that promote happiness and that conception is one of the most important ones in Mill's philosophy, he had to provide further explanations and direct critics' attention towards the fact that not only individual happiness is implied when an action is evaluated. Mill provides a definition of happiness as a rule of thumb in utilitarianism that says: *Happiness which forms the utilitarian standard of what is right in conduct, is not the agent's own happiness, but that of all concerned*(Mill, 2003, p. 51).

Mill goes on to argue about what the task of ethics should be, stating that: *It is the business of ethics to tell us what are our duties, or by what test we may know them; but no system of ethics requires that the sole motive of all we do shall be a feeling of duty; on the contrary, ninety-nine hundredths of all our actions are done from other motives, and rightly so done, if the rule of duty does not condemn them*(Mill, 2003, pp. 52 and 53). Mill proceeds to talk about the morality of a particular action, pointing out that it entirely relies on intention, that is on what the one who acts will do.

The issue of an end to an action is basically the issue of what things are desirable. According to utilitarian doctrine, happiness is desirable, and the only thing desirable as an end, all other things being only desirable as means to an end. Mill thus concludes: *Happiness has made out its title as one of the ends of conduct, and consequently one of the criteria of morality*(Mill, 2003, p. 84). Mill further explains this conclusion by asserting that human nature is so constituted as to desire nothing which is not either a part of happiness or a means of happiness, and if that is the case, then happiness is the only end to human actions, while its promotion is the standard by which every human action should be evaluated. This implies that happiness has to be a criterion of morality, as it is a part of the whole.

METHOD

The three ethical theories were used to design the questionnaire entitled *Physical Culture and Ethics* which was tested on a sample comprised of students at the University of Belgrade Faculty of Sport and Physical Education. The test was

based on surveying, while the information collected through such method was processed by means of SPSS 20.0 software pack through the use of appropriate statistical procedures explained by descriptive method. The statistical procedures applied were Mann-Whitney U test for the comparison of responses between sexes, and Kruskal-Wallis test to compare the answers with respect to the students' year of study.

The subject matter of the study is the application of a newly-designed instrument that evaluates students' opinions on particular ethical issues in physical culture.

The aim of the research was specifically to test the reliability of the questionnaire entitled *Physical Culture and Ethics* on a sample comprised of students at the University of Belgrade Faculty of Sport and Physical Education.

The sample involved the students pursuing academic studies in physical education at the Faculty of Sport and Physical Education in Belgrade (n=163). Two criteria were used to subdivide the sample: sex (M=119, F=44) and year of study (n1=22, n2=34, n3=36, n4=48, n5=23).

We made three hypotheses – one: the instrument *Physical Culture and Ethics* is reliable, two: students' responses will differ in correlation with sex and three: students will exhibit their educational maturity in correlation with the year of study and they will reaffirm their positions on ethical issues in physical culture.

The instrument *Physical Culture and Ethics* consisted of 44 statements to which subjects responded on a Likert-type five-point scale (5 – I absolutely agree, 4 – I agree, 3 – I am neutral, 2 – I disagree, 1 – I absolutely disagree).

Statements in this instrument reflected the ethical theories of Aristotle (theory of ethics and moderation, 14 statements), Kant (theory of duty, 14 statements) and Mill (theory of utilitarianism, 16 statements).

The statements that reflect the Aristotelian *ethical theory of virtue* are:

1. *Absolute, undisturbed and free action represents a goal to achieve in physical culture.*
2. *Happiness is a supreme good that can also be achieved by physical exercise.*
3. *Good as a moral worth refers to **external goods**.*
4. *Good as a moral worth refers to **the goods of the body**.*
5. *Good as a moral worth refers to **the goods of the soul**.*
6. *Happiness can arise as a consequence of physical exercise.*
7. *It is a virtue to engage in physical exercise.*
8. *Virtues can be acquired and perfected in physical culture.*
9. *Physical exercise is **a passion** and it represents a virtue.*

10. *Physical exercise is **an affinity** and it represents a virtue.*
11. *Physical exercise is **a quality** and it represents a virtue.*
12. *Moderation is possible in athletic activities.*
13. *I enjoy while I exercise.*
14. *Finding true balance is a virtue in physical culture.*

The statements reflecting the Kantian *ethical theory of duty* are:

