

Moral competence, dilemma discussion, and sports: unraveling the significance of framework, competitive level, and sporting experience

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Abstract

Background and Study Aim Stimulation of moral development is one of the most important tasks of modern education. Findings of recent studies indicate its importance for sound development of a young person. Research Objective: Examine the impact of moral dilemma discussions, the level of competitiveness, and years of sports training (experience) on athletes' morality.

Material and Methods The research study was conducted by the diagnostic survey method and was based on a quasi-experimental design with experimental and control (CG) groups. A sample of 352 university students in sport and physical education-related faculties participated in the study. They were assessed using Lind's Moral Judgement Test (MJT) and the Moral Judgement Test in Physical Education (MJT-PE).

Results There were no interaction effects between years of sport practice and levels of general moral competence in an overall group. However, in terms of the sport-specific domain of moral competence, there was a tendency towards statistical significance of an interaction effect ($p=0.07$) on the levels of moral competence. This was in addition to the main effect ($p=0.001$) that differentiated the experimental and control groups. The findings indicated that the experimental group scored significantly higher ($p=0.0008$) on MJT-PE C-index than their control group peers. This disparity can be attributed to the amateur sports students in the experimental group, who exhibited significantly higher levels of moral competence compared to their amateur counterparts in the control group ($p=0.0022$).

Conclusions This study underscores the positive impact of dilemma discussions on athletes' moral competence within the realm of physical education and sports. The findings strongly suggest that implementing structured dilemma discussions can significantly benefit amateur athletes. This emphasizes the critical importance of incorporating ethical deliberations into athletic training programs, especially for Physical Education and Sports educators.

Keywords: moral competence, dilemma discussion, athletes' morality, mode, training, sports practice.

Introduction

Education of socially, morally and democratically conscious youth is a necessary condition for the healthy functioning and development of modern society. This necessity suggests the need to find effective and empirically proven mechanisms of influence that contribute to moral and personal growth.

Moral competence and intelligence are a psychologist's long-sought bridge between moral attitudes or moral values on one hand and moral behavior on the other. According to Lajčáková [1], moral competence is the ability of an individual to arrive at moral judgments on the basis of his/her internal principles and subsequently act in accordance with these opinions. In this context, moral education appears not as a proposal of a

ready-made scheme of duties or a catalogue of norms that must be implemented [2]. Instead, it serves as an incentive to strive to act morally. This involves thinking independently through the prism of personally chosen categories of values that form the basis of the motivation of the choice and the decision made [2]. But moral competence is not only the skill of moral reasoning. It is also moral behavior that is consistent with the relevant cognitive and affective components. Additionally, it aligns with the context of democratic principles of social coexistence that determine human behavior in the social world [3].

One of the focal issues in moral functioning's research is whether sport promotes moral competence or quite contrary – attitudes of selfishness. According to Shields and Bredemeier [4, 5], the rules of some competitions often allow for greater egocentrism and moral flexibility than life outside of sports. That is, the environmental context influences ethical attitudes and behavior.

Based on the well-established theoretical background of Lawrence Kohlberg [6, 7] one's moral development occurs as a result of the interaction between the person and the environment and is a part of their cognitive development. This fact could be easily interpreted. The prerequisites for an individual to behave morally are cognition and conception of concrete or abstract terms, moral judgments, and thoughts. It seems that although the individual's moral behavior is defined by both affect and cognitive aspects, Kohlberg laid emphasis on the person's cognitive capacity to make moral judgments, which is defined as "the capacity to make decisions and judgments which are moral (i.e., based on internal principles) and to act in accordance with such judgments" [8, p. 425].

