STUDIA UNIVERSITATIS
BABEŞ-BOLYAI

EDUCATIO ARTIS GYMNASTICAE

4/2012

YEAR **(LVII) 2012**
MONTH **DECEMBER**
ISSUE **4**

S T U D I A

UNIVERSITATIS BABEŞ–BOLYAI

EDUCATIO ARTIS GYMNASTICAE

4

Desktop Editing Office: 51ST B.P. Hasdeu, Cluj-Napoca, Romania, Phone + 40 264-40.53.52

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 3 - 10
(RECOMMENDED CITATION)

AMELIORER LES HABILITEES SOCIALES DES ELEVES EN UTILISANT LES LESSONS D'EDUCATION PHYSIQUE

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SOMMAIRE. Cet article adresse le thème de développement personnel et social par les activités d'éducation physique et sport. Le dessein devrait présenter une solution possible au problème d'améliorer de capacité des élèves de comporter dans une façon responsable. Il a été commencé de la supposition que la responsabilité est une qualité personnelle qui est appris et donc peut être enseigné. L'approche est basée sur la méthode d'apprentissage social de Goldstein (1981) et est différent de que qu'a été proposé jusqu'ici. Il est, dans les certaines limites, similaire aux façon les concepts sont enseigné dans les écoles. Il est surtout basé sur expliquer, miser en cause, démontrer, raisonner, et refléter. Il pourrait être exécuté comme une activité de groupe. Son implémentation présuppose l'achèvement d'un feuilleton d'étapes qui incluent l'apprentissage de concept, l'apprentissage de discrimination perceptuelle, l'apprentissage de principe et l'apprentissage de problème.

Mots–clés: *éducation physique et sport, habilitées sociales, apprentissage, responsabilité*

REZUMAT. ***Ameliorarea abilităţilor sociale ale elevilor prin lecţia de educaţie fizică.*** Acest articol abordează tema dezvoltării personale şi sociale prin intermediul activităţilor de educaţie fizică şi sport. Acesta ar trebui să prezinte o soluţie posibilă la problema îmbunătăţirii capacităţii elevilor de a se comporta într-un mod responsabil. A pornit de la presupunerea că responsabilitatea este o calitate personală care se învaţă şi deci poate fi predată. Abordarea se bazează pe metoda învăţării sociale a lui Goldstein (1981) şi este diferită de ceea ce s-a propus până în prezent. Până la un anumit punct este asemănătoare cu modul în care se predau conceptele în şcoală. Se bazează mai ales pe explicare, problematizare, demonstraţie, raţionament şi reflecţie. Ar putea fi executată ca o activitate de grup. Implementarea sa implică parcurgerea unor etape care includ învăţarea conceptului, învăţarea discriminării perceptuale, învăţarea principiului si învăţarea problemei.

Cuvinte cheie: *educaţie fizică şi sport, abilităţi sociale, învăţare, responsabilitate*

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Améliorent les habilitées sociales des élèves

Le développement de qualités tel que la coopération, l'honnêteté, la communication, l'initiative ou la responsabilité fait partie du procès complexe de maturation. Agir responsable envers accomplir les tâches différentes est une qualité que notre société prévoit de ses membres. Le émergence de la nouvelle société d'information, que nous observons au commencement du troisième millénaire, montre que agir dans une façon responsable devient vital au nouvel environnement du travaille. La vie et le sort de milliers d'individus sont souvent dans la main d'une personne ordinaire. La responsabilité, comme une qualité personnelle ne peut pas être prévue des dirigeants seulement mais des gens ordinaires aussi. Manifester le niveau supérieur de responsabilité dans empoigner une assortiment des problèmes dans l'activité quotidienne est cruciale pour beaucoup d'endroits de travail. La responsabilité entoure telles qualités tel que concernément, raisonnablement, manifester une attitude active qui détermine l'engagement par-dessus et au delà de l'attente formelle, la fiabilité et la loyauté. La responsabilité est aussi l'habilité de percevoir les problèmes du groupe, les règles qui conforment, les codes de lois et morale du group.

Pourquoi améliorer les techniques de coopération

Le problème est que toujours beaucoup de gens ont besoin à se comporte responsable dans leur environnement du travaille. Les jeunes gens ne sont pas souvent capables de comprendre les problèmes de la vie quotidienne et ne sont pas capable de comprendre la nécessité d'obéir de normes et les règles. Pas peu de jeunes gens manifeste la tendance à négliger des normes des groupes ou de ne reconnaître pas l'importance de la loyauté. Dans la nouvelle société d'information, de plus en plus les individus sont prévus à manifester une attitude entreprenante active qui suggère en premier lieu la responsabilité. La fiabilité dans une économie globale est une qualité cruciale pour l'individu et pour la société. Beaucoup de sujets et beaucoup de cours q'on enseigne dans les écoles ou les universités souligne le besoin à encourager le développement des qualités tel que travailler en équipe, coopérer, travailler responsable et autres. Il y a petite évidence en suggèrent que beaucoup est pratiquement fait à faciliter cette façon de travailler. Il semble que dans l'école ils ne sont pas des sujets viser le développement de ces qualités avant mentionnes. Il y a cependant, beaucoup d'institutions fournissant d'activités éducatives en plein air qui utilise des activités spécifiques à améliorer la responsabilité de jeunes hommes mais leur impact est limité comme le numéro de participants est limité (Humberstone, 1992).

Améliorer les habilitées sociales des élèves en utilisant les lésons d'éducation physique

L'éducation est exigée à encourager les habilites sociales, enseigner des valeurs morales, former le caractère, former la personnalité et améliorer la connaissance. Les facteurs éducatifs dans la société agissent dans une façon corroborative; la

famille, l'école, la télévision, les organisations de jeunesse, l'église et les autres, tous influence d'une certaine façon le développement social du jeunes gens. Dans mon d'opinion l'école devrait jouer un rôle plus importante dans l'évolution sociale du jeunes gens. La mini-société qui est l'école constitue un environnement dans lequel les élèves peuvent apprendre et peuvent essayer une portée large de comportements sociaux relatés au rapport de pouvoir, les rôles, la pression de pair, les règles sociales, la coopération, le conflit pour résoudre, faire de décision, la direction et ainsi de suite. L'éducation physique est l'un des sujets qui pourrait substantiellement contribuer vers le développement personnel et social des élèves. L'activité dans le gym est en soi sociale et qualitativement différente de que qu'arrive dans la salle de classe. Parce que le mouvement est le focus, beaucoup de formalités de salle de classe sont suspendu. Dans les limites spécifiées, le comportement qui est inacceptable ailleurs est permis, est même encouragé. Par exemple, toucher et les autres formes de contact de corps, vocalisation bruyant et souvent chaotique et de rencontres spontanées avec les autres, sont toute une partie intégrale de beaucoup d'activités d'éducation physiques. Une littérature vaste montre l'intérêt et l'inquiétude croissants pour utiliser l'éducation physique pour améliorer la socialisation de jeunes gens. La tendance au sol interventions éducatives dans l'éducation physique sur les théories de la psychologie, la sociologie ou l'éthique est résulté dans l'emploi d'une portée large de concepts. Une partie du plus utilisé est: 'l'éducation de sociomoral' (Miller, Bredemeier et les Protections, 1997), 'le développement de sociomoral' (Solomon, Watson, Battistich, Schaps and Delucchi, 1990), 'la croissance de sociomoral' (Solomon, 1995), 'l'éducation sociale' (Underwood et Williams, 1991), 'techniques sociales' (Mc. Hugh, 1995), la 'croissance morale' (Bredemeier, Weis, Shields et Shewchuk, 1986), 'le développement moral' (Gibbons, Ebbeck et Weiss, 1995), 'le développement de valeur' (Hellison et Georgiadis, 1992), 'le développement de caractère' (Sage, 1998), 'l'éducation de caractère' (Fisher, 1998) et 'le développement d' affectivité' (Cutforth et Parker, 1996).

Comment la responsabilité peut être appris par les leçons d'éducation physique

Je commence de la supposition que la qualité à agir dans une façon responsable est un procès social qui est appris et donc peut être enseigné. L'étendue à quels les jeunes gens sont impliquées dans les activités influence leur capacité d'agir dans l'avenir. Impliquer les jeunes gens dans les activités suggérer la responsabilité est important mais également important est qu'ils perçoivent la participation comme utile et agréable. La façon ils perçoivent la situation détermine la probabilité d'adopter un comportement responsable dans un tâche résoudre situation. Je crois qu'il devrait être la décision de l'individu si à adopter le certain comportement dans les circonstances différentes. Que l'éducateur devrait faire est d'encourager de jeunes gens à agir responsable et les montrer les profits. L'approche que je propose aux enseignants par

cet article est basée sur la méthode d'apprentissage social de Goldstein (1981) et est différent de ce qu'a été proposé jusqu'ici. J'ai choisi à utiliser ce modèle pour un nombre de raisons: premièrement, cette approche est, dans certaines limites, similaire aux façon les concepts sont enseigné dans l'école. Il est surtout basé sur expliquer, démontrer, raisonner, et réfléchir. Secondement, il peut être exécuté comme une activité de groupe. En fait la présence du groupe est essentielle. Troisième, l'implémentation présupposes l'achèvement d'un feuilleton d'étapes, qui peut être identifié facilement par l'enseignant. Quatrième, les résultats de son implémentation peuvent être évalués précisément et n'exigent pas d'examens psychologique sophistiqués.

Quelque suggestion sur l'enseignement de responsabilité sociale par les leçons d'éducation physique

1. *L'apprentissage de concept est la première étape dans l'apprentissage de responsabilité.* Les enseignants peuvent demander aux élèves à exprimer leurs opinions en ce qui concerne la responsabilité sociale, écouter soigneusement et alors compléter. La responsabilité sociale est une capacité de la personne à accomplir des activités par-dessus et au delà de son autorité formelle. Pour améliorer les connaissances des élèves, l'enseignant peut faire remarquer quelques caractères indicateurs.

- Etre responsable signifie a s'intéresser des problèmes du groupe.
- Agissant responsable c'est comprenais les problèmes du groupe et est travailler a les résoudre.
- La responsabilité signifie à obéir les codes de lois et morale.
- La responsabilité demande une attitude active qui détermine l'engagement par-dessus et au delà de l'attente formelle.
- La responsabilité signifie aussi fiabilité, loyauté et sincérité. La partie d'introduction de leçons peut être utilisée à discuter et définir le terme. Les enseignants peuvent encourager les élèves à pense sur les sens des mots et discute la responsabilité. Le but de cette étape c'est d'apporter à leur attention le concept et spécifie son sens. La capacité de discuter de la responsabilité et sa signifiance indique le bon niveau d'apprentissage de concept.

2. *L'apprentissage de discrimination perceptuelle de responsabilité est l'étape prochaine et devrait être surtout convergé sur améliorer les fonctions perceptuelles de connaissance et l'attention.* Ces fonctions devraient être développées à rend capable l'élève a devenir plus sensible et critique aux comportements responsables. Ceci signifie d'aide les élèves a distinguer des conduites responsables de celles irresponsable ou moins responsable.

L'activité d'enseignants devrait inclure:

- Encourager les élèves observer et percevoir d'activités de groupe en focalisant l'attention vers les actions, les gestes et les mots qui ont une certaine signification pour la responsabilité. Observer comment les règles sont suivies, comment les codes

moraux sont respectes, comment l'inquiétude pour les pairs est manifestée pendant l'activité physique pourrait améliorer la perception de comportements responsables.

- Diriger les pensées des élèves a découvrir les sens d'actions des autres élèves et les discutent par rapport à la responsabilité. La signification de comportements pendant les leçons d'éducation physiques pourrait rester indecouvert par les élèves. Pour aider les élèves faire sens de leurs comportement pendant l'activités l'enseignant peut révéler les sens de certaines activités. Ceci pourrait être fait pendant l'activité ou poste activité en soulignant, les comportements significatifs. L'enseignant pourrait demander aux élèves se rappèlent certains comportements et découvrent leur signification par rapport à la responsabilité. Leurs pensées peut être diriges en les questionnant: sont ils intéressés des problèmes de l'équipe? Est-ce qu'ils ont compris les problèmes de l'équipe? Est-ce que leurs actions ont été gouvernées par les règles et les morales? Est-ce que quelqu'un est devenu impliqué dans les problèmes de l'équipe plus que tâches du sien/son?
- Encourager les élèves assumant des responsabilités dans le groupe. Les jeux mais les activités individuels sont aussi de bonnes occasions dans lequel les élèves pourraient être exigées à accomplir volontairement des tâches différentes. Au commencement d'un feuilleton de leçons les enseignants annoncent quant plus de l'exécution techniques, la responsabilité sera évaluée. A encourager des élèves prendre des responsabilités par-dessus d'espérance normaux les enseignants devraient récompenser ceux-là qui ont travaillé responsable. La récompense pourrait étendre de clignoter d'oeil à taper d'épaule, louer devant le groupe et offre pouvoir de décision in sein de la classe pendant une certaine activité.
- Analyser l'activité des élèves et faire exprimer leurs sentiments en ce qui concerne la façon dans lequel ils ont accompli leurs tâches. L'attention des élèves qui converge et les pensées sur les comportements pertinents pendant une assortiment des activités physiques embellissent leur capacité d'attention à discrimine le stimulus. L'autre comportement des gens est un stimulus complexe difficile à perçoit et dur à attache la signification exacte. En analysant comment les élèves règles respectées, comment ils ont réagi aux concasseurs de règle, comment les élèves essayés à comprend des problèmes des pairs, comment ils ont résolu des problèmes pendant les jeux ou la pièce, les élèves pourraient comprendre non seulement mieux quels moyens de responsabilité mais ils pourraient devenir capables de distinguer les comportements pertinents. En augmentant leur sensibilité aux comportements responsables, les élèves pourraient devenir plus responsables.

3. *L'apprentissage de principe est l'intégration de connaissance compétente, les valeurs et la conduite.* Le dessein d'apprentissage de principe devrait aider des élèves créent une harmonie et une réciprocité entre ce qu'ils savent, ce qu'ils estiment et comment ils agissent. L'apprentissage de principe devrait être un exercice dans la clarification de valeur et validation le développement en train de personnel. L'activité des enseignants pourrait consister dans:

➢ Demandant aux élèves aux questions de réponse tel que: est-ce qu'il? Est bon à suit des règles? Est-ce qu'il est bon au volontaire? Est-ce qu'il est important à suppose des tâches dans le groupe? Est-ce qu'il est bon à se préoccupe des pairs? Est-ce qu'il est bon est fiable? De cette façon les élèves pourraient être déterminés à comprend et définit leurs valeurs relatées à la responsabilité.

➢ Le débat qui encourage sur les sujets tel que confiance, la fiabilité, la loyauté et s'expliquer. Le débat devrait être mis à terre sur les exemples de groupes propre activité et réfère aux vraies situations et les vrais gens.

➢ Les élèves qui encouragent clarifient leurs vues et définissent leur position en ce qui concerne la responsabilité. Ceci pourrait être fait en exigeant des élèves au rappel leurs propres actions et les actions de pairs qui illustrent des comportements désirables et indésirables connectés avec les aspects spécifiques de responsabilité.

➢ Les activités qui organisent tel que les jeux, les concours, les races de relais, les poursuites dans lequel les élèves extérieures sont évaluées sur la sensibilité vers les pairs, la fiabilité, confiance, l'initiative, la loyauté et les autres. L'évaluation des pairs est importante à a fini sous le contrôle de l'enseignant comme les élèves pourraient apprendre à formule des opinions dans une façon constructive.

➢ Demandant aux élèves à formule une série de principes qu'ils veulent à suit. Les enseignants ne pourraient pas parler à chaque élève individuel et font attention à chaque comportement mais apporter significatifs fréquemment à l'attention d'élèves l'au-dessus des questions mentionnées.

4. *Résoudre de problème est l'étape prochaine dans l'apprentissage de responsabilité.* Il ne signifie pas l'accomplissement de solutions exactes aux problèmes conventionnels, mais plutôt le développement de comportements, qui sont utile dans un monde qui présente des problèmes qui exigent créateur de même que les solutions conventionnelles. Dans les termes génériques que l'enseignant aide le rôle implique la direction de l'expérience qui apprend à déplie dans un récompenser et la façon efficace qui examine des motifs des élèves, les valeurs, les énergies et les capacités. Dans les enseignants de termes spécifiques peut aider des élèves à développe une stratégie à résout leurs problèmes personnels qui sont causés par un manque de conscience, malentendu, par le manque de techniques ou par le manque d'expérience en ce qui concerne les comportements responsables.

➢ Les Enseignants peuvent aider premièrement des élèves identifient si les problèmes qu'ils rencontrent en réagissant réciproquement avec les pairs ou les enseignants ont une certaine connexion avec la responsabilité. Les élèves pourraient avoir des problèmes relatés à l'intégration dans un groupe, la confiance du groupe qui gagne, le soutien du groupe de perdre, le sentiment négligé par le groupe, la sympathie de groupe de perdre, souvent blâmé par les pairs, et les autres. Si les enseignants voient que la cause de tels problèmes réside dans le domaine de responsabilité, ils devraient faire remarquer le problème spécifique et aident l'individu le définit.

- Une fois le problème a été identifié des enseignants peuvent aider des élèves à évalue la situation et formule des solutions possibles. Ceci peut inclure des principes qui formulent pour le comportement d'avenir qui pourrait aider l'individu fait face au problème. Les Elèves peuvent être encouragés à formule des actions spécifiques dans les situations spécifiques. Par exemple celui peut proposer que l'élève suit les codes de règles du groupe et morale à évite la réjection du groupe pendant que joue des jeux.
- Pour les élèves d'aide suivent des enseignants de principes peuvent discuter des conséquences possibles de comportements spécifiques. En considérant les conséquences, les élèves peuvent choisir les actions qu'ils pensent sont la plupart des approprie à leurs buts.
- Egalement dans aider d'élèves résolvent des enseignants de problèmes peuvent encourager des solutions d'examen d'élèves dans la réalité. Par exemple un élève problèmes qui rencontrent avec le manque de soutien des pairs pendant les jeux peuvent essayer à suppose des tâches difficiles que le groupe doit atteindre. Les tâches en supposant difficiles dans un élève de groupe peuvent gagner le soutien et la sympathie.
- Egalement important aux solutions d'examen devrait évaluer les conséquences. Nous n'apprenons pas en faisant, nous apprenons en faisant et rendre compte que qu'est sorti de ce que nous avons fait. Les enseignants peuvent diriger des idées d'élèves mais ils devraient encourager aussi des élèves à évalue les issues de leurs propres actions.

Les questions ont relaté à l'implémentation de programme

La méthode esquissée voici un exemple d'une plus grande stratégie qui vise à l'embellissement de socialisation des élèves. Les effets de ce programme ont été évalués. Cinq groupes d'entre quatorze et dix-sept garçons (14-15 année vieille) a assisté des leçons dans lequel la méthode a été introduite par les leçons d'éducation physiques pendant une année scolaire. Il y avait aussi cinq contrôles, les groupes correspondants. Pour évaluer les résultats de l'implémentation de programme, diriger l'observation, les techniques de questionnaires et sociométrique ont été utilisées comme la partie d'une procédure de triangulation. Les résultats montrent que l'intervention peut être utilisée avec succès à améliore de la responsabilité des élèves. Le dessein de cet article devrait encourager des enseignants à l'usage ce programme. En choisissant à l'instrument il enseignants pourraient ajouter la valeur à leur travail, les élèves pourraient gagner la connaissance et les techniques qui peuvent aider les améliorent leurs vies. Les enseignants de PE enseigneront du quelque chose d'élèves que ne peuvent pas être ailleurs enseignés dans l'intérêt d'école et élèves pour l'activité physique pourrait être augmenté, et sans oublier les enseignants pourraient profiter en enseignant la responsabilité. La méthode peut être exécutée dans le programme de PE existant. L'apprentissage de responsabilité pourrait faire la partie de chaque leçon pendant une période de six mois. Au

commencement qui planifie est crucial et inclut proposer les objectifs éducatifs dans la relation proche avec PE les activités spécifiques. Le fonctionnement hors le projet a besoin de la responsabilité. L'expérience montre que vous ne pourriez pas réussir au commencement, vous apprendrez comme vous travaillez. Dans les étapes premières vous ferez ce que vous avez planifié, un peu plus tard vous ferez la situation quel spécifique exige. Le travail devient de plus en plus intéresser et de plus en plus récompenser. La coopération qui enseigne pendant vos leçons deviendra la routine que vous planifierez, agirez, observerez, écouterez.