1. *I asked myself if I can be better than I am now.*
2. *All athletes are not good and moral persons.*
3. *All athletes are not free as acting beings.*
4. *In addition to the rules of a competition, I have my "inner" rules that refer to fair competing against the opponent.*
5. *I would challenge a referee's call if it were to reflect negatively on my opponent.*
6. *In competing with an opponent, only individual qualities and the rules of sport should apply.*
7. *In an athletic competition, I am driven only by an instinct-based principle to beat the opponent.*
8. *Sometimes I remember that my opponent wants to beat me too.*
9. *If I lose, I am satisfied, provided I put in as much effort as I possibly could.*
10. *If I were to be awarded a prize (a cup or a medal) and if this were to go unduly against my opponent, I would insist for the prize to be awarded to my opponent.*
11. *Whenever I made a promise to my coach or trainer that I would do something, I kept my promise.*
12. *In a match I act in the spirit of fair play, hoping that other competitors will behave in the same manner.*
13. *The ultimate duty of athletes in an international competition is to participate in a manner such that they represent their country appropriately.*
14. *Professional and amateur sports differ in how freedom is achieved and in the application of norms of moral behavior.*

The statements arising from the Mill's *ethical theory of utilitarianism* are:

1. *Engaging in physical activity is enjoyable.*
2. *All people that engage in physical exercise are happy.*
3. *All people have equal rights as regards exercising.*
4. *All people have a natural need to exercise.*
5. *Happiness as an effect of exercise may be achieved if all people have equal conditions for exercising.*
6. *Engaging in physical exercises makes most people happy.*
7. *The principle of utility is the most important in physical exercising.*

8. *During physical exercise, the most important is to achieve **physical satisfaction**.*
9. *During physical exercise, the most important is to achieve **spiritual satisfaction**.*
10. *If engaging in sports brings gain, winning should be at all costs.*
11. *Training hard is a prerequisite for success and for satisfaction and happiness that is thereby achieved.*
12. *Given that the effort and pain are part of sports, engaging in sports cannot bring absolute happiness.*
13. *In sports, greater satisfaction comes from the financial gain than from the fame engaging in sports may bring.*
14. *Engaging in sports also comes with a financial gain.*
15. *Doping to achieve better results is not allowed in sports.*
16. *The respect of rules and regulations in sports represents the basis of correct and moral behavior.*

RESULTS AND DISCUSSION

Metric Features of Instrument

The instrument *Physical Culture and Ethics* consists of three scales (Aristotle, Kant and Mill) and its first version was tested prior to this study. Cronbach's α coefficient in two out of three scales was not satisfactory after the initial test. For the Aristotle scale, Cronbach's α was 0.74 after the initial test, proving it to be at a remarkable level; however, the Kant and Mill scales returned a coefficient of 0.4, which was not sufficient enough (Pallant, 2013).

The instrument was therefore redesigned, several statements were added to the Kant and Mill scales (Cronbach α coefficient is sensitive to the number of statements on a scale) and such a redesigned instrument was evaluated and tested again, so we will discuss the results of testing in this part of the article. Version two of the instrument yielded higher Cronbach's α coefficients (Table 1) that were satisfactory.

Table 1 – Cronbach's α coefficient per scales of the instrument *Physical Culture and Ethics*

Scale	Cronbach's α coefficient
Aristotle	0.74
Kant	0.60
Mill	0.50

Analysis of Response-based Results in Correlation with Students' Sex

The responses regarding ethical theories given by the students are grouped together based on their sex and presented in Table 2. The results reveal that male and female students demonstrated the highest level of agreement when it comes to statements that refer to Aristotle's theory of virtue, which is followed by Kant's theory of duty and by Mill's theory of utilitarianism, respectively.

The finding that the students for the most part are in agreement when it comes to the Aristotelian theory of virtue and moderation is quite positive, as the students who were surveyed are studying to become teachers of physical education. Similar to the previous studies, it turned out that there is a difference in students' responses with respect to their sex (Markovic, et al., 2016; Markovic & Bokan, 2014). This difference is defined as a "male" preference for moral values as opposed to the "female" preference for moral values.