Earlier, Piaget in his original theory of cognitive development [9] stressed the importance of peer interaction in child's intellectual and moral growth. It was later expanded by Kohlberg [6] in his concept of sequential stages of moral development model. This expansion was facilitated by broader social interaction and related even more to parallel cognitive development. Nonetheless, there have been many critical revisions of that theory up to date. For example, Gilligan [10] pointed out some shortages and limitations of Kohlberg's theory of cognitive (moral) development, indicating its masculine perspective. Meanwhile, Snarey [11] questioned the universality of the theory in terms of cultural application. Nevertheless, new attempts to frame a more relevant model of moral development, based on the latest research findings, have been undertaken since. The newest approach, the Social Information Processing-Moral Decision-Making (SIP-MDM) framework, was provided by Garrigan et al. [12]. It incorporates the social information processing theory based on the social neuroscience perspective. This model is worth mentioning here as it connected the former understanding of one's moral developmental processes with more advanced, neuroscience-based methods. In that model, the authors [12] indicated a few circumstances that may help in understanding the complexity of the moral development process. These circumstances include: how real-time decisions are made and mediated by social and contextual factors; what cognitive processes are required to enable moral maturing; how these processes develop over time in relation to factual behaviors. Recent research in moral psychology combines the decision-making process on moral dilemmas with human moral cognition and emotions. Studies by Greene [13] and Moll and Schulkin [14] provide evidence, using neuroimaging techniques, about the abovementioned associations. According to Rest [15], moral development typically increases until early adulthood. At that stage, it may reach a plateau. This was lately confirmed in a study by Martins, Santos, and Duarte [16] who found

such trend in a longitudinal study among nursing students in Portugal.

Previous empirical findings [17, 18] indicate the following:

a) Discussing moral dilemmas is not only an appropriate method for supporting one's morality, but it is also the most effective, particularly when discussing socio-moral dilemmas among peers [19].

b) Principled moral reasoning in undergraduate elementary and secondary education students can be enhanced through deliberate educational interventions. These interventions should include teaching moral theories and engaging in dilemma discussions [20].

Evidence [21] points out to the conclusion that group discussions on moral dilemmas (a situation in which a difficult choice has to be made between two or more equally undesirable options or conflicting moral principles) can be an effective pedagogical strategy. Although, as so far, it has been limited to general analyses of its impact on moral judgement, without going into details whether it was due more to the intrapersonal contemplation or the interpersonal discussion. This kind of instructional technique has been considered as one of the most effective in professional ethics education [21], and also in health education [22]. It focuses on the peer-interaction process that allows a participant to be faced with potentially dilemmatic situations, incompatible, but supported by competing moral reasons presenting broader picture of a situation [23]. It is worth mentioning that Thorne and Hartwick [24] found in their study on a group of auditors that contentious discussion with peers may provide vital feedback and signals on what is important and acceptable for others. This process facilitates the transformation of one's own moral reasoning.

In the context of China, Zhang [25] conducted an intervention study focusing on students majoring in economics to investigate the impact of a dilemma story-based approach on the enhancement of moral competence levels. The results revealed a statistically significant positive effect, indicating a subtle, yet discernible increase in moral competence within the group exposed to the dilemma story intervention. However, certain factors were recognized as potential contributors to the modest effect size. These factors include the relatively brief duration of each session (60 minutes) over the course of seven sessions and the limited opportunity for all group participants to express their views. For the assessment of participants' moral competence, this study employed the widely recognized Moral Judgment Test (MJT) developed by Lind [26]. Notably, the average score of moral competence, represented by the C-index, among Chinese economic students was found to hover around 19 points, providing a quantitative measure of their moral decision-

making abilities. This study's findings shed light on the efficacy of the dilemma story-based intervention as a method to enhance moral competence in the specific context of economics students in China. However, the influence of session duration and participant involvement warrants further exploration to optimize the intervention's efficacy and long-term impact.

The methodology of introducing the method of moral dilemma discussion is well-founded in the philosophy of education and in psychological and educational research. Its effects have been thoroughly analyzed in well-designed studies [17, 27, 28]. From the beginning, the dilemma discussion has shown to have a substantial effect size ($r = 0.40$); hardly ever were negative effects reported. It has shown to be highly effective in various age-groups, from ten-year-olds to adults. Method was tested and proven its effectiveness in various scientific fields [17]. But there have been no studies regarding how the method of the moral dilemma discussion affects the moral competence of the athletes.