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 11 - 21
(RECOMMENDED CITATION)

USING ARTISTIC GYMNASTICS FOR THE SOCIAL INCLUSION PROCESS OF CHILDREN COMING FROM SOCIALLY UNDER-PRIVILEGED BACKGROUNDS

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ABSTRACT. Sporting activities are the most efficient methods for a healthy life. Participation in organised and regular gymnastics activities can also bring major benefits to children from under-privileged social backgrounds. Thus, I endeavored to include some children from socially under-privileged categories into a process of basic sports training, specific to artistic gymnastics. We consider that activities specific to artistic gymnastics can be an efficient means of social inclusion of under-privileged children, trying to value the individual abilities of each of them. Methods and means specific to artistic gymnastics training were used. The motor skills assimilated were based on Special Olympics regulations, but also took into account the children's particularities. The trainings had at the beginning approximately 12 children of which 4 were selected, representing different social categories, to continue training and attend an international competition. The trainings reunited all the children into a unitary team, emotionally and functionally connected, the difference being noticed only in the individual abilities of each. The team managed a very good competition (with no major mistakes), obtaining meritable results. The children **did not** feel the social differences between them and they behaved as an unitary team, mobilizing, and showing behaviour of great common sense during a major sporting event.

Keywords: *social inclusion, gymnastics, voluntariness*

REZUMAT. ***Utilizarea mijloacelor gimnasticii artistice la procesul de incluziune socială a copiilor din categorii defavorizate social.*** Activităţile sportive sunt cele mai eficiente mijloace pentru o viaţă sănătoasă. Desfăşurarea activităţilor de gimnastică în mod organizat şi susţinut aduce beneficii majore şi copiilor din categorii defavorizate social. Astfel, am urmărit includerea unor copii din categorii defavorizate social într-un proces de antrenament sportiv unitar, specific gimnasticii artistice. Considerăm că activitatea specifică gimnasticii artistice poate fi un mijloc eficient de incluziune socială a copiilor defavorizaţi social, punând în valoare abilităţile proprii fiecăruia dintre ei. S-au utilizat metode şi mijloace de antrenament specifice gimnasticii artistice. Structurile motrice asimilate au avut la bază regulamentul Special Olympics, dar au ţinut cont şi de particularităţile copiilor. Antrenamentele au cuprins la început un număr de aproximativ 12 copii din care au fost selecţionaţi 4 copii, reprezentând diferite categorii sociale, pentru continuarea pregătirii şi deplasarea la concurs internaţional. Desfăşurarea antrenamentelor a reunit toţi cei 4 copii într-o echipă unitară, legată

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emoţional şi funcţional, diferenţa observându-se doar la nivelul abilităţilor individuale. Echipa realizată a desfăşurat un concurs foarte bun (fără greşeli majore), obţinând rezultate meritorii. Copiii nu au simţit diferenţele sociale dintre ei şi s-au comportat ca o echipă unitară, mobilizatoare, prezentând comportamente de mult bun simţ în cadrul unei manifestări sportive de mare anvergură.

Cuvinte cheie: *incluziune socială, gimnastică, voluntariat*

Introduction

Man through its nature, is a social and communicative human being. Group affiliation is a natural need, being a basic element of social inclusion. (Baba L., Borca C., Runceanu L., Vrasmaş E., 2009)

„Inclusive education is a continuous process of improving the scholastic institution, having as its purpose the exploitation of existing resources, especially human resources, in order to sustain the participation of all children from a community in the educational process". (MEN @ UNICEF, 1999, apud Guide for support teachers, 2005).

The process of **inclusive education** aims to offer all children the right to science, sport and education together, wherever possible, no matter their physical, intellectual or emotional state, or their ethnic, religious or cultural differences. (Creţu V., 2006)

Social inclusion is based on values, norms and helping attitudes, reciprocity and cooperation. People integrated into the inclusive system develop better communication and empathy, they are valued higher by society in comparison with excluded people who manifest powerful frustrations, they feel marginalized and they are resistent to the possibilities of change. (Lazăr S., 2008)

Inclusive education is based on certain principles:

- To form an educative environment where the students feel safe;
- To develop attitudes and tolerance behaviour skills;
- To develop intercultural and multicultural interactions;
- To form and consolidate a feeling of usefulness and responsibility;
- To establish the qualities of each student, which should be utilized, (Lazăr S., 2008)

Inclusive education targets access to education for all children and young people, especially the **under-privileged categories**. (UNICEF Romania, RENINCO ROM Association, 1999)

Among the categories integrated into inclusive education we have gypsy families, families with poor economical situations, and families with disabled children.

Gypsies are the second ethnic group from România, and they are present in all regions of the country. They present an image of arrogant people, who live beyond the usual norms, by specific rules and traditions, well defined inside the community.

They are present in everyday reality, being both a problem and a challenge at the same time. Lack of parent education, poverty, and group influence of affiliation make gypsy children leave school as early as the primary classes . Thus, they live in poverty, in very poor living conditions, with a high rate of crime, with fewer possibilites of education and a different standard of living. The adults lead a life that is compromised and lacking in perspective for their future children. (RENINCO Association România, 2000-2003)

The groups of families whose children have **mental and physical disabilities** are groups with special educational needs (CES). These groups require additional education, adapted to the particularities of each individual and their families (Moţet, D.,2001). Thus, a percentage of disabled children are integrated into the national educational system, with others attending special education schools. These children need to be accepted, supported, and encouraged, offering great satisfaction when progress is made, as a result of personalized didactic - educative actions. (Ungureanu, D., 2000)

Voluntariness

An important element of sporting activity is the presence of volunteers. These are pupils or university students who participate in the sporting activites voluntarily. The presence of volunteers is at the same time necessary and vital.

Voluntariness is the ”golden ring” which links the socially under- privileged children with the specialists who come to their aid. (Chera-Ferrario, B.)

The advantages which derive from the presence of volunteers are:

- they participate in the development of the exercises through permanent contact;
- they verbally advise and direct other children who can practice on their own;
- they communicate with them, about their life, about school and about free time;
- they help some of the children dress and undress;
- they become more understanding and they discover that they can be important, active and responsible (Vrasmaş, E., Nicolae S., Oprea V., Vrasmaş, T., 2005)

Sporting activities are the best means of social inclusion, gathering children from all social categories.

Exercise, an essential part of the life of contemporan man, forms and improves the human being, from a physical, moral, aesthetic and intellectual point of view, contributing to the promotion and consolidation of relationships between people, no matter the origin or social affiliation. (Vieru, N., 1997,)

Artistic gymnastics, a prestigious discipline in our country, also has a major formative and educative aspect for the socially under-privileged children. Gymnastics competitions which take place through the Special Olympics, include all apparatus for both the girls and boys, being individualized in each category (Special Olympics Regulations).

The greatness of gymnastics apparatus is extremely attractive and exciting, being a challenge for psycho-motric and sensorial abilities of children with special needs (CES). (Chera-Ferrario, B.)

Purpose

The development of a training program specific to artistic gymnastics with children from socially under – privileged categories, being finalized by a competition.

Objectives

- To execute the artistic gymnastics trainings in a competition hall;
- To select a group of children from different educational categories;
- To take part at an international gymnastics competition.

Hypothesis

We consider that by using means specific to gymnastics we can eliminate or improve social, ethnic or disability differences.

Place of sports activity and the group

Thus, at special school no.2 Ploiesti, artistic gymnastics lessons took place with a group of approximately 12 children and a specialized teacher. From these, 4 children were selected in order to go to the Luxembourg International Gymnastics Competition 2010. The 4 children were gypsies and children with disabilities, who also have a poor economical situation.

B. Jenica, 14 years old – family with poor economic situation, a large number of family members, she survives on the generosity of other children and lives in unsanitary conditions. She shows signs of ADHD, limited intellect but her motor abilities are very good. She learns any motor skill very quickly, she shows courage and agility accompanied by extreme agitation.

This child showed rapid progress in the learning and consolidating of the gymnastics exercises, and she demonstrated perseverence, thus being selected for the competition team.

C. Cristina, 14 years old – is a child with associated deficiences, but with a special talent for dancing and great body expressiveness. She comes from a large family, with low income, being neglected and not medically supervised, a fact which has lead to the appearance of some hearing problems. Therefore, the exercises accompanied by music were performed to a higher volume, thus the melodic line being favourably perceived and in this way she was able to show beautiful body expressiveness . The child learns and consolidates specific elements very quickly, having a strong personality, and so she was selected for the competition team.

N. Adelina, 12 years old – is a girl with a good economic situation, but with severe mental deficiences, IQ-30. She is a child eager to move but with reduced possibilities of motor actions. Although she communicates well with the teachers, the command of the motor execution of different exercises is difficult, slow, delayed.

She has a kind nature, sociable, open, and merry, but with high deficiency of motor commands.

C. Mădălina, 15 years old – of gypsy origin, with associated deficiences, coming from a family with social problems. She is a courageous girl, and obedient, who collaborated very well with the teachers, and with very good motor skills, taking part in the competition on two apparatus.

Volunteers Sample

For the whole training period we were supported by a team of volunteers, students from Victor Slavescu high- school, Ploiesti. They were between 16-17 years old, and there were approximately 15 volunteers.

Methods and means

Approximately 30 training sessions took place in order to participate at the international gymnastics competition. These took place in the gymnastics hall belonging to Petrolul Club, Ploiesti, for 4 months, after which the gymnasts participated in the specified competition.

Methods used in training

- Including all the children in homogeneous training;
- Supporting children financially transport to the gym;
- Observing children while training and forming a homogeneous team;
- Encouragement from the teachers, colleagues, volunteers or other children from the hall;
- Help in order to perform the exercises;
- Corrections in order to refine the exercises;
- Helpful demonstrations;
- Contest simulation (mock competition), official presentation of the children in front of the parents and some unknown people in order to observe practical actions and social behaviour in front of strangers.

After seeing the results it must be said:

APPEARANCES CAN BE DECEIVING.

Who would have said a child with hearing deficiences could do a very good floor exercise. Although Cristina is marginalized by the family, being the youngest child, with hearing problems, and although she is under-estimated because through not hearing well, she responds with difficulty, she has very good motor abilities and a great sense of music. By having in the background a rhythmic and resonant music, through repetition Cristina succeeded in winning 1st place on the floor exercise in an international competition.

Table nr. 1

The results of the children at the international competition

Ability level: I			**Ability level: II**
B. Jenica -II nd place – vault -II nd place – beam -IV th – uneven bars -V th place– floor -VI th - individual all-around	**C. Cristina** - I st place –floor - II nd place – vault - III rd place – uneven bars - V th place - beam -IV th place–individual all- around	**N. Adelina** - III rd place – vault - IV th place – beam	**C. Mădălina** - III rd place – beam - VI th place – vault

Jenica is a child who comes from a family with very difficult problems, and who lives her life in miserable conditions, also showing signs of ADHD; she is well taken care of, fed, moulded and directed in her actions in such a way that she develops self-control, she does her exercises with moderate energy and she earns a well-deserved 2nd place on the balance beam. Although, at first sight, one might say that a child with extreme agitation could not go up on the balance beam; through training, mobilization, discussions, repetitions and calmness she managed a very good exercise on the 10 cm wide beam.

Adelina has a severe psycho-motor deficit, a fact which can be seen in the exercises she does, but she shows very good adaptability. Never having left home, and never having slept away from her mother, Adelina is extremely courageous, she supports her colleagues and even children from the other teams, proving that with a little help she can manage away from her parents.

Madalina, being marginalized because of ethnic reasons, has become an introvert child. Due to the fact that she has very good psycho-motric development, she was able to do her beam exercise without mistakes, getting 3rd place in her category. After participating in this competition, she moves to a normal school, benefitting from the advantages and ethnic support of gypsies.

Methods of social assessment

The questionnaire mathod was used in order to appreciate and to evaluate the process of social inclusion. It was aimed at the parents, children and spectators present at the mock competition.

Table nr. 2

Questionnaire PARENTS (15 people)

No.			
1	How do people behave when they come into contact with your children?		
	Reticent		73 %
	Open		10%
	Indifferent		17 %
2	Which is the best environment for social inclusion?		
	School		60 %
	Sporting activities		25 %
	Educational activities		15%
3	Do you think that your children are socially included?		
	Yes		100 %
	No		0 %
4.	What are the effects of social inclusion ?		
	Appreciation of others around		23 %
	Group affiliatation		5 %
	Their own development		7 %
	Promoting abilities		45 %
	Alienation		
	Discrimination		
	Rejection		20 %
5.	After social inclusion the children are more:		
	Communicative		53 %
	Merry		20 %
	Confident		12 %
	Developed psycho-motorically		15 %

On question no. 2, regarding the best way of social inclusion, I obtained a percentage of 25% for sporting activities. This percentage, which is larger than for educational activities, highlights parents' views who observed the possibility and chance for their child to develop in a normal social environment through sporting activities where they can prove their abilities, earning prizes for their work, without being differentiated in any way.

The answers received from the parents, for question no.3, particularly that 100% of the participating children are part of the process of social inclusion, demonstrates to us the support and the satisfaction of the parents regarding the children's performances, who were involved in an extremely beneficial extra-curricular activity, being representatives of the society in which we live.

After social inclusion (no.5) parents observed that their children are more communicative, meaning they are more open to the people around them, more self-confident.

Table nr. 3

Questionnaire SPECTATORS (20 people)

No.			
1	What do you think about the fact that the children are socially under- privileged?		
	Reticents		80 %
	Open		11 %
	Indifferent		9 %
2	Which is the best environment for social inclusion?		
	School		75 %
	Sporting activities		15 %
	Educational activities		10 %
3	Do you think that in this moment the under-privileged children are included socially?		
	Yes		100 %
	No		0 %
4.	From what you have seen these children are:		
	Communicative		20 %
	Sad		
	Tolerant		15 %
	Violent		
	Lonely		13 %
	Friendly		7 %
	Merry		35 %
	Physically developed		10 %

The results obtained from the viewpoint of the spectators (other than the parents) show us that sports activities specific to gymnastics 15% are means of social inclusion alongside school activities. Having effectively participated in the sporting activity, spectators could do a direct assessment, in comparison with educational activities with which they are familiar but have not participated in.

On question no. 3 we get a 100% answer regarding sporting activities as a social inclusion process.

On question no.4 we notice spectators' point of view, which is that socially under-privileged children are merrier and more communicative in comparison to other socially under-privileged children they have met in daily life.

Table nr. 4

Questionnaire CHILDREN, (15 children)

No.			
1	Do you have friends from school or outside of it?		
	From school : YES / NO		YES – 75 %
			NO – 25 %
	From outside of school : YES / NO		YES – 100 %
			NO – 0 %
2	How many friends do you have from school?		
	1 / more		1 – 15 % More – 85 %
3	How many friends do you have from outside of school?		
	1 / more		1 – 65 % more – 35 %
4	What do friends offer?		
	Help		8 %
	Collaboration		
	Playfulness		60 %
	Trips		2 %
	Sport		30 %

The children's questions targeted their relationships with other kids, from school but especially from outside of it, as the effect of social inclusion.

On question no. 1, regarding friends outside of school, all the children mentioned having at least one friend from outside of school. This is closely related to the relationship the kids have developed with the volunteers, to the trust they have from the sport activity they participate in, helping them to communicate with other children outside their family circle.

Also, on question no. 4 the activities the children receive from their friends are playful activities but also support in their sport activity.

This proves that sport brings children together into a unitary team, developing their capacity to support their team mate without looking at the differences between them.

Conclusions

Over the course of 4 months I managed to conduct artistic gymnastics training sessions with children from socially under - privileged categories, without being set back by the differences between them. This training was best shown through participating at the 2010 Luxembourg International Gymnastics Competition.

By putting aside social and ethnic differences or disabilities and using training methods specific to artistic gymnastics, I created an ideal social inclusion process, achieving very good results, even with the children with special educational needs.

The good results obtaianed by the children prove that we can do sport with any child.

The very good results, the medals won by the children, brought the appreciation of many collateral people: of the parents who did NOT believe in their children, of the teachers of other subjects who do NOT get involved as much as needed and of the mass-media, as well as the appreciation of other children with special educational needs, who now want to take part in the trainings and to be able to go to a competition.

A vital role and an example to be followed were the participating volunteers. They managed to unify the training lessons, eliminating the social or physical differences between the children. They created a **connection** and awareness between all the participants at the sporting activity and implicitly in the social inclusion. Without the help of volunteers these activities can NOT be done because the children have different deficiences and there are very few teachers.

The participation of volunteers raised our school prestige both nationally and internationally, through stimulating the socializing process, through developing emotional balance, through creating new motivations, and through appropriate social conduct.

The volunteers got great satisfaction from the children's results at the competition. They were awarded and appreciated by the school they attend, determining more children to participate as volunteers at our sport events.

Proposals

The promotion and staging of more sporting activities that bring huge benefits to all: socially under-privileged children, students volunteers, society, parents and teachers. These activities are efficient both for children attending normal schools and for socially under-privileged ones.

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 23 - 34
(RECOMMENDED CITATION)

SPORT AS A RISK AND/OR PROTECTIVE FACTOR?*

KOVÁCS KLÁRA[1]

ABSTRACT. In this paper we would like to introduce and use in practice a new approach of research, namely the positive approach, which has roots stem from the fields of psychology, but it is a new approach in other social sciences, such as sociology, educational sciences etc. The positive approach emphasizes the relevance of protective factors, which contributes to students' well-being. In this paper we present the significance and theory of positive approach in the sociology of education by emphasizing the role of protective factors, especially sports, which contribute to young people's health behaviour and well-being. However the sports can also be a risk factor, therefore we think it is important to present the both side: in the literature we can find examples of that sport can be a protective and a risk factor. In our research we would like to examine the relationships between sport and unhealthier behaviour (smoking, alcohol and drug abuse). Can the sport be a protective factor against the unhealthier behaviour or it is a risk factor in the life of students at the University of Debrecen? How sports can contributes to the well-being of students? For testing this questions we used the database of Campus-life research (N=4189). In the first part of the study we present the roots and significance of positive approach in sociology of education and the earlier research results, which examine the link between sports and wellbeing and health as a part of it. In the second part we introduce the results of our research. According to our results we identified regular sporting as a protective factor against smoking and heavy drinking, because the sport is clearly reduces the incidence of smoking and heavy drinking rates, however, there was no significance correlation in the last case, such as in the cases of alcohol and drug abuse. Thus, regular physical activity does not just have a positive effect on health of the students, but also their physical, mental and social wellbeing.