Table 2 – Students' responses per theory and with respect to their sex MV (SD), male students n=119; female students n=44

Theory	Male Students MV (SD)	Female Students MV (SD)
Aristotle (theory of virtue)	4.03 (0.86)	4.21 (0.78)
Kant (theory of duty)	3.96 (1.05)	4.05 (0.96)
Mill (theory of utilitarianism)	3.63 (1.08)	3.75 (0.99)

For the purpose of easier understanding and better clarity of the presented data, responses to statements are grouped into three sets according to their intensity on the scale: negative responses (answers 1 and 2), neutral responses (answer 3) and positive responses (answers 4 and 5).

Table 3 – Subjects' responses to statements reflecting the Aristotelian ethical theory of virtue in correlation with subjects' sex (% , MV, SD), male students n=119; female students n=44

Scale	Negative responses (answers 1 and 2) (%)		Neutral responses (answers 3) (%)		Positive responses (answers 4 and 5) (%)		Mean Value (MV) Standard Deviation (SD)	
	M	F	M	F	M	F	M	F
1	9.2	4.5	14.3	15.9	76.5	79.6	3.92 (0.93)	3.98 (0.93)
2	1.7	0.0	6.7	2.3	91.6	97.7	4.47 (0.70)	4.73 (0.50)

3	31.9	20.5	41.3	36.4	26.8	43.1	2.87 (1.11)	3.23 (1.14)
4	20.2	15.9	38.7	40.9	41.1	43.2	3.22 (1.10)	3.32 (1.03)
5	9.2	4.5	35.3	22.7	55.5	72.8	3.69 (0.93)	3.95 (0.83)
6	1.7	2.3	2.5	2.3	95.8	95.4	4.55 (0.67)	4.61 (0.65)
7	3.4	0.0	2.5	0.0	94.1	100.0	4.51 (0.75)	4.70 (0.46)
8	0.8	0.0	0.8	0.0	98.4	100.0	4.60 (0.60)	4.75 (0.44)
9	3.4	0.0	10.9	18.2	85.7	81.8	4.27 (0.82)	4.43 (0.79)
10	3.4	0.0	15.1	13.6	81.5	86.4	4.13 (0.79)	4.30 (0.70)
11	7.6	11.4	20.2	15.9	72.2	72.7	3.95 (0.96)	4.00 (1.08)
12	8.4	6.8	26.1	22.7	65.5	70.5	3.81 (0.98)	3.95 (0.99)
13	3.4	0.0	5.9	4.5	90.7	95.5	4.50 (0.85)	4.77 (0.52)
14	5.0	0.0	26.1	25.0	68.9	75.0	3.89 (0.87)	4.20 (0.82)

Legend: Mann-Whitney U test resulted in a statistically significant difference in statements 2 (*Happiness is a supreme good that can also be achieved by physical exercise*), 13 (*I enjoy while I exercise*) and 14 (*Finding true balance is a virtue in physical culture*).

The results based on responses given by the respondents to each statement related to Aristotle's ethical theory of virtue in correlation with the respondents' sex are presented in the Table 3 above. The results of Mann-Whitney U test show statistically significant differences in statements 2 (*Happiness is a supreme good that can also be achieved by physical exercise*), 13 (*I enjoy while I exercise*) and 14 (*Finding true balance is a virtue in physical culture*). Compared to male students, female students had a higher mean value for all three statements, while in terms of percentages, they expressed a higher degree of agreement with the statements.

When we look at the results obtained from responses to the statement *Happiness is a supreme good that can also be achieved by physical exercise* (2), we may conclude that both female and male students expressed a high level of agreement (m – 4.47, f – 4.73), but the score of the female students is higher. The scores obtained from responses to the statement *I enjoy while I exercise* (13) are quite high (m – 4.50, f – 4.77), which is a positive and expected result, since students have many practical activities over the course of their studies. In this case as well, we can see that the female students showed more agreement, which is indicative of the “female” preference for moral values as opposed to “male” preference. As far as the last statement referring to Aristotle's theory of virtue *Finding true balance is a virtue in physical culture* (14), 75.0% of female students agreed with it, while the percentage of agreement was lower in male students (68.9%). According to Aristotle, the search for balance is a task of human activity. Scores related to this statement were lower than expected in both sexes, but such

results may come as a consequence of a relatively small sample of students who were perhaps more engaged in those sports where moderation is not possible.