Furthermore, in previous studies, it was found that both the years of sport experience as well as the level of competition in which the athletes are involved affect their moral judgement and behavior [29, 30, 31]. More specifically, it was found that:

a) as the years of involvement in sports increase, aggressive behavior becomes more legitimate and acceptable, especially when the participants are males [29];

b) the length of participation in sport is negatively correlated with sportspersonship behavior and moral competence [30, 31, 32];

c) professional players, in relation to amateurs, tend to display fewer positive character traits and place less emphasis on playing fairly. Additionally, athletes who participate at higher levels of sport competition (leagues) also tend to have lower ratios of moral competence [31, 32, 33].

The purpose of the present study was: a) to explore the effectiveness of a daily intervention with dilemma discussion in supporting athlete's moral competence, and b) to examine whether the level of sport competition (e.g., professional vs amateur), and the overall years of sport experience are significant factors for athletes' moral competence levels.

Materials and Methods

Participants

The research sample consisted of 199 amateur athletes, with 39.7% of them being female, and 153 professional athletes, with 41.8% of them being female. Additionally, 26 respondents who declared no participation in sports for a duration qualifying them as either amateur or professional athletes were initially part of the study. However,

they were subsequently excluded from the research. This examination took place in the academic year 2022/2023. All the respondents were students at Poznan University School of Physical Education (faculties of Physical Education and Sport major). The mean age of male and female respondents were respectively 20.4 ± 1.54 and 20.5 ± 1.78 years. The average training experience for amateurs was 6.1 ± 3.31 years, while for professional athletes it was 9.1 ± 3.57 years.

Research Design

The research study was conducted by the diagnostic survey method and was based on a quasi-experimental design with two groups – experimental (EG) and control (CG). The experiment was divided into two phases, and for testing a validated structured survey questionnaire was used. In the study Lind's Moral Judgement Test (MJT) was employed [34] to measure the level of general moral competence. One group, CG, had been asked to fill up the Lind's MJT – in 30 minutes session without any additional information or explanations to the test. This was followed directly by the second phase, the Moral Judgement Test in Physical Education (MJT-PE) [35] administered immediately afterwards (and took 15 minutes). Both phases were carried out in a one single 45 minutes session. The other group (EG), had to fill up the Lind's MJT with any additional information in 30 minutes (likewise the CG). The difference was how the second phase – the MJT-PE – was administered among students from EG. The respondents were given extended time (extra 60 minutes) which was spend on discussion with the whole-group scenario on each of the items of the second test (e.g., obeying coach/referee's decision, winning at all costs, fouling vs fair play, respect to the opponents and their health, aggressive behaviors in sport, sportsmanship vs unsportsmanship-like behaviors, rule violation, winners should not be judged). There were around 3 minutes devoted to discussion of each of the aforementioned MJT-PE test items through a group discussion, but without any final concluding statements (which took approximately 45 minutes). Discussion was moderated by a professionally prepared teacher, who conducted the session, but without making any right/wrong judgement suggestions. Finally, each responder of EG had about 15 minutes to fill up the MJT-PE.

Measures

Three self-report questionnaires were used to assess (a) demographic characteristics, (b) moral competence (in everyday life situations), and (c) moral judgment in physical education.

Demographic questionnaire

The demographic questionnaire regarded age, gender, level of sport participation, and years of

sport experience was additionally employed in this study. To recognize the modes of involvement in sports respondents were asked to indicate either no involvement, amateur, or professional practice. By professional involvement in sport it was meant engagement in regular, federated system of competitions organized by sport federations, while amateur practice meant taking part in sports as a hobby, for pleasure [36]. This was followed by a question concerning number of years of involvement and the type of specific sport they practiced.