Keywords: *psychology, sport, sociology, education, health*

Introduction

In this paper we would like to introduce and use in practice a new approach of research, namely the positive approach, which has roots stem from the fields of psychology, but it is a new approach in other social sciences, such as sociology,

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* The first part of paper, which involves theoretical framework is in press in special issue of Pedagógia Online – Higher Education Research Journal as a part of study: Pusztai, Gabriella – Baltatescu, Sergiu – Kovács, Klára – Barta, Szilvia: Institutional social capital and student well-being in higher education – A theoretical framework.

educational sciences etc. The positive approach emphasizes the relevance of protective factors, which contributes to students' well-being. Religion, social capital, peer support are examples to social protective factors (Pikó 2010a). In this paper we present the significance and theory of positive approach in the sociology of education by emphasizing the role of protective factors, especially sports, which contribute to young people's health behaviour and well-being. However the sports can also be a risk factor, therefore we think it is important to present the both side: in the literature we can find examples of that sport can be a protective and a risk factor.

In our research we would like to examine the relationships between sport and unhealthier behaviour (smoking, alcohol and drug abuse). Can the sport be a protective factor against the unhealthier behaviour or it is a risk factor in the life of students at the University of Debrecen? How sports can contributes to the well-being of students? For testing this questions we used the database of Campus-life research[2] (N=4189). In the first part of the study we present the roots and significance of positive approach in sociology of education and the earlier research results, which examine the link between sports and wellbeing and health as a part of it. In the second part we introduce the results of our research.

The origins of the positive approach in the sociology of education[3]

Based on the positive psychological approach, we apply the positive approach in the sociology of education in our research. The former one was developed by Seligman and Csikszentmihalyi (2000) but it may be perceived in the previous works of our Centre for Higher Education Research and Development[4]. We assume that instead of the critical approach of the social sciences, which primarily focuses on the pathological events, dysfunctions and causes in society, we need to investigate and identify positive, protective factors that contribute to the well-being of individuals and communities. Research projects are mainly directed on discovering factors of effective prevention, healthcare and health improvement but due to the complex phenomenon of health, the factors identified affect the full quality of life. Consequently, positive changes may not only detected at the individual level but at the level of communities and society as well Seligman and Csikszentmihalyi emphasized (2000) that autonomy, self-control, optimism, hope, talent, wisdom, creativity, future-oriented philosophy, courage, spirituality, will power and responsibility for others and ourselves all affect individuals' well-being in a positive way.

All these may be considered as individual motives, which characteristic to psychology, while research in the field of sociology of education aims to investigate social factors, mechanisms and phenomena that can be regarded as social protective factors. However, the terms of protective and risk factors is a basic paradigm in

[2] The Campus-life at the University of Debrecen is supported by the Hungarian Scientific Research Fund (K 81858). The timeframe of the research project involves 2010-2012; the leader of the research is Ildikó Szabó.

[3] He theoretical framework was translated by Szilvia Barta.

[4] Center for Higher Education Research and Development (CHERD). More information: http://cherd.unideb.hu/.

health psychology, on the other field of social sciences it is less spread and accepted, thus Pikó (2004) called this phenomena a paradigm shift in social sciences. In sum, in our theoretical model, the positive approach in the sociology of education and higher education research means the examination of social protective factors that contribute to the well-being of students in higher education.

The significance of social protective factors

The research of protective factors emerged when it became apparent that several risk factors are so deeply rooted in societies, cultures or even in the micro-environments surrounding individuals that it is impossible or lengthy to eliminate those. In Hungary, Pikó and colleagues have conducted research on protective factors among adolescents in one of the major cities in Hungary, Szeged. They examined positive factors that beneficently influence youths' health behaviour, function as protective mechanisms against addiction and deviance, which are known to decrease individuals' quality of life and subjective well-being.

Research projects on the relation of social competencies and drug use have proven that those with better communicative skills and higher social self-confidence are less likely to take drugs or drug-like substances (Pikó 2010b). Besides, patterns of lifestyle also affect youths' health behaviour: rational solutions contribute to addiction prevention; aiming for harmony positively affects health-preventing behaviour and the avoidance of smoking, alcohol - and drug use (Pikó – Keresztes 2010).

Sound family background and close friendships are essential for coping with everyday problems. Well-functioning, social supporting systems of individuals (close family or friendship ties) have proven to present significant protective effect in terms of health as well. The presence or absence, quality and quantity of relationships determine individuals' physical and mental well-being, thus they function as firm protective factors. People with stable relationships are less responsive to depression, psychosomatic illnesses and health-destructing substances (Kovács — Pikó 2010).

Numerous research projects have proven the positive effect of religion on physical, psychological and mental health and well-being (Pikó 2007, Kovács — Pikó 2010, Kopp et. al. 2004, etc.) Religiosity and integration into communities offer the potential of positive goals beyond self-interest, against consumer culture. Religious moral principles support the values of identity, helping relationships and social roles, which form the basics of positive quality of life.

Skrabski and colleagues (2004) regard coherence as the fundamental factor of mental and physical health, and thus well-being as far as the Hungarian society is considered. For them coherence is a firm belief in meaningful life, that individuals have their place and role in society, in the world, that everything happens for a reason and that we may influence events. Coherence includes the ability to cope with problems as well as security that there are persons, potentials, possibilities with which we are able to cope with difficulties. Consequently, Skrabski considered social capital as the predictor of well-being.

Sports and well-being in general and in youth

Sport as a protective factor

In the previous chapters we present and summarize the most important theory of our research, but in this chapter we would like to present an existing example, where this theory is tangible in practice. This is nothing more than a sport, because sport is important for staying healthy; therefore it contributes to physical and thus mental wellbeing. Several authors have proven the relation between sports and addiction on various grounds. Donovan emphasized the coherence of lifestyle, that is, if staying healthy is important (eq. feeding healthily, doing sports regularly), it is observable in other fields as well (eq. avoiding addiction) (Pikó 2002). Furthermore taking part in a sport activity as a member of a sport community contributes social, emotional etc. well-being. So sport can be considered as a protective factor. In the following paragraphs, we intend to present how can we characterize sports as a predictor of social capital and health and as a protective factor, which contributes to students' well-being.

Fox (1999) emphasized mainly the positive effect of sports on mental well-being. Doing sports contributes to the treatment and prevention of mental illnesses and disorders, it increases the level of physical and mental well-being among both the mentally ill and the general population. Besides, it also decreases everyday stress and anxiety, increases self-confidence and has several social benefits, such as the improvement of social relationships (as an element of social capital). Harrison and Narayan (2003) found that students doing some kind of sports have more healthy body images, are less likely to suffer from emotional disorders and to physically or sexually hurt their mates. They proved that those doing sports regularly commit suicide less frequently.

McAuley and colleagues (2000), Morgan and Bath (1998) examined how sports and regular exercising affects physical and mental well-being among the elderly, being a high-risk group in terms of health. While the former authors emphasized the positive effect of sports on social well-being (social relations, feeling integrated into a community), the latter ones highlighted its beneficial effect on psychological well-being (decreases symptoms of depression).

Numerous studies have proven that youths' health behaviour and lifestyle are related to their health status in adulthood, thus regular exercising as a form of health behaviour affects their health status and well-being in adulthood. Among sporting youths, we can find fewer smokers and more persons on a healthy diet. However, decreasing physical activity is associated with drug use and unsafe sexual behaviour. Sporting youths are more self-confident, have less psychosomatic symptoms and can be better motivated in healthcare programmes (Keresztes 2007, Mikulán et al. 2010).

American research results also support the findings that sports positively affect health-conscious behaviour. Pate et al. (2000) examined secondary school students and found that male sporting students eat significantly more vegetable, fruit, smoked less and used less drugs as compared to their non-sporting mates. At the same time, female sporting students consumed more fruit and vegetable but were less likely to get involved in unsafe sexual relationships.

Sporting youths establish friendships more easily, are more satisfied with their bodies, are more future-oriented and disciplined, and are less likely to suffer from depression. Those doing regular physical activities have a better feeling of well-being, higher emotional stability and intellectual performance.

A survey on a representative sample of 1000 high school Romanian adolescents indicate that, controlling for age, physical activity is moderately associated with life satisfaction and happiness. The relationship is mediated by self-esteem for boys and leisure satisfaction for both sexes (Bălţătescu 2003).

To summarize, we can state that the positive affect of sports on health could be proven in all three dimensions of health (somatic, psychological, psychosocial) (Pikó – Keresztes 2007, Brassai — Pikó 2010).

Sport as a risk factor

In the previous section we illustrated that doing sports and regular exercising positively affects almost all dimensions of subjective well-being and can serve as a protective factor against health-destructing behaviour (smoking, drug abuse) and mental illnesses, symptoms (depression). However, there are studies on the less obvious relation of the above mentioned statements. Among others, Fisher (2002) examined the spiritual well-being of students involved in teacher training, social worker and physical education (PE) and found that sports negatively affects the environmental well-being and the most important elements of religiosity (going to church, praying) of male PE students (religiosity is one of the components of spiritual well-being). The author made recommendations for further research.

Moore and Werch (2005) found that sports chosen by youths' and their relation to school (sport activity in or out of school) influences the frequency of youths' alcohol use in different ways. As for girls, participation at school cheerleader, gymnastics or dance teams decreases, while the same activities outside school, plus surfing and skateboarding increase the frequency of alcohol consumption. As for boys, swimming outside school decreases, while school-related American football, swimming, wrestling and tennis outside school increase the likelihood of taking a high quantity of alcohol.

Martens et al. (2006) uniquely collected studies on university athletes' alcohol use from various databases and re-analyzed those. They found that in the world of campuses, sporting students drink alcohol more frequently and are more likely to take serious quantities of alcohol, too. The explanation of this includes general reasons why students consume alcohol (social effects, belonging to sororities, fraternities, student associations, etc) and reasons related to sports as well (big pressure, anxiety and stress at contests, compliance to academic and sporting requirements at the same time) but the authors consider these speculations due to he lack of methodological tools. Finally, they made suggestions for further research for the examination of: (1) demographic attributes related to sports with which sporting individuals and periods at risk can be identified (contest periods, certain sport types), (2) the relation between sports and alcohol use, (3) and testing the preventing programmes of university/college student hostels.

Research questions and method

It is known that being a student in higher education itself can be a risk factor, because for example alcohol consumption as a type of unhealthy behaviour is particularly high among students. The one hand, taking part on parties with friends, on the other hand, the stress of exams encourages students to smoke, consume alcohol or drugs more often. Based on the literature arises the question that which functions have sports in the lives of students at the University of Debrecen. Does it function as a protective or a risk factor? Is it a positive or a negative correlation between sports and smoking, alcohol and drug abuse among students?

To answer these questions we used the database of Campus-life research. The survey was made in autumn of 2010. 4189 students filled out the questionnaire. The database is weighted by faculties. The sporting habits were examined by this question: How often do you do sport activity? We created three types of athletes by aggregating the answers: *non-athletes* (never or once a year do sport activity), *do sports rarely* (do sport activity once or a few times a month), *do sports regularly* (do sport activity once or more times a week).

We ask two ways the students' smoking, alcohol and drug consumption. On the one hand, are they smoking, abusing alcohol and drug, on the other hand, how often do they. The answers of second question are closer to reality in every cases, so we used these variables for analyzes.

Results

77% of the respondents replied that they do not smoke and 4,5% said that the smoke every day (figure 1).

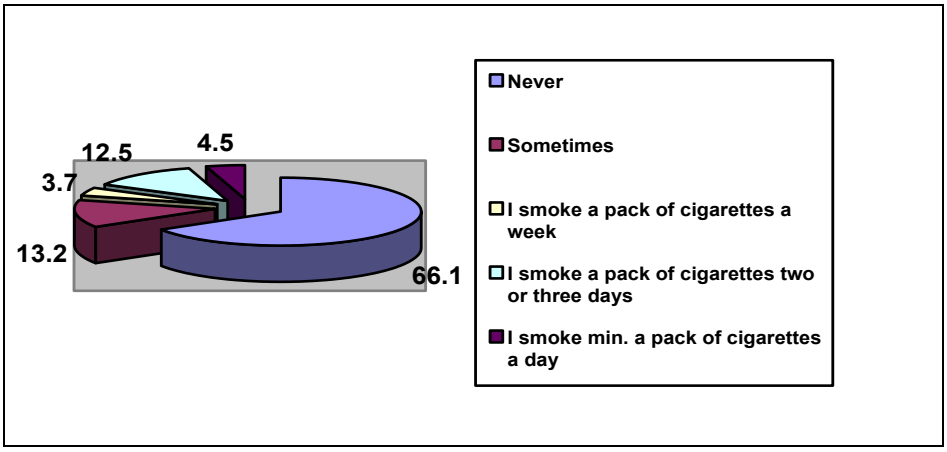

Figure 1: The prevalence of smoking among students in percentage (Source: Campus-life database, own construction)

We asked how often students consume alcohol, but we have to note that alcoholic beverage does not mean a large amount of alcohol, so we asked the high frequency of heavy drinking. One-fifth (!) of the students replied that they drink alcohol more times a week. The rate of those students, who never drinks alcohol less than one-tenth. Almost half of students answers that sometimes they get drunk. The 14% of respondents replied that they have tried some drugs in their lifetime. The frequencies are shown on the figure 2, 3 and 4.

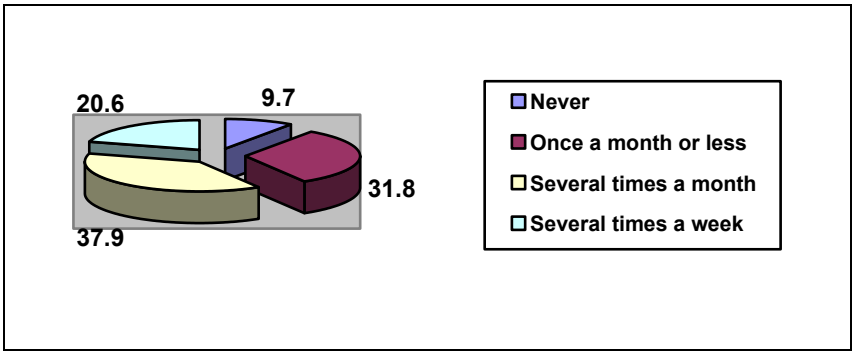

Figure 2: The prevalence of alcohol abuse among students in percentage (Source: Campus-life database, own construction)

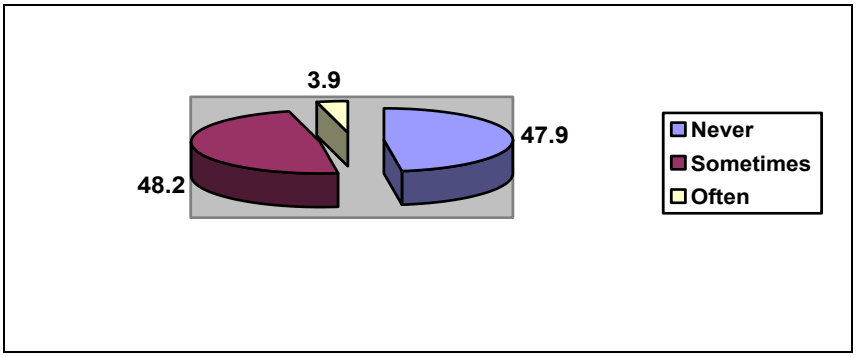

Figure 3: The prevalence of heavy drinking among students in percentage (Source: Campus-life database, own construction)

The most important aim of our research is to examine the relationship between sport activity and unhealthy behaviour (smoking, alcohol, drug abuse and heavy drinking). We made three types of athletes among students: *non-athletes*, *do sports rarely*, *do sports regularly*. We can see on the figure 5 that two-third of students does sport at least a week, but this group of students involves those who take part on

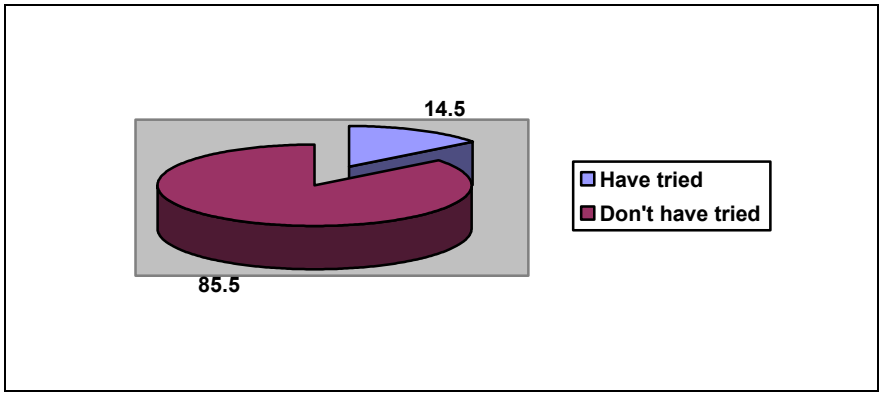

Figure 4: The proportion of students, who have tried drugs in percentage (Source: Campus-life database, own construction)

compulsory psychical education lesson at the university. They can be classified as the athletes since it is a unique opportunity for a lot of students to do regularly physical activity in organized form, with the same group of people, on a regular basis. If such physical education classes were not available, these students would not do sport most likely due to their demanding obligations at the university.

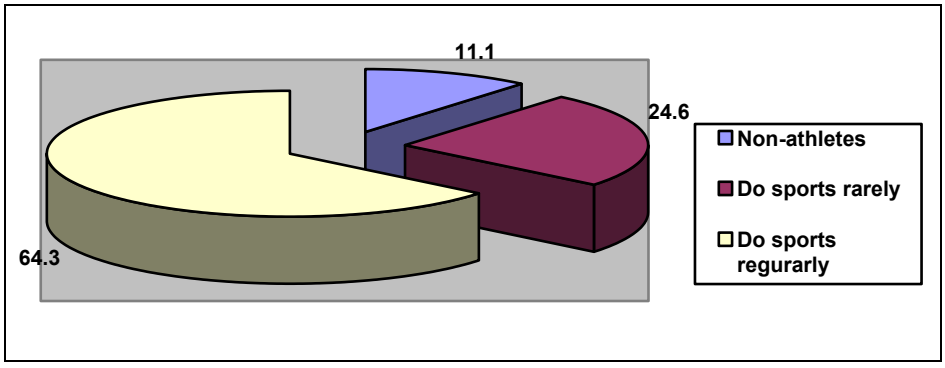

Figure 5: Types of athletes at the University of Debrecen in percentage (Source: Campus-life database, own construction)

We test the correlation between frequency of sport activity and unhealthy behaviour with Spearman correlation coefficient, because the result of Kolmogorov-Smirnov test was significant. We can see in the table 1 that regular sports have the most protective effect against smoking, because the frequency of sport activity decreases the frequency of smoking. In terms of alcohol consumption we found positive correlation. The background of this can be that this variable does not indicate a

large amount of alcohol consumption. The consumption of a glass of wine or beer with team-mates, friends is not harmful on health, and it can forge a community after a hard workout. In contrast, sport activity would be a protective factor against heavy drinking, because it seems doing sports reduces the frequency of heavy drinking, but no significant correlation found between two variables. Also we found no significant relationship between drug using and doing sports, probably, there are too few students answer yes whether or not they have ever consumed drugs.

Table 1.

Correlation coefficients between frequency of sport activity and smoking, alcohol, drug consumption and heavy drinking

	Frequency of smoking	Frequency of alcohol consumption	Frequency of heavy drinking	Drug consumption
Frequency of sport activity	-0,008**	0,048**	-0,007	0,01

(p= p <0,001, Spearman Correlation Coefficients.**
Source: Campus-life database, own construction)

59% of non-athletes never smoke, while 63% of those who do sport rarely and the 68% of regular sporting students answered that. The most pronounced differences were found in the case of smoking a pack of cigarettes per day between types of athletes: 10% is the ratio among non-athletes and 4% is the ratio in the latter two cases. It seems that only the regular sporting protects the most against smoking, because 15-15% of non-athletes and rarely sporting students answered that they smoke a pack of cigarettes two or three days, which means that they smoke almost every day. However, the regular physical activity does not protect against occasional smoking, because there is the highest proportion of occasional smoking among members of this sporting type (13,6%).