The results obtained from responses to the statements related to Kant's ethical theory of duty are presented in Table 4. The results of Mann-Whitney U test show a statistically significant difference in statement 4 (*In addition to the rules of a competition, I have my "inner" rules that refer to fair competing against the opponent*).

As we consider the responses to the statement 4 (*In addition to the rules of a competition, I have my "inner" rules that refer to fair competing against the opponent*), we may conclude that 84% of respondents of both sexes agreed with it, which is commendable, however in this case too, the percentage of agreement among female students is significantly higher. Respondents have a duty to act according to their "inner" rules, which reflects the theory of Kant who asserts that: *Duty is the necessity of acting from respect for the law* (Kant, 2008, p. 27). It is essential for prospective teachers of physical education to recognize the importance "inner" rules in any sense.

Table 4 – Subjects' responses to statements reflecting the Kantian ethical theory of duty in correlation with subjects' sex (% , MV, SD), male students n=119; female students n=44

Scale	Negative responses (answers 1 and 2) (%)		Neutral responses (answers 3) (%)		Positive responses (answers 4 and 5) (%)		Mean Value (MV) Standard Deviation (SD)	
	M	F	M	F	M	F	M	F
1	0.8	4.5	0.8	4.5	98.4	91.0	4.79 (0.48)	4.70 (0.85)
2	36.1	22.7	15.1	11.4	48.7	65.9	3.24 (1.62)	3.68 (1.38)
3	28.5	22.7	34.5	36.4	37.0	40.9	3.08 (1.16)	3.14 (1.15)
4	4.2	2.3	10.9	2.3	84.9	95.4	4.34 (0.90)	4.66 (0.64)
5	15.1	2.3	22.7	27.3	62.2	70.5	3.73 (1.13)	3.98 (0.82)
6	5.0	2.3	6.7	4.5	88.2	93.2	4.44 (0.92)	4.68 (0.67)
7	25.2	31.8	14.3	11.4	60.5	56.8	3.49 (1.22)	3.27 (1.21)
8	5.9	4.5	7.6	15.9	86.5	79.5	4.43 (1.03)	4.39 (0.92)
9	15.1	9.1	7.6	2.3	77.3	88.6	4.05 (1.19)	4.34 (1.06)
10	25.2	20.5	27.7	31.8	47.1	47.7	3.32 (1.28)	3.39 (1.20)
11	12.6	4.5	20.2	15.9	67.2	79.5	3.80 (1.06)	4.00 (0.86)

12	5.9	2.3	5.0	4.5	89.1	93.2	4.46 (0.93)	4.50 (0.70)
13	3.4	2.3	7.6	15.9	89.1	81.8	4.45 (0.81)	4.30 (0.82)
14	10.1	11.4	26.1	31.8	63.9	56.8	3.76 (1.00)	3.66 (1.14)

Legend: Mann-Whitney U test resulted in a statistically significant difference in statement 4 (In addition to the rules of a competition, I have my “inner” rules that refer to fair competing against the opponent).

The results based on responses given by the subjects to the statements reflecting Mill’s ethical theory of utilitarianism in correlation with respondents’ sex are presented in Table 5. The results of Mann-Whitney U test point to a statistically significant difference in statements 2 (*All people that engage in physical exercise are happy*), 3 (*All people have equal rights as regards exercising*) and 16 (*The respect of rules and regulations in sports represents the basis of correct and moral behavior*).

By analyzing responses to statement 2 (*All people that engage in physical exercise are happy*), we may observe that female students show a significantly higher level of agreement (3.41) with respect to male students (2.92). Again, we find the “female” preference for moral values that outweighs the “male” preference, which in case of Mill’s ethical theory means that female students have a stronger belief with respect to male students that happiness can be achieved through physical exercise.

The analysis of responses to statement 3 (*All people have equal rights as regards exercising*) shows that both sexes expressed a high level of agreement (m – 4.28, f – 4.57), but female students have a higher percentage. Female students attribute more importance to the right to exercise with respect to male students.

The statement 16 (*The respect of rules and regulations in sports represents the basis of correct and moral behavior*) was positively scored by 89.1% of male students, while the percentage of female students who gave a positive response was even higher at 95.5%. Female students emphasize the respect of rules and regulations as a foundation of moral behavior.