Moral judgment (MJT)

In the study, Lind's Moral Judgement Test [26] in its validated Polish form [36] was utilized to assess the participants' level of moral competence. Respondents were presented with two moral dilemmas and asked to indicate their agreement or disagreement with the provided statements. The first dilemma depicted a scenario of unethical behavior at the workplace, wherein factory workers, suspecting that managers were illicitly using confidential information against them, resorted to breaking into the administrative office. The second dilemma revolved around a medical scenario, where a woman suffering from cancer and experiencing severe pain pleaded with her doctor to administer an overdose of morphine.

According to the research protocol with MJT [34] students responded on a 9-point Likert scale, where the points ranged from -4 (totally disagree) to +4 (totally agree). Each of the two moral dilemmas had 12 statements (6 in favour and 6 against the behavior described), with all statements corresponding to the stages of moral development (the 6 stages of Kohlbergian theoretical model [6]). Final score, called the C-index, was summarized by an algorithm as described by Lind [34] with scores ranging from 1 to 100 points, and it reflects individual's ability to evaluate a given argument basing on their personal moral quality. It measures the degree to which a responder allows their own judgements to be affected by other moral concerns and potentially influential and mediating factors, rather than personal principles, opinions, and moral constructions. The smaller the C-index score the lower the level of moral competency in a person is. Scores below 19 are considered to be low and very low, scores above 19 to 29 are considered medium, and scores above 29 are acclaimed for high and very high levels of moral competence.

Moral judgment in Physical Education (MJT-PE)

To assess students' moral competence in physical education/sport settings the Moral Judgement in Physical Education Test (MJT-PE) [35] has been implemented. This tool has been conceived as a supplement to the original Lind's test [34] based on Kohlberg's structural-developmental theory [6] for morality and on the dual aspect theory of

moral behavior. In the MJT-PE, the responders meet one moral dilemma concerning story based on the certain situation from the sports field. In short, the story-dilemma concerns athletes who participate in sport competition during a school championship tournament and act inappropriately during the last minutes of a final game, driven solely by their desire to win. This particular situation was chosen due to its relatively common occurrence in sports events.

Likewise, akin to the aforementioned Lind's test scenario it is expected from everyone to choose on a 9-point Likert-type scale (from -4 – totally disagree to +4 totally agree) how much they agree with a 12 items sequence in favour of or against the described behavior in depicted school championship situation. Each item corresponds to one of the 6 Kohlbergian stages of moral development [6]. In the context of the students' behavior, the items were divided, with 6 arguments in favor and 6 against. One illustrative item aligned with Kohlberg's developmental stage 1 in favor of the players' behavior reads as follows: The players are justified in their actions, "because if they would lose the game probably they would be reprimanded by their coach". Conversely, an example of an item corresponding to stage 4, opposing the students' behavior, it is stated as: "The students' actions are deemed inappropriate, because committing intentional fouls is against the rules of the game".

The moral dimensions addressed in the items encompass issues of trust, adherence to rules and regulations, fair play, and the spirit of healthy competition. Through a thoughtful inclusion of these diverse moral perspectives, our study endeavors to capture a comprehensive view of the ethical dilemmas surrounding the students' behavior in the context of sports competition.

Validation process reinforced the robustness and reliability of the proposed model, thus lending credibility to its utility as a valuable tool for assessing moral development in the context of sport/physical education.

The index of moral competence in physical education (C-PE-index) is calculated in the same manner as the Competence Index (C-index) from the original test, all to multivariate analysis of variance. The test contains only one dilemma, but the way the C-PE-index is computed has no side effect on the interpretation of the final scores.

Statistical Analysis

First, we checked with a two-way ANOVA for some interaction effects between variables, then due to the normal distribution of data the comparison analyses between C-index scores were carried out with the use of Student's t-test. First the groups (EG and CG) have been compared on the mean C-index and C-PE-index scores, and this was followed by more detailed analyses for potential differences

within the group of amateurs (EG vs CG) and within the professionals sample (EG and CG). This was also done with the use of Student's t-test with p value set at < 0.05. All statistical analyses were completed using the STATISTICA software package.