Although the results of chi-square test also showed that there was no significant relationship between heavy drinking and frequency of sporting, but similar results were obtained in analyzing trends, such as in the case of smoking. 46% of non-athletes said that the heavy drinking have never occurred with them, while among athletes this ratio is just 2% higher. The „often" answer were chosen the smallest proportion of students who do sport rarely, while 5% of non-athletes and 4% of regular sporting students said that they are often occurred with heavy drinking. The percentages in the table below (table 2).

Table 2.

The occurrence of smoking and heavy drinking according to frequency of sport activity among students in percentage

Frequency of smoking (%)*	**Frequency of sport activity (%)**		
	Never	Rarely	Regularly
Never	59,2%	63,6%	68,3%
Sometimes	11,2%	13%	13,6%
I smoke a pack of cigarettes a week	3,5%	4,4%	3,5%
I smoke a pack of cigarettes two or three days	15,8%	15,2%	10,9%
I smoke min. a pack of cigarettes a day	10,4%	3,8%	3,7%
Frequency of heavy drinking (%)	**Frequency of sport activity (%)**		
	Never	Rarely	Regularly
Never	46,6%	47,9%	48,1%
Rarely	48,1%	49,3%	47,8%
Regularly	5,4%	2,8%	4%

(Source: Campus-life database, own construction)

Summary

This paper aims to examine whether or do not function sports as a protective factor against unhealthy behaviour (smoking, alcohol and drug abuse) in the life of students at the University of Debrecen. We apply the positive approach in the sociology of education in our research. It assumes that instead of the critical approach of the social sciences, which primarily focuses on the pathological events, dysfunctions and causes in society, we need to investigate and identify positive, protective factors that contribute to the well-being of individuals and communities. In our study the nature of sports was examined as a protective factor. For testing our research questions we use the database of Campus-life research.

According to our results we identified regular sporting as a protective factor against smoking and heavy drinking, because the sport is clearly reduces the incidence of smoking and heavy drinking rates, however, there was no significance correlation in the last case, such as in the cases of alcohol and drug abuse. Thus, regular physical activity does not just have a positive effect on health of the students, but also their physical, mental and social wellbeing.

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 35 - 45
(RECOMMENDED CITATION)

EXPERIENCES, MODELS AND PROACTIVE MOTIVE STUDENTS IN NEPROFIL HIGHER EDUCATION

IONESCU CECILIA LILIANA[1]

ABSTRACT. We conduct daily activities in a rapidly transforming society, the stress and strain and the intellectual are everywhere constant practice exercise is a primary alternative we consider in strengthening general health, to ensure a comfortable and mental required a very useful training and a healthy lifestyle. Although the field of physical education and sport is reflected mainly a practical perspective, it can be approached from the perspective of the movement favorably training sets, the value of the experiences and models of participating actively and constantly physical education and sports activities. In the context of the statements, we conducted a scientific investigation of wanting to introduce a sequence that did not focus on limiting motor size and whose expansion included two years, including two samples.

Keywords*: experiments, models, proactive motric*

REZUMAT. ***Experienţe, modele şi atitudini proactive motric la studenţii din învăţământul superior de neprofil.*** Ne desfăşurăm activităţile cotidiene într-o societate aflată în continuă transformare, în care stresul şi suprasolicitarea intelectuală sunt omniprezente şi în care practicarea constantă a exerciţiilor fizice reprezintă o alternativă primordială, considerăm noi, în întărirea stării generale de sănătate, în asigurarea unui confort şi al unui echilibru psihic deosebit de necesare şi utile formării unui stil de viaţă sănătos. Cu toate că domeniul educație fizică și sportivă se reflectă ca o perspectivă preponderent practică, acesta poate fi abordat și din perspectiva formării de seturi atitudinale favorabile mișcării, de valorizare a experienţelor și modelelor celor ce participă activ și constant la activități de educație fizică și sportive. În contextul celor afirmate, am întreprins o investigare ştiinţifică, din care doresc să prezint o secvență, care nu s-a concentrat limitativ pe dimensiunea motrică și a cărei extindere a cuprins doi ani, incluzând două eșantioane.

Cuvinte cheie*: experienţe, modele, atitudini proactive motric.*

Research I realized it had two populations sample of 80 teachers of physical education and 219 students from five institutions of higher education neprofil and hypothesis reads as follows: *the more valued the models, experiences and positive attitudes of students towards formal and informal motive activity as well, the more proactive attitudinal behaviors we notice, answering the range of supplementary/*

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complementary programs offered by the physical education departments of the non-specialized institutions of higher education – mainly the Technical University of Civil Engineering of Bucharest.

The experience is defined in the Explanatory Dictionary of Romanian Language (online edition) as "all knowledge that people acquire directly about surrounding reality in the process of social-historical, economic, etc. practice, of the material interaction between human being and world". Experience can be also considered as the assembly of knowledge pertaining to affective, cognitive, volitional, motive, psychological dimensions assimilated by human subject over time that usually enable you to adopt strategies for experiences to come.

The Explanatory Dictionary of Romanian Language defines the model as a "person, achievement, work that can serve as an example by value or qualities".

In the Psychology of Performance Sport, the attitudes are structural components of human personality, resulted especially from education and social influences. It is recognized that attitudes are predispositions to respond in a positive or negative way to someone or something in a certain context, focusing on certain people or objects. To achieve a certain attitude, some beliefs and values should exist previously, creating this attitude and having a specific conduct as response.

Why we introduced this triad, which is a variable in a topics accepted and used? Because, for the present study, we aimed at identifying the main patterns, experiences, attitudes of students related to the usefulness of systematic practice of physical activity. The quality of values developed by practicing physical education and sport (hereby the acronym PE) was the indicator used by us to quantify this variable.

The research method that we used for this variable was based on questionnaire investigation addressing the two sampled populations. The surveyed students answered item 7 of the questionnaire of opinions, values and attitudes, and professors answered item 10 of the questionnaire of opinions, values and attitudes. Item 7 addressed to students had the following form: *To what extent the qualities listed below could be developed through systematic practice of PE specific exercises? Mark with an X in the scale from 5 (very much, excellent) to 1 (insignificant, very little) the appropriate rank according to your experience and opinion.*

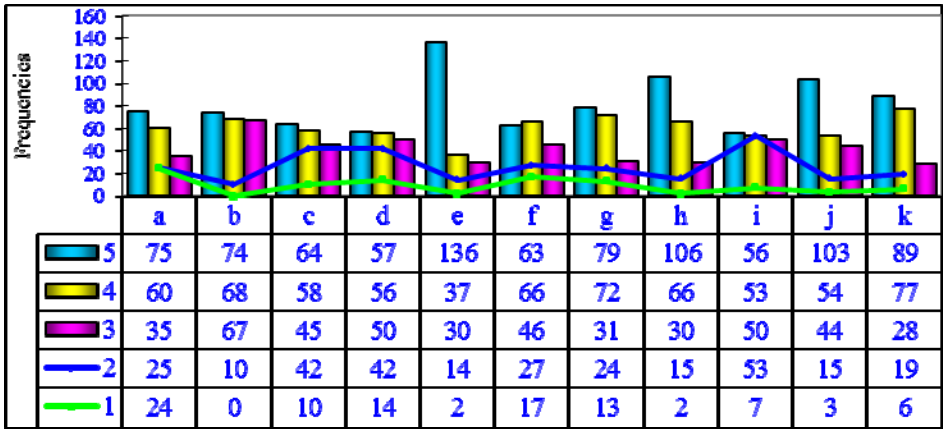
The investigated population evaluated a list of promoted qualities/value, as an effect of participation in physical education and sports activities. Data analysis has shown that the recording of values highlighted a good arrangement of percentages obtained for attendances corresponding to the intervals of the provided scale. Therefore, decreasing values were noted in percentages of students' options, from the maximum to the minimum scale level, namely 37% for interval 5, 28% for level 4, 19% for interval 3, 12% for 2 and 4% for lower level 1.

However, 65% of all responses focused on the upper ranges of the scale. Following up the total of the values obtained on the intervals 5+4, we notice that **rank I** was assigned for e-*"aesthetic qualities and features*", **rank II** was obtained by h-*"capacities for overcoming and self-overcoming within the limits of fair-play"*,

k-*"attention focused on elements of life"* had **rank III**. Index j-s, „*availability for rational effort distributed on long or medium term"* obtained **rank IV**, and g-*"intellectual traits and abilities (memory, spirit of observation, fast thinking, positive thinking)"* received **rank V**.

We point out the 16 percentages reserved for the minimal levels of scale 2 and 1 that we consider less important in this context of skills development through activities specific to this field of physical education and sport.

As an initial assessment, we affirm that we are satisfied with the options expressed by the students on this topic and we appreciate the high frequencies obtained on the upper part of the scale used, as the students indicated and accepted the quality of the values highlighted by constant practice of physical activity. Figure no. 1 shows the layout of the frequencies corresponding to the qualities developed by practicing the characteristic activities of PE.



	a	b	c	d	e	f	g	h	i	j	k
5	75	74	64	57	136	63	79	106	56	103	89
4	60	68	58	56	37	66	72	66	53	54	77
3	35	67	45	50	30	46	31	30	50	44	28
2	25	10	42	42	14	27	24	15	53	15	19
1	24	0	10	14	2	17	13	2	7	3	6

Figure no. 1. Students' responses on skills development through systematic participation in exercises specific to PE

The graphic distribution of the choices made by students points out the fact that out of the 11 qualities exhibited, 10 obtained frequencies with descending distribution from level 5 to the minimum level 1, reaching the maximum values on interval 5.

In terms of minimal level 1, we notice that all listed qualities received the smallest frequencies out of all preferences expressed.

Teaching staff responded to item 10 of the opinions, values and attitudes questionnaire that had the following statement: *mark an X, according to your experience and opinion, in the scale from 1 (insignificant) to 5 (very much), the rank taken by the skills developed by practicing systematically activities of PE.*

Recorded results have revealed encouraging aspects, emphasizing high percentages for the upper ranges of the scale. Therefore, we observed that 51% of respondents scaled the characteristics that were presented to them on level 5, 28% on 4, and 141 responses, 16% respectively, were placed on the medium interval.

On the maximum interval 5, the highest frequencies were obtained for f-*"competitive spirit"*-70 responses, a-*"respect for competitors"*-60 nominations, e-*"aesthetic features and traits"*-47 options; j-*"availability for rational effort distributed on average and long term"* and b-*" collaborative capacity"* got 45 nominations each.

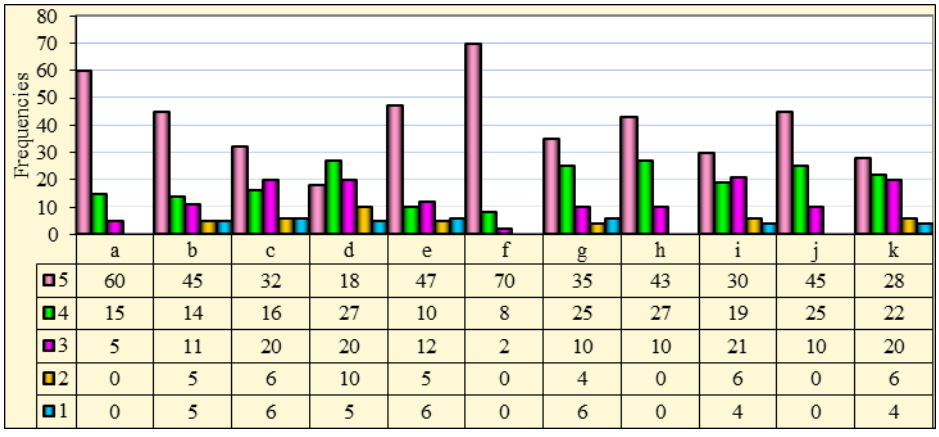
On the average interval 3 were concentrated 141 responses, out of each i-*"emulation related to a selected model"* has a frequency of 21, followed by three characteristics.

These ones are *"respect for common goods*", *"increased interest in watching sports competitions"* and *"attention focused on life elements"* with 20 options.

According to the ranks obtained by totalizing the values on intervals 5+4, 2+1 and the medium interval 3, we find out that on the upper level, **rank I** was obtained by *"competitive spirit"*, **rank II** by *"respect for partners/competitors*", and **rank III** for *„capacities to overcome and self-overcoming within fair-play limits*" and "*availability for rational effort distributed on medium and long term".*

On the interval 3, rank I was assigned to *"availability for rational effort distributed on medium and long term"*, rank II for three characteristics, namely *"respect for common goods"*, *„increased interest in watching sports competitions"* and *"attention focused on life elements*".

Figure no. 2 shows the graphical distribution of the characteristics developed by practicing physical exercises.



	a	b	c	d	e	f	g	h	i	j	k
5	60	45	32	18	47	70	35	43	30	45	28
4	15	14	16	27	10	8	25	27	19	25	22
3	5	11	20	20	12	2	10	10	21	10	20
2	0	5	6	10	5	0	4	0	6	0	6
1	0	5	6	5	6	0	6	0	4	0	4

Figure 2. Frequency response characteristics of teachers on the development of the systematic practice PE activities

From figure no. 2 we note that teachers' options for four of the listed characteristics, namely: a-*"respect for partners/competitors"*, f -*„competitive spirit"*, h -*„capacities for overcoming and self-overcoming within the limits of fair-play"* and j- *„availability for rational effort distributed on medium and long term"* were scaled for the first three levels only, namely 5, 4 and 3 respectively. It is also noticed the achievement of maximum frequencies on the high scaling interval 5, of ten characteristics out of the total of eleven characteristics presented, recognizing their importance through their assimilation and promotion following up the systematic practicing of PE specific activities.

For the variable expressed through proactive motive attitudes, the goal that we had to meet was the knowledge and especially the formation/maturing of students' attitudes as for practicing physical exercises during student days and afterwards; the index that we used to quantify this variable was represented by the attitudinal characteristics defined by power, relevance, level in terms of constantly practicing physical activity. The research methods used to examine the variable in question were the focus - group and the questionnaires addressed to students and teachers.

Composition of focus group: we formed a group of 8 students (4 girls, 4 boys) in second academic year, to whom we addressed several questions, aiming to achieve two precise goals. Respondents' age was from 19 to 21 years. Students were told that we wanted to know their attitudes about the activities specific to PE field, in general. The goal was the one mentioned earlier, consisting of learning students' attitudes related to practicing the activities specific to PE field in student days and after the studies.

Place: Department of Physical Education and Sport from the Technical University of Civil Engineering. The questions addressed and students' responses are recorded below:

a) Do you have negative feelings or did you have unpleasant experiences during physical activities practicing? What is your attitude regarding the participation in PE classes?

Respondents, by their answers, have shown their adherence to this type of activities, indicating that there were no experiences with unpleasant ends that would have influenced them and therefore they revealed their positive attitude in this matter.

b) If, besides the weekly class of PE, you participate in other physical activities too and under other forms? If so, what are they?

Most of the respondents answered affirmatively to this question and recalled physical involvement activities, such as biking, running, football, roller skating, swimming. The remaining respondents felt that activities such as walking through the park or climbing stairs represent forms of physical effort that meet their needs, physically.

c) How long you are willing to allocate to PE activities in your daily program?

The opinions on this issue were divided according to the spare time available to the students. More than half of the interviewed students indicated that they assign to physical activity at least 30 minutes carried out in four to five days; the other respondents confine themselves to walking, because of their busy schedule.

d) How long have you participated regularly in an organized system to practice a sport?

In the structure of this interviewed group we had four former athletes from different sport branches, for whom the participation had been constant and regular during their sports activity, for periods that ranged from four to six years. The same group of students felt that they should continue this sports activity, which is otherwise current for them as they keep taking part in such activities whenever time allows. The other students focus for now on PE classes and walks in open air only.

e) What are the motivational factors that make you attend PE classes?

Respondents' opinions to this question were rather varied, ranging from mandatory participation, to their desire to move, continuing with the possibility to relax, to unlock negative energy through exercise, ending by aspects connected to the wish for competition, achieved through specific activities too, especially through bilateral games.

f) The attitude that you display towards physical activities, in general, can influence you in any way in dealing with others?

The answers of the participants coincide entirely, namely they are able to discipline themselves, can communicate much better and can cooperate. Also, they considered that the respect for their partners, race mates and their competitors as well is consistent with a conduct based on attitudes of acceptance, tolerance, respect, manifested on playing field and even outside this one. By highlighting these features, the students stressed that they are able to win the fight with themselves through the manifestation and development of self-esteem.

Finally we thanked the students for the sincerity of their statements and especially for the maturity they had shown during our discussions. Following the dialogue that we had with the students, we can formulate a preliminary conclusion, namely we noticed with interest that the students have positive attitudes towards physical exercises, that there were no experiences estranging them from this kind of activity and that they have both physical and mental resources for manifesting proactive attitudes for motion. Also, we were able to state that there are real prerequisites for carrying on PE specific activities (represented by the most various forms such as games, running, swimming, walking etc.) even after finishing the studies. Students answered item 8 of the questionnaire of opinions, values and attitudes, which was worded as follows: *What is your attitude regarding the constant and continuous practice of physical exercises starting even from student days? Circle only one answer depending on your choice.* Students' responses were recorded in table no. 1.

Table no. 1.

Students' attitudes concerning the constant and continuous practice of physical activity

scale	*Variants of response*	Frequencies	Percent
5	It is a life style (**favorable, positive attitude**)	**48**	22%
4	I do my best to find spare time (**positive attitude, with involvement**)	**75**	34 %
3	I am interested only as far as I have spare time (**favorable attitude, without involvement**)	**59**	27%
2	I stick to pure classes of physical education (**reserved attitude**)	**28**	13%
1	I am not interested (**unfavorable, negative attitude**)	**9**	4%
TOTAL		**219**	**100%**

After centralizing the responses expressed by students, we noticed a number of 48 students, 22% respectively, of all those involved in the investigation that we had carried out, who show *a favorable attitude* towards the effective participation in PE specific activities. A total of 75 of these students showed a *positive attitude, with involvement*, making all efforts to find spare time in their daily program for this type of activities, while 59 respondents have *an appropriate attitude, but without involvement,* their interest in taking part in these activities exists only within the leisure limits. Those who have not a positive attitude towards the carrying out of the activities specific to PE represent 4%, respectively 9 students out of the total of 219 interviewed people. A number of 28 interviewed students confine themselves only to the effort made in PE classes, manifesting a *reserved attitude.*

We were also interested in teachers' opinions regarding students' involvement in the activities conducted, in order to learn which are students' attitudes towards such activities. Teaching staff answered items 3 and 12 of opinions, values and attitudes questionnaire. Item 3 had the following requirement: *Following up the discussions that you had with your students, what is the frequency of their participation in sports activities in their spare time?* Responses were recorded in table no. 2.

From the data recorded in table no. 2 and after determining the ranks corresponding to variants of response, we notice the following matters: rank I was obtained by the variant *"frequent*" with 44 responses, rank II was assigned to *"very frequently*", *"sometimes"* and "*very rarely, never"*, with 10 responses each.

Table no. 2.