Table 5 – Subjects’ responses to statements reflecting the Mill’s ethical theory of utilitarianism in correlation with subjects’ sex (% , MV, SD), male students n=119; female students n=44

Scale	Negative responses (answers 1 and 2) (%)		Neutral responses (answers 3) (%)		Positive responses (answers 4 and 5) (%)		Mean Value (MV) Standard Deviation (SD)	
	M	F	M	F	M	F	M	F
1	0.0	0.0	2.5	0.0	97.5	100.0	4.78 (0.47)	4.86 (0.35)
2	38.7	25.0	23.5	18.2	47.8	56.8	2.92 (1.17)	3.41 (1.04)
3	6.7	9.1	7.6	2.3	85.7	88.6	4.28 (0.98)	4.57 (0.93)
4	26.1	15.9	9.2	9.1	64.7	75.0	3.51 (1.36)	3.93 (1.17)
5	16.0	15.9	29.4	20.5	54.6	63.6	3.46 (1.09)	3.59 (0.97)
6	5.9	4.5	8.4	4.5	85.7	91.0	4.24 (0.93)	4.39 (0.78)
7	31.9	29.5	31.9	34.1	36.2	36.4	3.01 (1.16)	3.09 (1.14)
8	13.4	31.8	17.6	11.4	69.0	56.8	3.80 (1.11)	3.48 (1.49)
9	10.9	2.3	25.2	15.9	63.9	81.8	3.71 (1.03)	4.02 (0.70)
10	62.2	52.3	17.6	18.2	20.2	29.5	2.36 (1.34)	2.45 (1.28)
11	7.6	2.3	6.7	0.0	85.7	97.7	4.28 (0.92)	4.59 (0.62)
12	52.1	43.2	16.0	25.0	31.9	31.8	2.62 (1.36)	2.82 (1.33)
13	56.3	61.4	13.4	18.2	30.3	20.4	2.55 (1.29)	2.27 (1.13)
14	21.8	27.3	10.9	15.9	67.3	56.8	3.63 (1.26)	3.34 (1.26)
15	7.6	9.1	11.8	4.5	80.6	86.4	4.43 (1.12)	4.41 (1.15)
16	0	0	10.9	4.5	89.1	95.5	4.55 (0.69)	4.77 (0.52)

Legend: Mann-Whitney U test resulted in a statistically significant difference in statements 2 (All people that engage in physical exercise are happy), 3 (All people have equal rights as regards exercising) and 16 (The respect of rules and regulations in sports represents the basis of correct and moral behavior).

Analysis of Response-based Results in Correlation with Years of Study

Responses provided by the subjects to statements reflecting the three ethical theories are grouped by year of study, as shown in Table 6. The results demonstrate that the mean scores are the highest in statements that refer to Aristotle’s theory of virtue. Kant’s theory of duty comes second, while Mill’s theory of utilitarianism ranks third. The ranking of the theories is the same as that

correlating with sex, however the differences that may be identified with respect to years of study are remarkable.

Table 6 – Students’ responses to statements reflecting the three ethical theories in correlation with the year of study MV (SD), 1st n=22, 2nd n=34, 3rd n=36, 4th n=48, MSc n=23

Theory	1 st	2 nd	3 rd	4 th	MSc
Aristotle (theory of virtue)	4.08 (0.83)	4.06 (0.81)	4.02 (0.84)	4.14 (0.85)	4.05 (0.79)
Kant (theory of duty)	3.94 (0.93)	3.91 (1.10)	3.97 (1.05)	4.05 (1.02)	3.99 (0.92)
Mill (theory of utilitarianism)	3.72 (1.07)	3.59 (1.09)	3.72 (1.05)	3.70 (1.08)	3.56 (0.86)

Table 7 presents basic descriptive indicators (MV and SD) for statements in all three groups of ethical theories that show a statistically significant difference based on the Kruskal-Wallis test in correlation with the year of study. From all the statements referring to Aristotle’s ethical theory of virtue, the statistical significance is found in statement 4 (*Good as a moral worth refers to **the goods of the body***), while from the statements referring to Kantian theory of duty, the statistical significance is found in statement 4 (*In addition to the rules of a competition, I have my “inner” rules that refer to fair competing against the opponent*), and finally from the statements referring to Mill’s ethical theory of utilitarianism, the statistical significance is found for statements 10 (*If engaging in sports brings gain, winning should be at all costs*) and 16 (*The respect of rules and regulations in sports represents the basis of correct and moral behavior*).