Ethics

The study was conducted in strict accordance with the guidelines set forth in the Declaration of Helsinki (2013). The research protocol received ethical approval from the Local Bioethics Committee of the University of Medical Sciences, Poznań (decision no. 893/18). Prior to participating in the study, all respondents were provided with detailed information regarding the study's objectives, and they were assured of the voluntary nature of their involvement. Given that all participants were above the age of 16, consent was obtained directly from each individual.

Additionally, participants were provided with explicit information regarding the confidential and anonymous handling of data collection and storage. They were reassured that their individual contributions would be kept unidentifiable during all stages of data processing, encompassing publications and reports.

Results

A two-way ANOVA analyses showed no interaction effects (nor main effects) in the whole overall group between years of sports practice and modes of training (amateur vs professional) neither in case of MJT C-index with $F(3,344)=1.4967$, $p=.2152$, nor in MJT-PE C-PE-index with $F(3,343)=.2620$, $p=.8527$. Also analyses for potential interactions between years of training group differences (EG vs CG) showed no effects with $F(5,340)=1.8553$, $p=.1016$ for MJT C- index. While in regard of MJT-PE C-PE-index it was approaching statistical significance for the interaction effect with $F(5,339)=2.0471$, $p=.0716$ with main effect statistically significant at $p=0.001$ for the differences between EG and CG.

Then, the results were analysed for the potential differences in the mean C-index scores between "discussion" and "non-discussion" groups (EG vs. CG) (Table 1) to assess the extent of disparity in the declared answers, reflecting the level of moral competence.

It can be stated that the level of moral competency between the groups (EG – "discussion" vs CG – "non-discussion" one) was comparable since there was not statistically significance difference in terms of C-index scores, and the scores fell within the range of "low level of general moral competency", as they have been below the 19 points at C-index scores (Table 1). However, MJP-PE test scores comparison indicated there was a significant statistical difference in sport-specific moral competency levels in favour of "discussion group".

Further analysis concerned checking for potential differences between modes of involvement in sport practice (Table 2) and "discussion" (EG) and "non-discussion" (CG) groups. In terms of the levels of general moral competency (MJT C-index) there were no statistically significant differences neither within the groups of amateurs (EG vs CG) nor within the groups of professionals (EG vs CG). The only statistically valid difference was found in case of comparison of groups of amateurs in MJT-PE C-index scores. It was the amateurs from "discussion" group (EG) who scored higher than their peers from CG. Among professionals there was no indication of statistical significance despite the difference also in favour of athletes from discussion EG.

Discussion

The need to support the social, moral and democratic development of young people necessitates the search for effective and proven methods of influence through which education authorities could create stimulating educational experiences of moral and personal development and self-awareness. The best-known way to foster moral and democratic competencies is to provide proper

Table 1. Comparison of C-index scores between the groups.

Index	Discussion group (EG) N =178	Non-discussion group (CG) N =174	p-Value
C-index	15.2±10.6	14.7±8.6	0.6793
C-PE index	35.5±22.6	27.3±20.7	0.0008

Table 2. Comparison of C-index scores between the amateurs and between the professionals from experimental and control groups.

Index	Amateur (EG) N =97	Amateur (CG) N =102	p-Value	Professional (EG) N =81	Professional (CG) N =72	p-Value
C-index	16.1±11.0	14.9±9.4	0.4259	14.2±10.1	14.6±7.2	0.7653
C-PE index	37.3±22.3	27.4±22.5	0.0022	33.4±23.2	28.1±18.3	0.1239

learning opportunities in which s/he feels safe to freely express his/her moral ideals and arguments and in which s/he also respects others and their right of opinion, like in the method of the moral dilemma discussion [38].

The present study aimed to explore whether dilemma discussion but also the level of competition and the years of sport training (experience) could affect players' morality. The findings of this study not only corroborate, but also expand upon existing knowledge regarding moral development in the context of sports.