Frequency of students' participation in PE specific activities in spare time

Scale	*Variants of response*	Frequencies	Percent	RANK
5	Very frequently	10	13%	**II**
4	Frequently	44	55%	**I**
3	Sometimes	10	13%	**II**
2	Rare	6	6%	**III**
1	Very rarely	10	13%	**II**
TOTAL		80	100%	

We notice with interest that a percentage of 55%, 44 teachers respectively from the total number of 80 investigated ones, indicated that students participate frequently in PE activities, therefore they have a positive attitude in terms of participation in specific activities. In figure no. 3 we show the distribution of teachers' responses on the same topic.

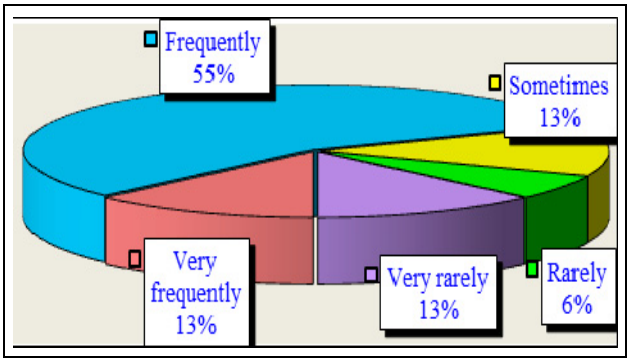


Figure 3. Teachers' opinions on students' participation in physical activities

In figure no. 3 we find out a satisfactory percentage of 55%, from our point of view, given to students who have favorable attitudes, by participating *"frequently"* in these activities specific to PE. We also noticed that for three intervals of the presented scale 5-3-1, equal percentages were obtained, 13% respectively, for *„very frequently*", *„sometimes"* and *„very rarely or never".* The maximum percentage 55% was obtained by the assessment on interval 4 of the scale, while the minimum percentage 6% is placed on the lower interval of the scale.

We are interested in teachers' opinions about students' continuous participation in activities of physical education and sport; the teaching staff expressed their views on the requirement of item 12, namely: *What is the frequency of the requests from your students to continue practicing some PE activities outside the classroom, some sports?* Centralized data are to be found in table no. 3.

Table no. 3.

Students' participation in leisure sports activities, according to teaching staff

SCALE	Variants of response	Frequencies	Percent
5	Very frequently	15	19%
4	Frequently	22	27%
3	Sometimes	20	25%
2	Rare	15	19%
1	Very rarely	8	10%
TOTAL		**80**	100%

From the table above we find out that the frequency of students' request to participate in addition to classes included in PE formal program is the following one*: "frequent"* by 27%, and *"very frequent"* by 19%.

Adding the results obtained on the two intervals of our scale, we get 46%, which is, as we think, a satisfactory rate. We must emphasize that this result does not certify the fact that students who did not asked to practice PE activities in addition to regular classes do not participate in sports activities.

We note that the value of responses frequency obtained by adding the lower intervals 2 and 1 is 29% of all options expressed.

We can say that in the large mass of students there are persons willing to practice these activities even after their classes program. From our perspective, we feel that we have met students' requirements and we have offered them opportunities to express their physical potentialities, convinced that their participation in activities belonging to our field will continue after university graduation too.

Statistical data. Table no. 4 shows the values of statistical indicators: arithmetical mean, median, module, standard deviation, Skewness and Kurtosis indicators.

Table no 4.

Statistic indicators for items 7, 8, 3, 10 and 12

Indicators / Items	Arithmetical mean $\overline{x}$	Median Me	Module Mo	Standard deviation S	Skewness indicator	Kurtosis indicators
Students						
I7	3.83	4	5	1.176	-.717	-.480
I8	3.73	4	5	1.259	-.611	-.947
Teachers						
I3	3.48	4	4	1.190	-1.001	.022
I10	4.14	5	5	1.099	-1.217	.796
I12	3.26	3	4	1.250	.237	-.932

We notice the following aspects resulting from the statistical data recorded in table 4:

(1) For items 7, 8, 3 and 12, the arithmetical mean with value superior to figure 3 shows us that the majority of the preferences expressed ranged between intervals 3 and 5. Value 4 of the median indicates that half of the options expressed on interval 4 have been reached, same situation as on interval 3, respectively – where median value is 3. The highest frequencies of responses were recorded on intervals five, four or three of the scale, corresponding to modal values 5, 4, or 3.

(2) The negative values of skewness and Kurtosis indicators show moderate negative asymmetries (a longer tail of distributions towards small values), "platykurtic" distributions respectively, with values dispersed on a larger interval around the mean. We observe from this table that the arithmetical mean of all items is smaller than the median, excepting item 12 where the mean is higher than the median, showing a positive value of Skewness indicator. The negative values of Kurtosis indicator show a poorer group of options around the mean, in contrast with the positive value recorded in item 10, indicating a stronger group of options expressed by teachers around the mean.

(3) The standard deviation of each item shows a fairly large spreading of data belonging to the measured characteristics related to arithmetical means, but in conjunction with the other indicators analyzed it follows that these ones fit satisfactorily a normal distribution of data, between -1.96 and +1.96 respectively.

Interpretations and comments about <u>experiences, models and attitudes among students</u> and <u>motive proactive attitudes of students</u>. Following the completion of analyzes by investigating two variables emphasize the following conclusions:

(1) We remind that the goal that we intended to achieve for investigating the variable "experiences, models and attitudes among students" was the identification of these experiences, models and attitudes useful for the systematic practicing of physical activity and the indicator corresponding to this variable was the establishment of the quality of values developed by PE practicing. Students expressed their views on the features that could be developed as a result of a systematic practice of physical movement. The frequencies of the recorded answers had a decreasing distribution of their values, from the high level 5 to the low level 1, without fluctuations.

A great number of responses were concentrated on the upper intervals, their frequencies and percentages were analyzed previously.

(2) For the variable defined by motive proactive attitudes, we set as goal the knowledge and especially the formation/maturing of students' attitudes towards practicing physical exercises in student days and after graduation; the indicator that we intended to use for measuring this variable was represented by the attitudinal features defined by power, relevance, level related to constant practicing of physical exercises. This variable was investigated by using a focus-group and questionnaires addressed to students and teachers.

Following up the dialogue with students and the review of the responses recorded in the questionnaire, we are happy to notice that these young people expressed positive attitudes concerning the active participation in physical activities, that they had not any bad experiences in their life that could estrange them from these PE specific activities. Also, students have both physical and mental resources for manifesting proactive attitudes and for continuing to practice physical exercises even after graduation.

There were also recorded teachers' opinions on the frequency of students' participation in sports activities in their spare time, which is satisfactory but leaves enough room for a much better participation in these activities, certainly. Subsequently, as a result of the analyses and interpretations of the data obtained, we believe that the hypothesis defined as follows: "*the more valued the models, experiences and positive attitudes of students towards formal and informal motive activity as well, the more proactive attitudinal behaviors we shall notice, answering the range of supplementary/complementary programs offered by the physical education departments of the non-specialized institutions of higher education – mainly the Technical University of Civil Engineering of Bucharest"* is confirmed.

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ASPECTS REGARDING THE RELATION BETWEEN AGE, THE VALUE OF THE START REACTION TIME, AND THE ACCUMULATION OF PSYCHO-MOTOR EXPERIENCE IN THE PRACTICE OF WOMEN'S SPRINT EVENTS

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ABSTRACT. The way in which women react to various stimuli, their reaction time at different ages, and the differences between their reaction and the men's reaction, have served as basis for many interdisciplinary researches. *Goal.* Having as framework the specific problematic of human performance in general, and athletic performance in particular, this paper aims to do a thorough analysis of the start reaction times recorded by the medaled female athletes in the sprint events, during the Romanian National Athletics Championships of 2011. *Methods.* The subjects of this research were professional female athletes divided, according to the Romanian Athletics Federation regulations into 5 age categories (juniors III, II, I, youth, and seniors), whose start reaction was measured with complete start reaction analysis systems, "Alge timing StartJudge SJ" and "Timetronics." *Results.* In average, the best reaction time values in the observed competitions were recorded by female athletes in the JII category (16-17 years old - 0.213 s), followed by JIII female athletes (14-15 years old - 0.215 s), and senior female athletes (over 23 years old - 0.216 s). *Conclusions.* The results of our research allow us to say that the accumulation of psycho-motor experience throughout the years of professional practice of women's sprint events does not represent always a factor of improvement for the value of the reaction time to a sound stimulus.

Keywords: *track and field, reaction time, experience, medaled female athletes*

REZUMAT. ***Aspecte privind relaţia dintre vârstă, valoarea timpului de reacţie la start şi acumularea experienţei psihomotrice în practica probelor de sprint feminin.*** *Introducere.* Modalitatea prin care femeile reacţionează la diferiţi stimuli, timpul de reacţie al acestora la diferite vârste şi diferenţele dintre reacţia femeilor comparativ cu cea a bărbaţilor au reprezentat obiective care au stat la baza iniţierii multor cercetări interdisciplinare. *Obiectiv.* Încadrându-se în problematica specifică performanţei umane în general şi a performanţei sportive în special, lucrarea îşi propune să evidenţieze o amplă analiză a timpilor de reacţie la start, înregistraţi de

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atletele medaliate în probele de sprint, în cadrul campionatelor naţionale de atletism ale României, în anul 2011. *Metode.* Subiecţii cercetării au fost reprezentaţi de atlete de performanţă încadrate de regulamentul Federaţiei Române de Atletism în 5 categorii de vârstă (juniori III, II, I, tineret şi seniori), a căror reacţie la start a fost măsurată cu sisteme complete pentru analiza reacţiei la start „Alge timing StartJudge SJ" şi „Timetronics". *Rezultate.* În medie, cele mai bune valori medii ale timpilor de reacţie pentru sezonul competiţional analizat au fost evidenţiate de atletele medaliate la categoria JII (*16-17ani – 0,213s*), urmate de atletele JIII (*14-15ani – 0,215s*) şi senioare (*peste 23 ani – 0,216s*). *Concluzii.* Rezultatele cercetării ne permit să considerăm că acumularea experienţei psihomotrice în practica performanţei sportive din probele de sprint feminin, odată cu creşterea în vârstă, nu ar reprezenta întotdeauna un factor de îmbunătăţire a valorii timpului de reacţie la un stimul sonor.

Cuvinte cheie: *atletism, timp de reacţie, experienţă, atlete medaliate*

Introduction

The analysis of the reaction time as a man's ability to respond to the action of certain stimuli has aroused the interest of specialists in many fields, for several centuries. In time, the simple analysis of the reaction value expressed in milliseconds, and the discovery of the neuro-physiological mechanisms that form the basis for the motor, mental, and psycho-motor reaction, were not enough to quench the specialists' thirst for knowledge. Thus, the studies and researches regarding the analysis of the reaction time became deeper, more specialized, and more orientated towards more complex aspects (see the studies of A.T. Welford, 1980, R.J. Kosinski, 2012, etc).

One of the interesting aspects was determining the differences between genders regarding the speed of the reaction to stimuli: do the men react faster than the women, and if this is true, then in what way, form, time, or under what conditions the female subjects react.

I.W.Silverman (2006) suggested that the difference between the men's and the women's reaction time is getting smaller, especially the reaction to a visual stimulus. The author explains this by the women's increasing involvement in certain activities, especially in sports that require a fast reaction. With regards to professional track and field, the start reaction, as an expression of the reaction time to a sound stimulus, can be very close between men and women, sometimes even better in women. We can say that in certain situations of competition stress, the female athletes can mobilize faster than the male athletes (see Table 1, where the average start reaction value of the female track and field finalists in the 2012 London Olympics is better than the males', for the 100 m sprint event).

Starting from these ideas, but also wanting to see the value of the reaction to a sound stimulus in a particular group of subjects (professional female athletes), we set out to analyze the differences in value of the reaction times in the national

Table 1

The start reaction recorded by the 100 m sprint finalists at the London 2012 Olympics

	Women's 100m sprint	**SRT***	**Men's 100m sprint**	**SRT**
1	Shelly-Ann Fraser-Pryce	0.153s	Usain Bolt	0.165s
2	Carmelita Jeter	0.153s	Yohan Blake	0.179s
3	Veronica Campbell-Brown	0.143s	Justin Gatlin	0.178s
4	Tianna Madison	0.171s	Tyson Gay	0.145s
5	Allyson Felix	0.176s	Ryan Bailey	0.176s
6	Kelly-Ann Baptiste	0.128s	Martina Churandy	0.139s
7	Ahoure Murielle	0.156s	Richard Thompson	0.160s
8	Okagbare Blessing	0.165s	Asafa Powell	0.155s
Average		***0.156s***	*Average*	***0.162s***

*SRT - Start Reaction Time

championships female medalists, as well as the relation that might exist or not between the accumulated experience in practicing sprinting, age, and the value of the reaction to a sound signal.

Hypothesis

- the accumulation of psycho-motor experience throughout the years of professional practice of women's sprint events does not represent always a factor of improvement for the value of the reaction time to a sound stimulus.

Material and Methods

The research subjects were professional female athletes who have won medals during national indoor and outdoor 2011 championships.

Table 2

Research subjects

	Categories	**Age**	**Indoor**	**Outdoor**	**Total**
1	Juniors III (JIII)	14-15 years old	12	21	33
2	Juniors II (JII)	16-17 years old	12	21	33

	Categories	Age	Indoor	Outdoor	Total
3	Juniors I (JI)	18-19 years old	12	21	33
4	Youth (Yth)	20-22 years old	12	21	33
5	Seniors (Sen)	23 y.o.---	12	21	33
Total			60	105	165*(160**)

* - Even if there were female athletes who had won medals in at least 2 events, the value of their reaction time was considered as such, each time recorded by a medaled female athlete being taken into consideration separately;

** - out of the 165 reaction times recorded by the female medalists, only 160 were statistically-mathematically analyzed, because 5 female athletes did not "show" any start reaction (Table 4).

The 11 *track and field events* observed for the start reaction analysis were: 4 indoor (60m sprint, 60m hurdles, 400m sprint – 300m sprint for JIII, relay), and 7 outdoor (100m sprint, 100m hurdles – 80 m hurdles JIII, 200 m sprint, 400m sprint – 300m sprint JIII, 400m hurdles -300m hurdles JIII, relay 4x100m, relay 4x400m – 4x100m, 200m, 300m, 400m JIII).

The research instruments were complete systems for analyzing the start reaction*, Alge timing StartJudge SJ and TimeTronics* (starting blocks with movement sensors, a pistol, a printer, a microphone, a central unit, a loudspeaker).

Results and Discussions

After recording and analyzing the data, the following observations were made:

- the analysis of the values recorded by the subjects during the national *indoor* track and field competitions, regarding the variability coefficient on a *practiced event* (Table 3) has allowed us to determine a high homogeneity of the values for the 1st place in the 4x2 relay event (Vc <10%); a homogeneity of the start reaction values for the 2nd and 3rd place in the 4x2 relay event, and for the 3rd place in the 400m sprint and 60 m hurdles event (10% < Vc < 20%), and a heterogeneity for the other 7 groups of analyzed values (20% < Vc), where their average emphasizes a low homogeneity;
- the analysis of the values recorded by the female subjects during the national *indoor* track and field competitions, regarding the variability coefficient on *age category* has allowed us to determine a homogeneity of the juniors III and seniors values (10% < Vc < 20%), and a heterogeneity of the reaction times for the juniors II, juniors I, and youth categories (Table 3);

Table 3

The *indoor* start reaction values (0.000s)

Indoor	60M			60MH			400M (300m sprint for JIII)			4X2 tracks (4x1for JIII)			M2	Vc
	Place I	Place II	Place III	Place I	Place II	Place III	Place I	Place II	Place III	Place I	Place II	Place III		
3rd	0.189	0.178	0.203	0.235	0.218	0.185	0.225	0.247	0.232	0.212	0.195	0.247	**0.214**	11.22
JII	0.191	0.118	0.171	0.101	0.163	0.126	0.335	0.328	0.225	0.240	0.260	0.238	**0.208**	37.07
JI	0.343	0.209	0.340	0.147	0.111	0.142	0.308	0.220	0.300	0.264	0.230	0.263	**0.240**	32.38
Yth	0.172	0.128	0.167	0.168	0.186	0.207	0.201	0.203	0.213	0.241	0.220	0.344	**0.204**	26.05
Sen	0.172	0.128	0.167	0.175	0.168	0.186	0.201	0.203	0.213	0.241	0.220	0.240	**0.193**	17.23
M1	**0.213**	**0.152**	**0.210**	**0.165**	**0.169**	**0.169**	**0.254**	**0.240**	**0.237**	**0.240**	**0.225**	**0.266**		
Min	0.172	0.118	0.167	0.101	0.111	0.126	0.201	0.203	0.213	0.212	0.195	0.238		
Max	0.343	0.209	0.340	0.235	0.218	0.207	0.335	0.328	0.300	0.264	0.260	0.344		
Amp	0.171	0.091	0.173	0.134	0.107	0.081	0.134	0.125	0.087	0.052	0.065	0.106		
S	0.07	0.04	0.07	0.05	0.04	0.03	0.06	0.05	0.04	0.02	0.02	0.04		
Vc	34.21	25.94	35.52	29.39	23.06	19.97	24.85	21.76	15.37	7.70	10.42	16.70		

Legend: M1 - average value on places and events; M2 - average value on age category; Min - the lowest value, in this case the best reaction time per analyzed variable; Max - the highest value, in this case the worst reaction time; Amp - Amplitude; S - Standard deviation; Vc - Variability coefficient for the analyzed criterion.