Table 7 – Response scores for statements in which Kruskal-Wallis test shows a statistically significant difference in correlation with the year of study MV (SD), 1st n=22, 2nd n=34, 3rd n=36, 4th n=48, MSc n=23

No.	Statement	1 st	2 nd	3 rd	4 th	MSc
1	A 4	3.14 (1.04)	3.32 (1.07)	3.28 (1.00)	3.56 (0.90)	2.52 (1.31)
2	K 4	4.50 (0.60)	4.09 (1.06)	4.28 (1.00)	4.58 (0.68)	4.78 (0.52)
3	M 10	3.05 (1.21)	2.35 (1.41)	2.67 (1.47)	2.23 (1.22)	1.70 (0.82)
4	M 16	4.86 (0.35)	4.41 (0.61)	4.53 (0.74)	4.52 (0.77)	4.96 (0.21)

Legend: Kruskal-Wallis test shows a statistically significant difference in the following statements: statement A4 (*Good as a moral worth refers to **the goods of the body***) referring to the Aristotelian ethical theory, statement K4 (*In addition to the rules of a competition, I*

have my "inner" rules that refer to fair competing against the opponent) referring to Kant's ethical theory, and statements M10 (*If engaging in sports brings gain, winning should be at all costs*) and M16 (*The respect of rules and regulations in sports represents the basis of correct and moral behavior*) referring to Mill's ethical theory.

As we analyze the scores referring to the statement A4 of Aristotle's ethical theory of virtue (*Good as a moral worth refers to **the goods of the body***), we may observe that the mean scores are the lowest in those respondents who pursue a master's degree (2.52). Such scores favor the idea that as the students become more mature, they modify their positions regarding certain ethical issues in physical culture, i.e. they realize that the good as a moral value is not related exclusively to the goods of the body.

The analysis of the scores referring to the statement K4 of Kant's ethical theory of duty (*In addition to the rules of a competition, I have my "inner" rules that refer to fair competing against the opponent*) reveals that the scores of graduate students in master studies are the highest (4.78), which is indicative of the fact that as students go through the education process at the University, they reinforce their belief that they should act according to their inner instinct, and not only according to external rules that apply to a certain activity.

By analyzing the scores related to the statement M10 (*If engaging in sports brings gain, winning should be at all costs*), we may observe that the mean scores in students pursuing a master's degree are by far the lowest (1.70) with respect to other students, which shows that the students' positions are reaffirmed as they become more mature and it is also indicative of the quality of the program of study at the University of Belgrade Faculty of Sport and Physical Education, because students in the first year of study had a score of 3.05. We can see there is a trend of declining scores related to this statement as we go from the first towards the fifth year of study. A change in position regarding this issue is quite important for prospective teachers of physical education, and particularly for those who will pursue their careers in the sports industry.

The analysis of scores referring to the statement M16 (*The respect of rules and regulations in sports represents the basis of correct and moral behavior*) shows that the students improve their positive attitude towards that statement, so the students in master's studies have the highest mean score (4.96).

Based on the results of the study, we may conclude that the hypothesis that students would become more mature in educational terms and they would reaffirm their positions regarding ethical issues in physical culture as they progressed in their studies is confirmed.

CONCLUSIONS

The relationship between ethics (as a discipline of philosophy) and physical cultural studies (as a professional and scientific discipline) has not been researched sufficiently, which is one of the reasons this study was carried out and the instrument *Physical Culture and Ethics* designed.

The quantitative analysis of previous studies revealed that there were certain reliability issues with instruments used in those studies, as they were not designed according to all methodological requirements, and for that reason the instrument *Physical Culture and Ethics* was designed and tested.

The theoretical part of this study presented the ethical theories of Aristotle, Kant and Mill based on which 44 statements reflecting those theories were designed, and they refer to the physical culture. The Likert-type five-point scale was used to assess the statements.

This questionnaire was tested on a sample of 163 students at the Faculty of Sport and Physical Education which was subdivided by two criteria: sex and year of study. Three hypotheses were made: one: the instrument *Physical Culture and Ethics* is reliable, two: students' responses will differ in correlation with sex and three: students will exhibit their educational maturity in correlation with the year of study and they will reaffirm their positions on ethical issues in physical culture.