In our study there were no major interaction effects found between years of sport practice and levels of general moral competence (measured by MJT) in an overall group of examined students. However, in terms of the sport-specific domain of moral competence (measured by MTJ-PE), the ANOVA analysis showed a tendency for statistical significance in the interaction effect on the levels of moral competence. This interaction effect was observed in the C-index scores for sport-related dilemmas, with the main effect differentiating the experimental and control groups.

More specifically, concerning the effect of the intervention program with dilemma and discussion method, the findings indicated that experimental (discussion) group scored significantly higher on MJT-PE C-index than their control (non-discussion) group peers. And the difference could be accounted to the amateur sports students from the experimental group, who presented significantly higher levels of moral competency than their amateur counterparts from control group. A comparison of the MJT-PE scores within the professional groups of sports students did not indicate statistically valid differences, despite the higher on average score gained by the students from experimental group than for the professional sports students from control (non-discussion) group. This would imply, according to Kohlberg's theory, a higher level in terms of moral competence for both examined groups.

A study by Patil et al. [39] suggests that in hypothetical moral dilemmas moral decision-making process might be susceptible to contextual saliency of the presentation of these dilemmas. This was investigated on participants being exposed to dilemmas in virtual reality, which they perceived more emotionally arousing than the ones provided in a form of a description in text. In an earlier meta-analysis review by Schlaefli, Rest and Thoma [18] concerning various age and intervention method groups (including group discussion of moral dilemmas, psychological development programs, humanities courses) it was found that the dilemma discussion and psychological development programs produce modest overall effect size (with optimal treatments from 3 to 12 weeks, more

effective on 24 years and older adults than younger respondents). On the other hand, Thorne, Massey, and Jones [40] indicated that group consensus might be achieved through conformity. This occurs when the minority does not accept the dominant view but accedes to the majority as a result of group discussion. Additionally, consensus can be achieved through innovation (when the majority accedes to the minority's view) or normalization (when there is reciprocal influence). The findings suggest that prescriptive discussion on a moral dilemma encourages the group to be looking for the best response (solution) to that dilemma, if it is represented by the dominating majority.

It was also found [40] that deliberative discussion may encourage the elimination of multiple viewpoints. It clearly shows how the social influence process may affect individuals' moral reasoning, but understanding what mediate the effects requires more studies. Lezley et al. [41] proved group debates to be the effective in terms of ethical issues among pharmacy students, helping them develop skills such as teamwork, peer assessment, communication, and critical evaluation. On the other hand, Friedrich et al. [42] report on the studies indicating a decrease of moral competence levels throughout medical school study time. The intervention implemented by Friedrich et al. [42] employed two different teaching methods: principle-based (maintaining balance between normative perspectives) and theory-based (providing normative perspective) case discussions. The study did not find statistically significant superiority in either of the two methods. However, the effect size suggested that principle-based case discussions may be more effective in improving moral competency. There is general consensus about the importance of ethics education for medical students, given that they encounter moral dilemmas daily in their professional work. However, there is a lack of agreement among medical universities on how to improve the skills that will enable future medical doctors to analyze and solve potential moral conflicts they may encounter. Additionally, there is uncertainty about how to incorporate these goals into their curriculum during their studies [43]. So far, research in medical moral problems indicate that some forms of educational methods (e.g., small groups and case discussions in a course lasting at least 20 hours, guided discussion and learner/problem solving methods) are more effective than others [43, 44, 45]. It is then imperative to underscore the critical significance of validating and promoting ethics education in the realm of sports.

Sport, as one of the most important and popular elements of contemporary culture, can be very helpful in character development and value learning [46]. However, the competitive nature of sport rivalry

often brings unwanted, unethical behaviors into practice due to the pressure on athletes to win [47, 48]. Professionalization and commercialization of sports emphasize winning over participation. This combination of sportsmanship and competitiveness has created a conflict between values and functionality [49]. Thus, a moral dilemma arises related to the desire and need to win against the importance of participation and following the rules of the game, a contest between fairness and merit [50].