- the analysis of the values recorded by the subjects during the national *outdoor* track and field competitions, regarding the variability coefficient on a *practiced event* (Tables 4 and 5) has allowed us to determine a high homogeneity of the values (Vc <10%) for 4 of the 21 analyzed groups of values; a relative homogeneity (10% < Vc < 20%) for 10 of the 21 groups of values, and a heterogeneity (20% < Vc) for the other 7 groups of analyzed values;
- the analysis of the values recorded by the subjects during the national *outdoor* track and field competitions, regarding the variability coefficient on *age category* has allowed us to determine a relative homogeneity of the values (10% < Vc < 20%) for the seniors, and a heterogeneity of the reaction time values (Vc < 10%) for the other age categories (Table 4 and 5);

Table 4

The *outdoor* start reaction values (0.000s)

Indoor	100m			100mh (80mh for JIII)			200m			400m (300mh for JIII)		
	Place I	Place II	Place III	Place I	Place II	Place III	Place I	Place II	Place III	Place I	Place II	Place III
JIII	0.183	0.200	0.166	0.207	0.161	0.134	0.173	0.251	0.288	0.241	0.233	0.218
JII	0.192	0.172	0.184	0.195	0.174	0.154	0.188	0.192	0.233	0.266	0.199	0.344
JI	0.170	0.198	0.205	0.149	0.170	0.205	0.199	0.152	0.211	0.314	0.369	0.282
Yth	0.173	0.165	0.181	0.177	0.223	0.267	0.247	0.299	0.179	NS	0.385	0.346
Sen	0.243	NS	0.189	0.227	0.146	0.226	NS	0.288	NS	0.252	NS	0.284
M1	**0.192**	**0.184**	**0.185**	**0.191**	**0.175**	**0.197**	**0.202**	**0.236**	**0.228**	**0.268**	**0.297**	**0.295**
Min	0.170	0.165	0.166	0.149	0.146	0.134	0.173	0.152	0.179	0.241	0.199	0.218
Max	0.243	0.200	0.205	0.227	0.223	0.267	0.247	0.299	0.288	0.314	0.385	0.346
Amp	0.073	0.035	0.039	0.078	0.077	0.133	0.074	0.147	0.109	0.073	0.186	0.128
S	0.03	0.02	0.01	0.03	0.03	0.05	0.03	0.06	0.05	0.03	0.09	0.05
Vc	15.45	9.72	7.62	15.55	16.60	27.33	15.86	26.66	20.14	11.99	31.77	17.97

Legend: NS - there was no recorded start reaction time

Taking the same approach (for the criteria "practiced event" and "age"), and considering the two competition seasons (indoor and outdoor), the analysis of the best and the worst average values recorded by the female subjects with regards to start reaction suggests the following:

- the best *average value* (M1) for the *practiced event* criterion that was recorded during the *indoor* national track and field championships belonged to the 60 m sprint silver medaled female athletes (0.152 s), whereas the worst average value belonged to the 4x2 relay bronze medaled female athletes (0.266 s - M1 in Table 3);

- the best start reaction *average value* (M2) for the *age category* that was recorded during the *indoor* national track and field championships belonged to the senior female medalists (0.193 s - Table 3), whereas the worst start reaction average value belonged to the junior I female medalists (0.240 s);
- the best start reaction *individual value* that was recorded during the *indoor* season belonged to the 60 m hurdles junior II female gold medalist (her reaction time of *0.101, Fig. 1, s* is excellent, considering the scientifically proven and IAAF assumed physiological limit for his age, of 0.100 s). In complete opposition, the worst start reaction time was recorded by the 4x2 relay female bronze medalist in the Youth category (*0.344 s*, Table 3);
- the best start reaction *average value* (M1) for the *practiced event* criterion that was recorded during the *outdoor* national track and field championships belonged to the 100 m hurdles female silver medalists (0.175 s - Tables 4 and 5), whereas the worst average value belonged to the 400 m sprint female silver medalists (0.297 s - Tables 4 and 5);
- the best start reaction *average value* for the *age category* criterion that was recorded during the *outdoor* national track and field championships belonged to the junior III (14-15 years old) female medalists (0.217 s), whereas the worst average value belonged to the female medalists in the Youth category (0.251 s);
- the best start reaction value for the whole *outdoor* season was recorded by a 14-15 -year old (junior III) bronze female medalist during the 80 m hurdles event, 0.134 seconds, a very good reaction time, considering the scientifically proven and IAAF assumed physiological limit, of 0.100 s. In complete opposition, the worst start reaction time was recorded by the 400 m sprint silver medalist in the Youth category (*0.385 s*, Tables 4 and 5);

F 60 m Garduri J2 Finala

	Nume Prenume	A.N.	Club, Dubla Legitimare	Rezultat
1	Pop, Cristina Diana	94	CS Satu Mare	9.00
2	Calineac, Daria	94	LPS Cluj Napoca	9.07
3	Legman, Georgiana Melania	95	LPS Cluj Napoca	9.10
4	Bratu, Mirela	94	LPS Braila	9.13
5	Panturoiu, Elena Andreea	95	LNPA Cl.Muscel	9.14
6	Nita, Alexandra Madalina	95	CS Ceahlaul Pt.Neamt	9.28
7	Nita, Ruxandra Ioana	94	CSS 1 Constanta	9.52
8	Virna, Andreea Beatrice	94	LPS Iasi	9.67

Culoar	Seria	1 din 1		Timpi de reactie		
8 Virna, Andreea Beatrice 94			8	OK	060	0,357
7 Nita, Ruxandra Ioana 94			7	OK	100	0,192
6 Legman, Georgiana Melania 95			6	OK	120	0,126
5 Bratu, Mirela 94			5	OK	068	0,183
4 Calineac, Daria 94			4	OK	196	0,183
3 Pop, Cristina Diana 94		1	3	OK	044	0,101
2 Panturoiu, Elena Andreea 95			2	OK	096	0,158
1 Nita, Alexandra Madalina 95			1	OK	248	0,125

Figure 1 – the start reaction for the women's 60m hurdles event, at the National Athletics Championship, juniors II (public source: http://www.fra.ro/rezultate/1300692566.pdf)

Table 5

The *outdoor* start reaction values (0.000s)

Indoor	400 mh (300mh for JIII)			4x100m			4x400m (1+2+3+4 for Jun III)			M2	Vc
	Place I	**Place II**	**Place III**	**Place I**	**Place II**	**Place III**	**Place I**	**Place II**	**Place III**		
JIII	0.186	0.257	0.343	0.252	0.220	0.252	0.182	0.179	0.227	**0.217**	22.31
JII	0.289	0.161	0.299	0.202	0.238	0.288	0.209	0.187	0.220	**0.218**	23.42
JI	0.295	0.245	0.281	0.212	0.211	0.262	0.353	0.205	0.214	**0.233**	26.59
Yth	0.321	0.255	0.279	0.220	0.205	0.246	0.278	0.272	0.308	**0.251**	24.60
Sen	0.238	0.254	0.244	0.175	0.194	NS	0.278	0.272	0.298	**0.238**	18.32
M1	**0.266**	**0.234**	**0.289**	**0.212**	**0.214**	**0.262**	**0.260**	**0.223**	**0.253**		
Min	0.186	0.161	0.244	0.175	0.194	0.246	0.182	0.179	0.214		
Max	0.321	0.257	0.343	0.252	0.238	0.288	0.353	0.272	0.308		
Amp	0.135	0.096	0.099	0.077	0.044	0.042	0.171	0.093	0.094		
S	0.05	0.04	0.04	0.03	0.02	0.02	0.07	0.05	0.05		
Vc	20.24	17.61	12.47	13.19	7.77	7.08	25.79	20.50	18.01		

The analysis of the reaction times of the medaled female athletes, for both competition seasons (indoor and outdoor, tables 3, 4, and 5) has emphasized the following aspects:

- the smallest reaction time *value* (0.101 s, which is the best value for his total motor performance) was recorded by a female hurdler from the 16-17 years old age category (Jun II), winner of the gold medal during the indoor season;
- the highest reaction time *value* (0.385 s, which is the worst value for his total motor performance) was recorded by a 400 m sprinter from the 20-22 years old age category (Youth), winner of the silver medal during the indoor season;
- the smallest reaction time *average value* (meaning also the best average value for their total motor performance) was recorded during the indoor season, when the 60 m female sprinters had an average of 0.152 s, in comparison to the best start reaction time average (0.175), recorded by the female hurdles, during the outdoor season;

The analysis of the data resulted from the calculation of the professional female athletes' reaction time average values, with regards to their *place on the podium* (type of medal they had won), as well as the comparative analysis of the start reaction average values, has indicated the following aspects:

- regarding the *indoor* competitions, the best average start reaction value belonged to the female silver medalists (second place winners - 0.197 s, Table 6), followed by the average value recorded by the female gold medalists (0.218 s), and finally by the female bronze medalists (0.220s);

Table 6

Average start reaction values according to age, and place categories

Category / Place	Season - ***Indoors***				Season - ***Outdoors***			
	1st place	2nd place	3rd place	**Average**	1st place	2nd place	3rd place	**Average**
JIII	0.215	0.210	0.217	**0.214**	0.203	0.214	0.233	**0.217**
JII	0.217	0.217	0.190	**0.208**	0.220	0.189	0.246	**0.218**
JI	0.266	0.193	0.261	**0.240**	0.242	0.221	0.237	**0.233**
Yth	0.196	0.184	0.233	**0.204**	0.236	0.258	0.258	**0.251**
Sen	0.197	0.180	0.202	**0.193**	0.236	0.231	0.248	**0.238**
Average	**0.218**	**0.197**	**0.220**	**0.212**	**0.227**	**0.223**	**0.244**	**0.232**

- regarding the *outdoor* competitions, the order of the average values is the same as for the indoor season: the best average start reaction value belonged to the female silver medalists (second place winners - 0.223 s, Table 6), followed by the average value recorded by the female gold medalists (0.227 s), and finally by the female bronze medalists (0.244 s);
- as we can observe in Table 6, the indoor average reaction time values are better than the outdoor ones. Thus, the winter (indoor) female gold medalists have a better average start reaction (0.218 s) than the summer (outdoor) female gold medalists (0.227 s), by 0.009 s. Regarding the average values of the silver and bronze female medalists, there is a difference of 0.004s for the 2nd place, and of 0.024s for the 3rd place;
- the average value of all start reaction times recorded during the indoor season (0.212s) is 0.020s better than the average value of all start reaction times recorded during the outdoor season (0.232s, Table 6);
- after calculating the total average value for both seasons, we can say that 0.222s is not a very good time for female sprinters.

After analyzing comparatively the average start reaction values on age categories during the two studied seasons (column M2 in Tables 3, 4, 5, and 7), we noticed that:

- the 14-15 year-old female athletes (JIII) have recorded an outdoor start reaction that was *worse* by 0.003 s than the indoor start reaction;
- the 16-17 year-old female athletes (JII) have recorded an outdoor start reaction that was *worse* by 0.010 s than the indoor start reaction;
- the 18-19 year-old female athletes (JI) have recorded an outdoor start reaction that was 0.007 s *better* than the indoor start reaction;
- the 20-22 year-old female athletes (Youth) have recorded an outdoor start reaction that was *worse* by 0.047 s than the indoor start reaction;
- the over 23 year-old female athletes (Seniors) have recorded an outdoor start reaction that was *worse* by 0.045 s than the indoor start reaction;
- on average, the indoor start reaction time (0.212 s) was 0.020 s better than the outdoor value (0.232 s);

Table 7 shows us that, considering the whole 2011 competition season, the average start reaction value of the female silver medalists is better (0.210 s) by 0.010s than the female gold medalists' (0.223 s), and by 0.020s than the female bronze medalists' (0.233 s).

In average, the best reaction time values for both competition seasons (indoor and outdoor) were recorded by female athletes in the JII category *(16-17 years old - 0.213 s)*, followed by JIII female athletes *(14-15 years old - 0.215 s)*, and senior female athletes *(over 23 years old - 0.216 s)*. Table 8 shows that the worst average values were recorded by junior I female medalists *(18-19 years old - 0.237 s)*.

Table 7

Average start reaction values according to place, for both seasons

Place	**Season - *Indoors***					**Season - *Outdoors***					**Average** for both seasons
	JIII	JII	JI	Yth	Sen	JIII	JII	JI	Yth	Sen	
1st place	0.215	0.217	0.266	0.196	0.197	0.203	0.220	0.242	0.236	0.236	**0.223**
2nd place	0.210	0.217	0.193	0.184	0.180	0.214	0.189	0.221	0.258	0.231	**0.210**
3rd place	0.217	0.190	0.261	0.233	0.202	0.233	0.246	0.237	0.258	0.248	**0.233**

Table 8

Average start reaction values according to age, for both seasons

Category	Season - ***Indoors***			Season - ***Outdoors***			Average
	1st place	2nd place	3rd place	1st place	2nd place	3rd place	
JIII	0.215	0.210	0.217	0.203	0.214	0.233	**0.215**
JII	0.217	0.217	0.190	0.220	0.189	0.246	**0.213**
JI	0.266	0.193	0.261	0.242	0.221	0.237	**0.237**
Yth	0.196	0.184	0.233	0.236	0.258	0.258	**0.228**
Sen	0.197	0.180	0.202	0.236	0.231	0.248	**0.216**

Conclusions

The analysis of the data recorded in this research, our experience in the practice of professional athletics, as well as previously conducted studies, allow us to say that the accumulation of psycho-motor experience throughout the years of professional practice of women's sprint events does not represent always a factor of improvement for the value of the reaction time to a sound stimulus.

Even if certain studies have shown that motor experience can shorten the reaction time, this aspect was not totally confirmed in the professional athletes studied in this research, the analysis of data showing average values that are not ascendant or descendant with regards to the relation between age, accumulation of psycho-motor experience in the professional practice of sports, and the value of the start reaction time.

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 59 - 63
(RECOMMENDED CITATION)

STUDY ON THE IMPORTANCE OF THE ATHLETIC EXERCISES IN PREVENTING AND COMBATING OVERWEIGHT AND OBESITY IN CHILDREN

STOICA MARIUS[1], STOICA ALINA[2], GOZU BOGDAN[2]

ABSTRACT. Childhood obesity not only leeds to increased risk of physical problems and adult obesity, but also takes an emotional toll as well. Research goal is to identify specific athletic exercises which will be applied systematically to the children of school age (7-10 years) for the detection and treatment of obesity. In this study, we tried to select the athletic exercises, specific and nonspecific, which will positively influence weight loss of young children and keep them within normal parameters appropriate in terms of somatic and fitness. It found that application of specific athletic exercises can positively influence weight of children, through a systematic organization under the guidance of a specialist teacher.

Keywords: *overweight, obesity, children, athletic exercises.*

REZUMAT. ***Studiu privind importanţa exerciţiilor atletice în prevenirea şi combaterea supraponderabilităţii – obezităţii la copii.*** Obezitatea la copii poate determina afecțiuni grave, precum tensiunea crescută, valoare mare a colesterolului, boli cardiovasculare, diabet, cancer, spondiloză şi a bolilor de ficat. Are repercursiuni nu doar asupra aspectului fizic, dar și problemelor de natură psihică.Scopul cercetării este acela de a identifica mijloacele specifice atletismului, aplicate în mod sistematic la nivelul copiilor de vârstă şcolară mică (7-10 ani) pentru depistarea şi tratarea obezității.În prezentul studiu, am încercat să selecționăm mijloacele atletismului, specifice şi nespecifice, care să influenţeze pozitiv pierderea în greutate a şcolarilor de vârstă mică, precum şi menţinerea lor în parametri normali corespunzător din punct de vedere somatic şi al condiției fizice.S-a constatat că aplicarea mijloacelor specifice atletismului poate influenţa pozitiv greutatea elevilor de vârstă şcolară mică, printr-o organizare sistematică sub îndrumarea unui profesor specialist.

Cuvinte cheie: *supraponderabilitate, obezitate, copii, exerciții atletice.*

Introduction

USA is home to the most obese people in the word. It is estimated that in the U.S.A. 22 million children under five years are clinically obese. This number is twice higher than in 1980 (Stoica, 2010).

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In Europe, the percentage is 10% for the same period of time. In adolescents this is even more alarming rate has tripled since 1980, reaching their case from 5% to 16% as is currently:

- five million obese children in Europe - a real epidemic obesity;
- every year there are 330,000 new cases of childhood obesity in Europe (Le Figaro, March, 2007).

Childhood obesity not only leeds to increased risk of physical problems and adult obesity, but also takes an emotional toll as well.

More than that, obesity in children can cause serious conditions such as high blood pressure, high cholesterol value, cardiovascular disease, diabetes, cancer, liver disease and spondylosis (Stoica, 2005).

Moreover, the Romanian statistics on obesity are alarming. A Romanian in four is obese and every second Romanian has a weight problem, because of a sedentary life and an unhealthy eating.

It is important to help a child develop good eating habits from the start and make sure that they do exercises every day for 30 minutes.

Organization and Research Methodology

Purpose and Research Objectives

Research goal is to identify specific athletic exercises which will be applied systematically to the children of school age (7-10 years) for the detection and treatment of obesity.

Within the training of children we applied specific and nonspecific means athletics, adapted to the level of their overweight-obesity.

Research Objectives

In this study, we tried to select the athletic exercises, specific and nonspecific, which will positively influence weight loss of young children, and keep them within normal parameters appropriate in terms of somatic and fitness.

Research objectives:

- identification of bibliographic materials in the country and abroad;
-detection level and composition of overweight and obesity lots included in the study;
- bringing subjects to optimal weight relative to their age and height;
- create the habit of practicing exercise regularly;
- awareness of children about the influence of excess fat on health and aesthetic nuisance.

The Research Hypothesis

We found that:

- an excess of fat may be a consequence of poor nutrition during childhood or even from the earliest years;

- a lack of involvement in the ongoing monitoring of child development from the young favor the obesity;

- a specific and nonspecific means of physical education, athletics and kinesiology easier to maintain an optimal weight and obesity prevention course.

Based on present findings we conducted research to verify the following hypothesis: *Acting systematically with specific and nonspecific physical education and athletics exercises, can influence harmony in the body of school age children (7-10 years).*

Subjects. Location of the Experiment

The experiment took place, from January to June 2011, at School No.. 150 "St. Eleutherius", Bucharest. Children practiced physical education programs, conducted outside of physical education under the guidance of specialized teachers. Measurements were first applied and a final sample of 16 girls and 13 boys, which went beyond normal weight. It was formed a working group of the 29 subjects and had initiated a program with two lessons a week for one hour, for a period of one semester.

Means Used

The findings on the degree of obesity of students, they started to develop exercises to improve and reduce overweight and obesity. Exercises were applied experimental sample were established in the independent variable (Stoica, 2009).

Depending on the degree of overweight or obesity of each child, we systematized exercises in order to pursue objectives:

→ Exercises for analytical processing of muscular and joint;
→ Exercises for walking, running, jumping and throwing;
→ Exercises for strength of different muscle groups;
→ Exercises for coordination capacity.

Somatometrice Methods

Dimensions considered were:

- longitudinal dimensions (height)
- mass-size somatic (body weight)
- body fat, using BIA technology (bioelectrical impedance analysis) by BODY FAT OMROM. The result is displayed in %, and the device calculates and body mass index (BMI).

The following formulas apply:

• Fat tissue in %
• active mass weight body - fat (kg.)
• body fat (kg.) = Weight x body fat %

In children, a BMI over 20 is a health warning; they tend toward a clear obesity. Classic, is calculated as:

$$\text{BMI} \ (\text{kg/m}^2) = \frac{\text{Weight (Kg)}}{\text{Height}^2 \text{ (m)}}$$

Statistical Method

Were calculated the following statistical indicators: average, standard deviation and standard error.

Results and Interpretation

After applying means of physical education and athletics in particular, have found that:

- the obese category, 3 of 8 students have dropped quite high in weight, topping the category overweight now, the remaining 5 students stagnating in the field of obesity, weight losses recorded yet.
- the overweight category, 10 students fell below the 20 overweight, topping the field of normal weight.

The data summarized in tables and graphs represented, we found that the overweight and obese children in Romania reaches fever pitch.

It also found that application of specific athletic exercises can positively influence weight of children, through a systematic organization under the guidance of a specialist teacher.

Conclusions and Proposals

Physical exercise systematically, methodically adapted to the particularities of overweight and obesity in children aged 7-10 years, encourage weight loss, maintain strength of muscle, stopping weight gain, is efficient on subcutaneous abdominal fat, improves their blood pressure and lipid metabolism parameters.

Taking into account reporting BMI to normal age of 7-10 years, we see a variety of BMI to normal.

To prevent this condition, we recommend the following:

→ the fight against childhood obesity should be initiated and must be addressed particularly obese families;

→ setting of meals and a children's routines, lower portion, and a slowing trend of the child to eat in excess;

→ avoid junk food type meals (fast food, snacks, chips, etc..), sweets, and decrease consumption of carbonated beverages and synthetic fruit juices. It also recommends increasing consumption of natural water;

→ supervision of children by weighing weekly and weight comparison with rules for dealing with sex, age and their height;

→ encourage daily physical activities is one of the most important factors in preventing obesity. Favorable effect of sport is both fat burning, especially as concerns providing new child, exposed to sedentary pleasures and eating excessive;

→ limiting time spent watching TV and computer, and avoid eating during these activities.

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 65 - 72
(RECOMMENDED CITATION)

THE EFFECT OF CURRICULUM BASED PHYSICAL ACTIVITY ON THE BEHAVIORAL PATTERNS AMONG COLLEGE STUDENTS

YOSEF HAR EVEN[1]

ABSTRACT. Until about 10 years ago, sports units were part of the university's lifestyle in all Israel universities, educating and encouraging students to engage in physical activity within the curriculum as an integral of the individual's health promotion. These sports units closed down one after the other, and now only two academic centers still have sports centers engaging in physical activity as part of their curriculum, as an obligatory general subject within the students' engineering curriculum. This work presents a literature review as part of a research seeking to understand the students' attitudes and thinking patterns regarding physical activity in general and curriculum based physical activity in particular, so as to be able to make recommendations to decision makers in the universities regarding physical activity intervention programs so as to promote health among the students – the future leaders.