The analysis of Cronbach's α coefficient showed that the values for all three scales were satisfactory, thereby confirming the first hypothesis.

The comparison of basic statistical indicators of responses given by male and female students to statements representing ethical theories (Aristotle, Kant, Mill) demonstrated that the female students had higher scores in all scales, while the ethical theory of Aristotle showed a statistical significance, which confirmed the second hypothesis.

The comparison of basic statistical indicators of responses given by students to statements representing ethical theories (Aristotle, Kant, Mill) with respect to the students' year of study (mean value and standard deviation) showed variation in values on all scales as we moved from the first towards the fifth year of studies, which confirmed the third hypothesis.

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ИНСТРУМЕНТ ЗА ПРОВЕРУ ЕТИЧКИХ ТЕОРИЈА У ФИЗИЧКОЈ КУЛТУРИ

САЖЕТАК

У овом истраживању проверен је инструмент под називом *Физичка култура и етика* који се састојао од 44 тврдње на које испитаници дају свој степен слагања на петостепеној скали Ликертовог типа. Те тврдње рефлектују етичке теорије Аристотела (14 тврдњи), Канта (14 тврдњи) и Мила (16 тврдњи). На узору од 163 студента Факултета спорта и физичког васпитања Универзитета у Београду (119 студената и 44 студенткиње), са свих година студија (n1=22, n2=34, n3=36, n4=48, n5=23), проверен је хипотетички модел о етичким теоријама. Претпоставили смо да студенти са годинама студија у васпитно-образовном смислу сазревају и изоштравају своја схватања према етичким питањима у физичкој култури, као и да студенти и студенткиње формирају свој специфични морални поглед на стварност физичке културе. У поређењу основних статистичких показатеља одговора студената по годинама студија (средња вредност и стандардна девијација) у односу на тврдње које представљају етичке теорије (Аристотел, Кант, Мил) – на свим скалама се констатује благо померање вредности од прве ка петој години студија, чиме је хипотеза потврђена. У поређењу основних статистичких

показатеља одговора студената и студенткиња у односу на тврдње које представљају етичке теорије (Аристотел, Кант, Мил) – на свим скалама су бољи резултати студенткиња, а етичка теорија Аристотела је показала и статистичку значајност, чиме је и друга хипотеза потврђена.

Кључне речи: Етика, Аристотел, Кант, Мил, Физичка култура

ИНСТРУМЕНТ ДЛЯ ПРОВЕРКИ ВЛАДЕНИЯ ЭТИЧЕСКОЙ ТЕОРИЕЙ В ФИЗИЧЕСКОЙ КУЛЬТУРЕ

АННОТАЦИЯ

В данном исследовании применялась методика «Физическая культура и этика», основанная на 44 утверждениях, на которые респонденты отвечали по пятибалльной шкале Лайкертовского типа. В методике применялись высказывания таких великих ученых, как Аристотель (14 утверждений), Кант (14 утверждений), Милль (16 утверждений). Гипотетическая модель этической теории была проверена на выборке из 163 студентов на факультете физической культуры и спорта в Белграде (119 студентов мужского пола и 44 женского пола), обучающихся на всех курсах (n1=22, n2=34, n3=36, n4=48, n5=23). Мы предположили, что студенты обладают большой зрелостью в плане образования и могут подтвердить свою позицию по отношению к этическим проблемам в сфере физической культуры, поскольку они продвинулись в своих познаниях, а также предположили, что юноши и девушки имеют свои специфические моральные взгляды на реальности физической культуры.

При сравнении основных статистических показателей ответов студентов, отражающих этические теории (Аристотель, Кант, Милль) по годам обучения на факультете (определялось среднее значение и стандартное отклонение) – у студентов наблюдались некоторые изменения в отношении к этическим теориям от первого до пятого годов обучения, что подтверждает выдвинутую гипотезу.

При сравнении основных статистических показателей ответов юношей и девушек, отражающих этические теории (Аристотель, Кант, Милль) – у студенток результаты были лучше по всем шкалам, а владение этическим учением Аристотеля у них оказалось статистически значимым по сравнению с юношами, что подтверждает вторую гипотезу.

Ключевые слова: этика, Аристотель, Кант, Милль, физическая культура.

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