Incidents of violence on a sport field, hate, cheating, doping, and examples of bribery in sport-related context are often broadly broadcast and reach children and youth via numerous social media platforms [51]. Ring and Kavussanu [52] found that cheating in sport was associated with motivation with goals and suggested that interventions promoting fair play could focus on influencing the goals of the young sport contenders. Yet, Šukys [53] in his research revealed that there was a strong justification pattern for cheating among male athletes who tend more often to manipulate the rules of the games than females. However the sport students with less years of sport practice tended to justify deceptive actions linked to the manipulation of the results in sports more, but less justify other cheating forms in context of sports.

Youth attracted to sports is especially vulnerable group, not yet fully developed in terms of moral competency and susceptible to various influential factors. Unfortunately, youth sport programs are not structured to foster the development of skills in dealing with moral dilemmas in sport. Additionally, they provide even less support for helping young people transfer the positive values of sport into other real and daily life domains. In earlier research on sport adolescents aged 16-18 years [54] it was found that the level of general moral competency was low concerning 71.6% female, 76.8% male. At the same time the level of competency was not correlated with years of training nor with the mode of involvement (amateur/professional) in this age group. The results of correlation analysis with type of sports (individual vs team) did not provide consistent results as well. Earlier Proios, Doganis and Athanailidis [55] in their study on the same age group of participants also showed no significant differences in development of moral reasoning across types of sports, forms of participation and years of experience in sport. Apparently, Cummings et al. [20] showed in this age-group of youth that 5 weeks of direct instruction methods and participation in moral dilemma discussions, even via online participation, can bring positive change in principled moral reasoning. At the same time, it was found that college students do not grow in their moral development and reasoning from freshman to senior year. Studies conducted

on students pursuing physical education and sport major studies, aged between 19 and 23 years, reveal concerning findings regarding the preparedness of future physical education teachers and sport coaches in handling sport-related moral dilemmas. Specifically, 70% of the examined respondents exhibited a low level of moral competency [56]. Consequently, there is a pressing need for research endeavours that investigate the efficacy of diverse methods aimed at fostering moral development within the sports context, especially among further physical education and sport specialists.

Although the research concerned testing a novel method of group discussion influence on young sportspersons some limitations of the study need to be acknowledged. The sample size is reasonable and similar in two examined groups (with random allocation of the participants), but in the future studies this could be expanded to a bigger size. Also, the quasi-experimental nature of the study design does not allow for more generic conclusions. Perhaps longer time duration of the influence (more weeks and more discussion sessions) could be more effective, and would allow for comparison of pre-test/post-test levels, which was not possible, nor sensible with the study design presented in the paper.

Conclusions

In our study we have investigated the effectiveness of dilemma discussion method in supporting athletes' moral competence, as well as examined whether the level of sport competition (e.g., professional vs amateur) and overall years of sport experience are significant factors for athletes' moral competence levels.

It was proved that the dilemma discussion method has a significant positive effect on the level of athletes' moral competence. The findings showed that there was a significant statistical difference in the levels of moral competence specific to sports dilemmas in favor of the experimental "discussion group". At the same time, it should be noted that the effectiveness of the method was higher for amateur athletes than for professional ones. This means that in our study professional athletes were less sensitive to the effects of this method. Such a result suggests that professional sports may lead to the formation of stronger attitudes in terms of immoral behavior, and to achieve a positive effect on the formation of moral competences of professional athletes, the influence of the method should be more long-term and thorough.

The results of our study should become a strong argument for conducting an analysis of the system of training athletes by coaches and education governing bodies, including councils of the sports education system. The dilemma discussion method has proven its effectiveness in its use among young

athletes and deserves careful attention from the side of physical education and sports specialists. After all, the goal of the training process should be not only to prepare the athlete to achieve the highest results in sports, but above all to educate a conscious, highly moral citizen of society.

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Conflict of interest

The authors declare that there is no conflict of interest in writing this article.

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