***Keywords**: physical activity, students, health promotion, healthy life style, nutrition, behavior, perceptions*

REZUMAT. Până cu aproximativ 10 de ani în urmă, bazele sportive au fost o parte din stilul de viață al universității, în toate universitățile Isrel, educând și încurajând studenții să se angajeze în activități fizice în cadrul curriculum-ului ca parte integrantă a promovării sănătății individului. Aceste baze sportive au închise una după alta, iar acum doar două centre universitare au încă centre sportive implicate în activitatea fizică ca parte a curriculum-ului lor, ca un subiect general, obligatorie în cadrul curriculum-ului de studenților la facultăți de inginerie. Această lucrare prezintă ce este cunoscut în literatura de specialitate, ca parte a unei cercetări, încearcând să se înțeleagă atitudinea studenților și modul lor de gândire în ceea ce privește activitatea fizică, în general, și a curriculum-ului bazat pe activități fizice, în special, în așa fel încât să fie în măsură de a face recomandări pentru factorii de decizie din universități cu privire la programe de activitățo fizice de intervenție, astfel încât să promoveze sănătatea în rândul studenților - viitori lideri.

***Cuvinte cheie:** activitate fizică, studenți, promovarea sănătății, stil de viață sănătos, nutriție, comportament, percepții*

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Introduction: Significance of the Topic, Theories and Relevant Previous Research

Researchers in the domain of health promotion have regarded university campuses as worthy places for promoting numerous educational causes. Universities such as Oxford and Cambridge have taken the responsibility for educating the students as part of their philosophy whereas other universities regard their role as teaching a profession or a subject matter and nothing more (Zilberman et. al., 2004; Irwin, 2007), and do not include Physical Education and the promotion of a healthy lifestyle in their curricula. Promoting health via physical activity is of great significance as students, during their university studies, reduce their physical activity and engage in sedentary behavior (Behrens & Dinger, 2003; Buckworth & Nigg 2004; Sinclair, et al, 2005; Keating et. al., 2005).

On the other hand, research literature throughout the years shows that lack of physical activity poses great risks to a person's health, both mentally and physically, such as heart disease, diabetes, hypertension, Colorectal Cancer, lack of mental resilience, suicidal behavior, anxieties, and depression. Moreover, many students are not exposed to the physical activity recommendations (Centers of Disease Control and Prevention, 1995; Kilpatrick, et. al, 2005; Soyeur et. al. 2010; Downs & Ashton, 2011).

In his Salutogenic theory focusing on health promotion factors, Antonovsky (1998) argues that instead of focusing on risk factors, we need to focus on health promoting parameter such as physical activity, proper nutrition, healthy alcohol consumption and non-smoking. We are not to focus on damage-controlling medicine. In other words, the theory refers to all people everywhere on the convenience-inconvenience continuum rather to a specific at-risk group. A person ahs to promote his/her health all the time at any state via physical activity and a healthy lifestyle rather than wait for a disease or health threat to develop.

The literature warns us from negative implications of excessive physical activity. For instance, research conducted by Richert & Hummers (1986) and Taliaferro et. al. (2009), examined the association between excessive physical activity and eating and mental disorders, and found a correlation between the wish to lose weight and excessive jogging and eating and mental disorders.

High level physical activity is often mentioned in reference to persons with anorexia. It was found that hyperactivity is one of the early signs of anorexia; 30% - 40% of the women suffering from anorexia participate in excessive physical activity. Some argue that women suffering from anorexia need to feel they are in control, and hence they are excessively physically active. Excessive physical activity comes to enhance the fragile ego and self-image before mental breakdown. In contrast, Richert & Hummers (1986) found that research conducted on drama, dance, Physical Education and English students, found no association between anorexia and excessive physical activity, but rather, a positive correlation between anorexia and self image. Research conducted by Taliaferro et. al, (2009) points to correlation between anorexia

and mental illnesses, such as depression, low self esteem, and negative self image. Finally, and perhaps the most valid finding is the evidence of a direct correlation between excessive physical activity and eating disorders and anorexia.

Literature Review Pertaining to the Association between Physical Activity and Different Life Domains

Research literature presents an extensive body of knowledge regarding the implications of physical activity on many human life domains.

1. Implications of Physical Activity and Proper Nutrition on Physical Health

Obesity is the number 1 disease in the U.S. and the western world, causing heart and other bodily diseases. In 2002, 67.5% of American citizens aged 20 and above were obese. Seo et. al. (2007) and Seo et. al. (2009) reported that physical activity contributes to health promotion and proper weight management. Since the data reveal obesity among students, campuses must engage in intervention to promote physical activity and a healthy lifestyle among students. In 2000, two studies were conducted regarding physical activity as promoting health. The first research conducted by Disch & Cavallini (2000), sought to examine the extent of an individual's physical activity, and how consistent the individual is in the weekly physical activity routine. This research argued that the value of physical activity had been elevated by the World Health Organization by use of a variety of tools, the most important being the proliferation of useful knowledge for promoting the individual's health. The second research was conducted by Ross (2000) and engaged in medical students, whereby the curriculum offered lessons on how to interview patients regarding their health. In particular, the interviews included nutrition recommendations, advice regarding alcohol consumption and physical activity recommendations. The research found that proper nutrition is of great significance to one's health, and is an integral part of medicine. Finally, the medical students were taught the significance of BMI measurements. They were told it would be advised to recommend that their patients walk 30 minutes a day seven days a week.

Suminski et al, (2002); Buckworth & Nigg, (2004) and Sinclair et al (2005) studied college students in the U.S. and in the western world and examined the differences between physical activity among active students and those who are sedentary. The studies found that 78% of American students sit a lot and their level of activity is way below the recommended level of activity for improving health. Moreover, the older the students, the more hours they spend on the computer. Students reported as many as 30 weekly hours of study. This shows that to promote the students' health and physical activity, the college has to promote a physical activity intervention program. Kilpatrick, et. al. (2005) report that only 38% of the students reported steady physical activity and 50% of the students reported a decrease in physical activity since high school. Additional studies (Behrens et. al., 2005; Plavina,

2006) found that most of the students are not exposed to the recommended physical activity, which might put them at risk of obesity and the risk of not promoting health. Most studies concluded the universities have to introduce intervention programs to promote physical activity and health.

In an additional study conducted in a college in Turkey by Soyeur et. al. (2010), the researchers stated physical students' physical activity enhances vigor and minimizes fatigue. This research, too, presented the problem of students' insufficient physical activity among students and the findings show that 605 of the students are not active at all, while 34.9% of the students are minimally active. The conclusion was that physical activity among students has to be encouraged.

In summary, a correlation between physical activity and physical health was found among students.

2. Mental Health Risks and Physical Activity

This section reviews the students' mental health and risks, and their association with physical activity in the campus. Nguyen-Michel et. al. (2006) and Downs & Ashton, (2011) reported that college students develop high risk of mental disease. In 2008, a research was conducted which found that some 53% of the BA students reported mental problems. Some reported severe depression with symptoms. 11% of the students reported considering suicide in the four weeks before the research. Many students reported anxieties.

In 2000, the data showed that 52.8% 0f the students reported moderate to high anxiety. Research has also found a positive and strong correlation between the level of physical activity and the risk of hopelessness, depression and suicidal behavior.

The recommendation to decrease anxiety levels, depression and suicidal behavior included consistent physical activity, which decreases these behaviors: three days a week of moderate – vigorous physical activity, at an average of 25 minutes each time (CDC, 2009). In contrast, Behrens et. al. (2005) argue that in order to promote health, adults should make 10,000 steps each day, whereas there are those who claim 4,000 steps a day are sufficient, meaning 30 minutes of moderate to vigorous walking.

In summary, there is a correlation between physical activity and emotional health among students.

3. Students' Risk Factor Related Behavior: Alcohol consumption, Drug Abuse and their Association with Physical Activity.

This section reviews the findings of recent studies regarding students' behavior pertaining to risk factors: Alcohol consumption, Drug Abuse and their Association with Physical Activity.

Dunn & Wang, (2003), Irwin, (2007), and Seo et al, (2007) reported that 87% of the students experienced alcohol consumption; 43% smoked and 17.7% smoked marijuana, 3.4% had tried cocaine in the year before the research. It was found that

physical activity intervention and sports teams in the universities influence a decrease in smoking, drug abuse and alcohol consumption. Other studies found no association between physical activity and alcohol consumption. These findings are explained by the fact that athletes, too, are attracted to alcohol binging parties as part of the independent students' culture. It was also found that physical activity results in mental resilience, which protects the person against the need to resort to risk factors related behaviors (Downs & Ashton, 2011). It can be said that physical activity may reduce smoking, drinking and drug abuse among students.

4. The Students Perceptions of their Academic Achievements and Physical Activity

The current section will shed light on the students' perceptions of their academic achievement with regards to their physical activity.

Downs & Ashton (2011) report reading a 2007 research which states more than 44% of the students believe their grades have much to do with their mental state of health, and that mental weakness and stress characterize students in their first year in college. The research pointed to the direct association between physical activity and promotion of mental health, and hence, greater academic success. The conclusion was that physical activity intervention programs have to be introduced in colleges so as to promote students' mental health and academic achievements.

5. Students' Multiculturalism Physical Activity

Research conducted by Suminski et. al. (2002) suggested that physical activity with an ethnic variety among students is of great significance, since cultural diversity influences participation in physical activity and the promotion of health. The researchers examined the students' BMI, measured height and weight and physical activity on a scale of 0 – 7: 0 = physically inactive; 7 = runs over 10 miles a week. They also examined how hard it was for the students to perform their physical activity.

It was found that different sections of the population lack knowledge concerning recommendations for physical activity. It was also found that universities have the resources to introduce physical activity and intervention programs, and if students are not active, the resources are not sufficiently used.

There are those who claim that intervention programs do not increase the number of students who participate in physical activity. However, if an intervention program is well structured, and connects to the students' perceptions, it may benefit them. If the program is sensitive, clear and acceptable, the students will cooperate. Research conducted in 1995 found that 42.2% of the students were not physically active. Since the university's human landscape is multicultural, an intervention program which suits the different cultural groups is of great significance for the promotion of students' physical activity. Furthermore, Kemper & Welsh (2010) concluded that Afro-Americans

feelings regarding physical activity are positive, but too many students do not even hear about the recommendations regarding moderate or vigorous physical activity.

6. Access to sports Facilities

The issue of access to sports facilities has not been researched sufficiently. However, researchers suggest that proximity to sports facilities in the campus constitute an attracting force and increases students' motivation to engage in physical activity. Keating et. al. (2005 and Reed & Phillips (2005) found that the proximity to the campus and to home acquired sports facilities have increased frequency, intensity and the duration of physical activity. There was a correlation between the proximity of the facilities and physical activity. Living near the campus and its sports facilities has been a significant factor in the students engaging in physical activity.

7. Gender Differences

Suminski et. al. (2002) found that women are less active than men over the weekend. Keating et. al. (2005) added more information about gender. Students' behavior pertaining to physical activity was researched and it was found that effectiveness is the female students' top reason for engaging in physical activity, and a student that is more effective can promote health better.

Enjoyment has been one of the most forceful causes of physical activity among students; men reported more enjoyment with physical activity than women. Intrinsic motivation is still in its initial steps of research, but has been found to be the main motivation for physical activity, but the wish to look good was a major reason for participation in physical activity: men – because of muscle increase and women because of the wish to lose weight and look good. It was also found that men are more attracted to weight lifting activities and participation in sport teams, whereas women prefer yoga, dance and aerobic dance. The family's encouragement of physical activity among women has been stronger. Hence, gender is factor to consider regarding making physical activity accessible to students.

This section actually concludes the literature review discussing the association between students and physical activity. The following section discusses critical aspects and recommendations.

Critical Aspects and Recommendations

Keating et. al. (2005) argue researchers have to be in agreement regarding measurements of physical activity, "How much exercise per week? What are the measures of physical activity?" In the last two decades levels of physical activity have been altered and the public is confused. There has to be a uniform program for promoting students' physical activity among students, including constant monitoring and improvement processes.

The literature review reveals that all researchers are in agreement regarding the fact that physical activity promotes health on all of its levels: physical health (diabetes, obesity, and nutrition), mental health, emotional health, risk factors, academic success, cultural diversity, proximity to sports facilities and gender differences. However, it seems there is consensus as per the recommendations regarding the intensity of physical activity, the duration of the activity and the amount of activity required for promoting one's health. Hence, it is recommended that follow up studies examine the issue further so as to be able to organize recommendations to students regarding the physical activity required for maintaining good physical, mental and emotional health. Furthermore, the activity has to be adjusted to the students' varying needs.

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 73 - 77
(RECOMMENDED CITATION)

THEORIES REGARDING THE TRAINING LOAD AND MODELS IN RELATION TO THE ADAPTATION CRITERION

SABĂU GHEORGHE[1], MACRA-OŞORHEAN MARIA[2], IURIAN CRISTINA[3]

ABSTRACT. The study object, in relation to the training theory, is the sportsman's organism, subjected to very actual and regular short term and long term stimuli. These stimuli must guarantee a precise modification of the adaptation processes. If we neglect the sportsman's health, it will never allow us to obtain a useful classification of methods and exercises specific to sport subjects, until they do not outrun the detailed complex description. All intentions regarding training, moreover in the case of creating a theory in this field, could become imprudent and thoughtless without the knowledge provided by the models of adaptation processes, produced by applying the load and the tasks to be carried out.

Keywords*: training, criteria, models,adaptation*

REZUMAT. ***Teorii privind clasificarea încărcăturilor şi metodelor de antrenament în funcţie de criteriul de adaptare.*** Obiectul de studiu în ceea ce priveşte teoria antrenamentului, este organismul sportivului, care este supus unor stimuli foarte concreți şi regulați de scurtă sau de lungă durată. Aceşti stimuli trebuie să garanteze o modificare precisă a proceselor de adaptare. Dacă neglijăm sănătatea sportivului, aceasta nu ne va permite niciodată să obținem o clasificare utilă a metodelor şi exercițiilor specifice disciplinelor sportive, până ce nu se va ajunge să se depăşească descrierea complexă detaliată. Toate intenţiile privind antrenamentul, cu atât mai mult în cazul creării unei teorii în acest domeniu, ar dovedi imprudenţă şi nechibzuinţă fără cunoştinţele pe care ni le aduc modelele proceselor de adaptare produse prin aplicarea încărcăturilor şi sarcinilor de realizat.

Cuvinte cheie: *antrenament, criterii, modele, adaptare*

Introduction

The implementation of new model drafts based on the biological priorities of sportsmen, that is on the processes of adaptation to training, are inevitable requirements in the present performance sport. It is necessary to create the ample

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and detailed classification of training tasks for this, as well as the elaboration of method models that use these tasks. They should act accordingly, as for the basic manner the models are the basis, in order to create a theory in which the dominant laws in model functioning should be precisely included.

Neglecting the health of sportmen will not allow us to obtain the classification of the models and the subject-specific and sport branch-specific exercises, there being the need of a complex and detailed description of this phenomenon. The basic condition therefore is the creation of an ample and detailed classification of training tasks, as well as the elaboration of method models that use these tasks. The models represent the basis to create theories, in which we have to include the dominant laws in the functioning of the model. The theory resulting from here must be able to explain mainly the empirical laws and not viceversa.

The classification of training tasks in relation to the degree of adaptation

It is necessary to have a short term and long term classification in this direction, following the adaptation models of the organism, which is subjected to training tasks, and which has to be adapted in relation to its possibilities to cope with these tasks.

Many authors are of the opinion that, in order to use the influences of the physical exercise in the adaptation processes, it is necessary to respect the following points:

- The theoretical model of the human body that includes the knowledge of anatomy, biochemistry, histology, physiology, but also the actual information regarding the respective sport subject.
- The complex reproduction of the exercise and the description of biochemical and physiological processes that take place in cells and tissues.
- The determination of new RNA (the genetic apparatus of cells) formed in cells and organs.

With all the information available, we face difficulties in classifying the exercises with influence on the endocrine and imunologic system. In this manner, a hormone reserve is created for the anabolic processes in all tissues, including the immunologic system.

The mathematical model

The mathematical model provides the possibility to determine the intensity and the duration of the exercise, or of the recovery interval, and to observe the adaptation of the theoretical model in relation to the mahematical one.

The mathematical model encompasses $(nx10) + 6$ differentiated equations, n representing the number of muscle fibres in the muscle, the energetic flow being calculated in this manner, the recovery of the glycogen reserves.

The great advantage and the particularity of this model, in comparison with others that occur in scientific literature, results from the fact that the biochemical processes do not take place in the organism generally, but more precisely within

certain miofibriles, differentiated among them by the speed of metabolic processes in the organism. The results obtained by the mathematical model confirm the data of the theoretical model, and coincide with scientific literature.

The model of reactions with one training unit/session per day

Below we propose the model of exercises adapted to tasks and loads of force/speed, anaerobic-lactacidic and aerobian, as follows:

- Exercises of force-speed:

Intensity I = 90%; D = 0,5 minutes; recovery break P = 10 minutes.

Calculations base on a daily training carried out within a period of 180 days during which 1-17 repetitions were done.

- Exercises with rhythm (anaerobic-lactacidic effort):

I = 60%; D = 2 min; P = 5 min; training days : 180, no. of calculations made = 24.

- Exercises of duration (aerobian tasks):

I = 30% (above the anaerobian threshold); D = 3 minutes; P = 3 minutes; P = 3 min; training days: 180;

Modulation of mycrocycles taking into account the „hormone economy"

By the aid of computers, the adaptation reaction of sportsmen, or of the main systems that intervene in the application of maximum tasks without health risks, have been checked. Further on, we present the problem of creating microcycles according to the principle of „ hormone economy".

The model includes 3 types of microcycles MIC with 4 days of training:

MIC 1: 2 days aerobian effort + 1 day pause + 1 day force-speed tasks.

MIC 2: 1 day force-speed tasks + 1 day pause + 2 days aerobian tasks.

MIC 3: same as MIC 1, though doubling tasks/aerobian load.

The work of speed or force-speed tasks must be followed by a pause, which is necessary for the carrying out of proteinic synthesis, with a higher concentration of hormones in the blood. The increase of aerobian tasks causes an increase of mithocondrions, and an improvement of efficiency. Therefore, we have to introduce other microcycles called „download", to enable the recovery of endocrine glands.

Only an adequate planning of microcycles, with optimal relations among the volumes of speed or force-speed load, and the aerobian ones guarantee an improvement of efficiency, maintaining health at the same time. The reason for structuring training in mezocycles (4-6 weeks) is registered in the increase of the training volume, until the optimum level in the adaptation processes. However, there is the possibility of another planning without downloading microcycles, only if the various microcycles have completely ended the processes of adaptation (supercompensation) of tissues. These processes are slower in bones, tendons and ligaments, that is why other calculations and models are necessary.

Models of adaptation in mezocycles of training

Several specialists have studied the training called „training in blocks", with effect in time for speed runners in athletics, basing on the slow increase of tasks. The conclusion drawn is that the metabolism of hormones outruns their synthesis, from where a stress situation occurs (SEYLE), characterized by the decrease of force efficiency, or by the running speed in tests and compensations.

This problem has been checked by the aid of mathematical models in the following programs:

- training in blocks for the speed test, including the effect in time and accumulative of training.
- the balanced division of tasks along a training period.

In the following table, we are going to present the results of models in various microcycles (MIC) in a semester (the tasks being divided according to the training in blocks). In both cases, the volume of tasks was equal.

Table 1.

The results of models in various microcycles (MIC) in a semester (according to training in blocks)

Microcycle days	Intensity of exercise	Duration (sec)	Break (min.)	Microcycles				
				1	2	3	4	
				Number of repetitions				
Monday	90	6	3	3	24	24	12	6
Tuesday	80	30	10	2	3	30	20	10
Wednesday	90 70	6 60	2 5	3 6	3 3	24 2	12 1	6 1
Thursday	Rest							
Friday	90	6	2	4	32	28	14	7
Saturday	90 70	6 60	2 5	2 12	12 6	12 4	6 2	3 1
Sunday	Rest							

Table 2.

Model results in a microcycle (tasks are divided during the semester according to the best adaptation of the muscular mass and the sportsman's health)

Microcycle day	Intensity	Duration (sec)	Pause (min)	Number of repetitions
Monday	90	6	3	12
Tuesday	80	30	10	10
Wednesday	90	6	2	12

Microcycle day	Intensity	Duration (sec)	Pause (min)	Number of repetitions
	70	60	5	2
Thursday	Rest			
Friday	90	6	2	14
Saturday	90 70	6 60	2 5	6 4
Sunday	Rest			

Conclusions

The steps taken to justify the theory of training indicate the absolute importance of two criteria:

- The register of specific adaptation processes in the sportsman's body for long or short term. The adequate models and the justification of their adaptation to practice are necessary.
- The application of model results to obtain improvement, that is adequate improvement functionally, for task planning and training scheduling, including the theoretical support of training principles.

Logically, the main objective of theory development is its correct application to different subjects/tests or groups of sport subjects.

The understanding of physiological mechanisms of adaptation in relation to the characteristics of sport activity represents the basis for considerations whose aim is the objective assessment of the compensation possibilities of the sportsman's body, and its adjustment in the training process.

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 79 - 85
(RECOMMENDED CITATION)

SKI WAXING – AS A SKI PRESERVATION METHOD DURING SUMMER AND CARRY

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ABSTRACT. Background. Skis alongside with the maintenance of the equipment are the big issue of skiers. Waxing is the "food" of skis and also one of the best carry and preservation method since his water repellent characteristics. **Aims.** The preparation of skis for a preservation and carry goal is another way of use of the ski waxes. This study shows how can wax preserve skis. **Methods.** The research, in our scenario, is based on the ski wax known water repellent and sealing property, used for dual purposes and/or crosspurposes. **Results.** The use of ski wax as a ski preservation method during summer and carry, indicate increase of life and performance of skis and a really good storage and preservation of ski parts, which can alter, due to the corrosive and damaging effects of the air humidity and dirt on contact with the ski edges and the base of skis. **Conclusions.** The study shows an effective sealing of the surface, protected from different corrosive degradation due to preservation exposure of skis.

Keywords: *skis, ski wax, water repellent characteristics of ski wax, corrosive effects, preservation method.*

REZUMAT. ***Ceruirea ca metodă de conservare a schiurilor, pe perioadă de vară şi în condiţii de transportare. Premize***. Schiatul, alături de întreținerea echipamentului de schi sunt dezbaterile mari ale schiorilor. Ceruirea cu ceară de schi este "hrana" schiurilor și, de asemenea, una dintre cele mai bune metode de păstrare și conservare, datorită caracteristicilor cerii de impermeabilitate împreună cu aplicarea ei uşoară pe suprafaţa schiurilor. **Obiective**. Pregătirea schiurilor având ca scop conservarea și transportul lor, este un alt mod de utilizare a cerii de schi. Această lucrare arată cum poate ceara pentru schiuri oferi conservare. **Metode.** Cercetarea, în scenariul nostru, se bazează pe ceara de schi cunoscută , pe proprietatea ei de rezistentă la apă şi etanşare, utilizate pentru scop dublu şi/sau scopuri opuse. **Rezultate**. Utilizarea cearii de schi, o metodă de conservare a schiurilor pe timpul verii și totodată de transportare, indică cresterea vieții și performanței schiurilor, o stocare foarte bună și conservarea unor părţi din schiuri, care se pot modifica, ca urmare a efectelor corozive și dăunătoare ale umidităţii aerului și a murdăriei în contact cu canturile si talpa lor. **Concluzii**. Studiul arată o etanșare eficientă a suprafeței dorite, protejare în fața degradării datorate diferiților agenți corozivi și ca urmare a expunerii schiurilor pe perioada de păstrare.

Cuvinte cheie: *schiuri, ceară de schi, caracteristică de impermeabilitate a cerii pentru schi, efecte corozive, metodă de conservare.*

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Background

In the year 1673 Johannes Scheffer from Argentoratensis Lapponiæ was giving advice to skiers how to handle their skis (http://en.wikipedia.org/wiki/Ski_wax#History - 2012). The technique of making the wood of the ski water repellent was well known as an important part of the maintenance and durability of the ski base. It was in the middle of the XIX century when ski waxing, alongside with the development of ski manufacturing, started to improve as a technique and to become more and more important. Since then the growing need of equipment performances, alongside with the development of the ski industry and chemistry have made the development of better, faster, more durable and of higher quality equipments for ski maintenance and ski service, possible.

Nowadays these techniques of ski service have been developed into a profession.

Athletes from around the skiing world pay more attention to handling the skiing equipment **new, used ones or grooved**. Even though, the technique depends on the type of skis we use and the purpose of the service, made these three selections. Also the development of skis enhanced the skills which led to better skiing techniques with the need of new, made the improvement of the freeskis or off-piste skis (powder skis with twin tip, all mountain skis, big mountain skis, freestyle and newschool skis) a bigger movement and worldwide alone standing category beside the classical alpine skiing on different trimmed slope conditions (natural as for freeride, back-country skiing or ski-alpinism times trimmed slopes for alpine skiing, nordic-skiing and snowboarding), nordic-skiing and snowboarding. Mono-skiing and snowboarding made the new approach in skiing possible, like the rise of the freeskis especially made for all terrain. Manufacturers build skis that can fit groomed and ungroomed snow conditions (ex: Völkl Mantra (http://www.momentskis.com/shop/category/skis/ -2012) freeskis -are made around 70 % for off-piste and 30 % for trimmed slope with tip rocker technology, Völkl Kendo (http://www.momentskis.com/shop/category/skis/ -2012) can go 50-50 %, or manufacturers dedicated only to freeski gears like Moment (http://www.momentskis.com/shop/category/skis/ -2012)), not to mention the huge selection of skis made exclusively for powder back-country skiing. These skis are very different from the classic alpine skis made especially for groomed slopes. The sidecut of the ski is one of the particularities of these skis: these skis have more then 110 and it can go to 160- 170 in front, from 85 to 130-140 in the middle and from 105 up to 130-140 at tail.

Aims

This type of skiing has developed lately in a really high speed from year to year, and earned his place among other techniques. The appearance of the freeski equipment, schools, contest types of handling the skis alongside with the service of these gears made possible this brake through as independent ski style named freeskiing.

Some manufacturers like home manufacturers have their own waxes and own particular way of applying them on the surface of the skis. The technique of waxing

is much more complex than what is known written, because of the servicemens from around the globe, each one of them having their own way of seeing the service of the skis and they are protecting their intellectual knowledge. If the use of less material than what a company would use, usually we are pushed to think that what a factory tuning can make is not possible in a custom one. That thought is incorrect.

Custom ski-service is the best service that a skier can get. The person who makes the service is important along with his skills. It is well known that the companies are for a profit, when, not every time a ski serviceman is going for the profit, instead he is going only for the supreme achievement. Some equipment will not be in use at a factory because the patent of a few are held by authors, who are not in the will to put in on the free market position, instead they make their own little businesses around it. In this part of the world of skiing my family has these kind of concerns as inventors, manufacturers and wax providers officially for the "Gebefügi" Sport Association, since 2006, but with a 100 year of non-official provider heritage for the Gebefügi skiing family and the small skiing community of Cluj-Napoca (for ski clubs like "Voinţa", C.S.S. "Pionerul", Palatul Copiilor Cluj and independent athletes alongside with the athletes of Mountain Rescue Service of Cluj County).

The last years of ski race in Romanian championship at children, junior and senior level had more than 100 of top places in national and international rankings (COUNTY races, F.R.S.B races, F.I.S races) won by the skiers from Cluj's skiing community (results of the races can be found at the national archive of Bucharest, at the archive of the clubs, and in personal archive of skiers and teachers of different clubs) led by ski teacher Gebefügi J.László.O. .

The skier family Gebefügi from Cluj-Napoca is in a work for patenting some of the skiwaxes made.

Methods

The skiwaxes where custom made for race needs, because the huge interest of this family in the ski races.

- **New skis and used** ones have the opportunity to be held in shape as long as they are in usage.

New and slightly used skis have needs like waxing before usage or to preserve during non-usage or carry.

The waxing for skiing technique is different from weather conditions to the skisurfaces and the materials (as waxes and maintenance tools) used. Each ski responds differently in changing either one of those mentioned before. Lots of manufacturers have different types of maintenance kits, beside the hand- and homemade tools that are custom made too. The usage of P-tex as a sliding surface, for instance, is the most popular these days, and the wax for keeping them or carry, furthermost applied is an all condition wax mixture made similar by more companies. Because of the race needs of the athletes and the policy of selling, the ski wax companies keep their formula secret.

In **The Mechanism of Sliding on Ice and Snow (**F. P. Bowden and T. P. Hughes- 1939**)** we can observe that the materials used in skiing and the usage conditions are very complex and the knowledge of the service of skis is still in various changing. It is correct to say that at some exact point of the temperature intervals we can use some specific waxes with the mention of the effort to calculate each sliding time the exact reference point with the exact wax types. We can also say that skiers can really receive all types of waxes for their need also by mode of appliance like hot waxing or dry waxing.

Important, in ski alpinism and the back-country ski handling because before the appliance of the ski skins the grip of the ski- alpinism- skinglue will not have adhesion in a full ski waxing if it's made in an alpine way, therefore the skiwaxing in these type of skiing is different also, even for carry. Also in off-piste skiing the grooved base is common because of the hard territory.

- Grooved ones have the opportunity to be used with a lower percentage of accuracy and lower gliding performances in some skiing conditions. First handling the surface issues by using the tools of repairing like iron, P-tex repairing, in core shot repairing, side edge tuning or base edge angle reset, this technique applies also to the new and used skis depending on the need.

The grooved skis are already in a degrading position so the tuning for these particular kinde of skis is more rudimentary. The carry is the same as for the previous, new and slightly used skis, but difers the amount of material used in recovery, and the work time, since with this tipe of skis we have more work.

Tools. Tools used in the maintenance of the skis are more then 100 (home made tools and company made tools like: Holmenkol tools, Swix, Solda, Wintersteiger, Maplus, Briko, Toko and more).

Different brands use different approaching, and each supplier has his own waxing catalog and waxing technique with an instruction manual. Use of only one catalog and only one company products can be a good maintenance technique but not enough for race. Race department's need more than that, like mixes of more company products and the custom involvement with the knowledge and skills of the service man with the feedback from the athletes. Regarding what we will be going to do or what we want to do, we use more or less of these tools, custom made tools and factory made tools by ski suppliers. Most of them have the same utility with a different tuning finish. We have different angle tools or different side edge (http://www.skituning101.com/ -2012) files, from stone made, to different diamond files, not to mention the metal files or the strippers as sidewall removers. For the base we have from ironing systems like from iron to the hotboxes and the manual corks, besides the brushes that go from the ones made with horsehair to the ones made of stel, or roto-brass brushes.

Results

We created a list of guidance for tools most used in ski waxing and maintenance or ski service and the purpose of these items. This list it's getting bigger each year so we can only provide a guiding one. Guiding one in our case will be the one made with the only one layer of wax for all condition that we referred to. This will be the classic simple waxing that provides skis a good preserve during summer or for carrying and as a ski waxing for amateurs. It can be used also for cleaning the base of the skis.

Furthermore the next need for service of the ski is the fixing tools like the vice that is specially made for skiing and also the table. Because the wax contains toxic components when heated it's highly recommended the use of the air ventilation system.

Short list with ski tools for amateurs.

Base bevel guide- for different base edge angle and base angle that differs from 0.5º, 0.7º and 1º depending on the skier technique and the skiers style (Fig.1.).

Edge bevel guide- for different side edge angles that differs from 90º, 89º, 88º, 87º, 86º, 85º depending on the skier technique and the skier style.

Files – are used for filing the edges.

Clamps- for fastening the file to the edge bevel guide or the base.

Wet-stone and Diamond stones- for side edge tuning, it depends of the shape we have and what shape we need.

Wax - all condition for carrying.

Wax remover- „Wax can be dissolved by non-polar solvents like gasoline, benzene (carcinogenic) or mineral spirits. However commercial wax solvents are made from citrus oil, which is less toxic, harder to ignite, and least damaging (if at all) to the ski base" (http://en.wikipedia.org/wiki/Ski_wax#History - 2012).

Iron and corks- for a even extent of the wax and the cork for tuning finish (the friction from the cork and the base of the ski made manually, can provide enough heat to melt a certain amount of wax, to make the waxing of the base of the ski).

Scrapers - plastic and metal scraper or plexit scrapers - for removing and adjusting the surface of the base when we use candles, waxes, or just for a simple extent or adjustment.

Rubber files - for edge tuning (Fig.1.).

Brushes - made from plastic, horsehair, metal etc.

Repair kit - screwdrivers, knife, screws, lighter etc.

P-tex candle - for grooved ski repairs, melted on the ski.

Fiber made pads- for smoothing and depolarization.

Edge glue - made especially to keep away the metal edge from corrosion, and still to be removable.

The Figure 1 is a section of the ski that shows the parts that need mostly the attention of the skier so to know how to use the tools and what for.

First, the edges should be tuned as for the first day of skiing, this will prevent edges from rust, and is important to take the dirt off. You have to make your skis clean, and for this reason you have to wash them firm, and then hand dry the skis. The bindings should dry in a few days. The things to be carefully about the base, is the edge rusting and base dryout.

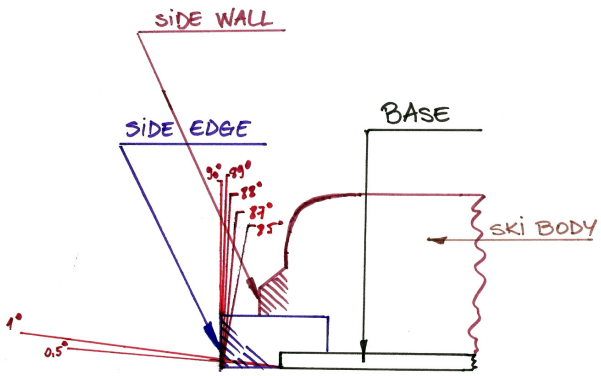

Figure 1. Ski Section

For this reason use the bronze brush, and brush the bare brase, to continue the base cleaning. Put hot wax in a layer and scrape it off before the wax has cool down. This is a practice that helps cleaning the base. For this particular reason, you have to do it a few times. Put a big amount of wax on the base and make shore that the wax should cover the edge too. No scraping or brushing this time, to have a nice sealed skibase, away from the corosive peculiarity of the air.

”If you live in a humid part of the world, try not to store your skis in a basement or garage where there is a high moisture content. If possible, keep your skis in a cool, dry place, away from sunlight. Use a ski strap or tape to keep the skis base-to-base and secure, so that next season all you have to do is scrape off the storage wax, and you will be ready to go!” (http://www.skituning101.com/2010/04/ski-tuning-101-presents-summer-storage.html-2012).

Conclusions

- The study shows an effective sealing of the surface, protected from different corrosive degradation due to preservation exposure of skis.
- After two years of usage of the skis we have a grooved ski that looks and acts like a ski that is in his second year of usage (maybe with less scrapes on the base).
- The skis shows higher gliding performances.
- Base of skis are structured finish.

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 87 - 93
(RECOMMENDED CITATION)

BIOLOGICAL TRAINING STRATEGY FOR AN ALPINE SKIER, CHILDREN AND JUNIOR CLASSES

GANEA IOAN VIRGIL[1]

ABSTRACT. In context of sport performance, preparing children and junior skiers requires a harmonious division of time between training and educational and vocational training. The biological preparation of an alpine skier requires continuous alternation of increasing altitude and training (of residence) with altitude training and competition.

Keywords: *biological preparation, stages of preparation, altitude.*

REZUMAT. ***Strategie în realizarea pregătirii biologice a schiorului alpin la categoria copii şi juniori.*** Pregătirea schiorilor copii şi juniori, în vederea practicării sportului de performanţă, presupune o împărţire armonioasă a timpului între antrenamente şi formarea şcolară şi profesională. Pregătirea biologică a schiorului alpin solicită în permanenţă alternanţa altitudinii de creştere şi formare (de reşedinţă) cu altitudinea de pregătire şi concurs.

Cuvinte cheie: *pregătirea biologică, etape de pregătire, altitudine.*

The importance of biological preparation

This component of sports training includes a series of medical measures for athletes in order to a successfully participation in competitions. The biological preparation for competition, especially before important competitions, is a connection of physiological, natural or artificial factors applied in preparing athletes, in order to increase the body's ergotrop potential, resulting an increased effort capacity. In the means used for the above are not included the artificially raising or doping procedures, that can affect the biological efficiency.

Biological training strategy for an alpine skier, junior high and low class in order to adapt the body to altitude

In preparation towards a specific training is envisaged alternation between altitude of residence and nearby areas, the competition areas or the ones of biological stimulation.

Post season stage (April, May, June), characterized as a phase of strong technical training, is done for 36 days, during holidays and weekends, at heights over 1500 meters (possibly glaciers). Fructifying the adaptation to altitude from the competitive season (January, February, March) the skier is responsive and is capable of great accuracy in technical executions.

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During July and August, the period is characterized by the main goals of rehabilitation and maintenance of physical training, conducted alternately in sea level, with a minimum qualifying period of 14 days to the sea or salt lakes, residence and altitudes between 1000-2000 m (completion of hiking trails).

Land preparation stage is developed in September and October, alternating general and specific workouts between home and altitudes up to 1500 m. Such training will be held 5 days a week at home and three days in the mountains in September and in October for 7 days at home and 7 days in the mountains, alternately.

Pre season stage overlaps with November and December and is characterized by joint training on land and snow (depending on rainfall and budget), increasing the share of specific training on snow in November from 14 days to 22 days in December at altitudes of 1000-2000 m. Than is absolutely necessary to achieve a dynamic training and a "whipping oreganion" in competition areas on different levels of 250-400 m, at high speeds, between Starting and Arrival points.

The In season stage, held mainly in January, February and March, is customizes through the fact that the skiers evolve at different altitudes and in the areas where competitions takes place, depending on the competitive calendar. So, in one single week, this forces them to go through quickly, differences of high-level between residence (approx. 300 m) and areas of competition (1500-2000 m). Body already gained altitude adaptation is not affected by these short passages at low altitudes (memory of acclimatization).

In conclusion, maintenance and training skiers at altitudes decides the efficiency and accuracy of motor skills in competition and his personal results.

Table no 1.

Planning annual training exercise based on the weight factors

Stages of preparation / Factors training	Post season April, May, June	Recovery July, August	Land preparation stage Sept., Oct.	Pre season November, December	In season January, February, March
Physical training	20%	60%	55%	30%	20%
Technical training	50%	20%	30%	50%	20%
Tactical training	20%	5%	5%	10%	40%
Mental training	5%	5%	5%	5%	10%
Pregătire theoretical	5%	10%	5%	5%	10%

Sports training weight factors depending on the stages of preparation (graphical representation)

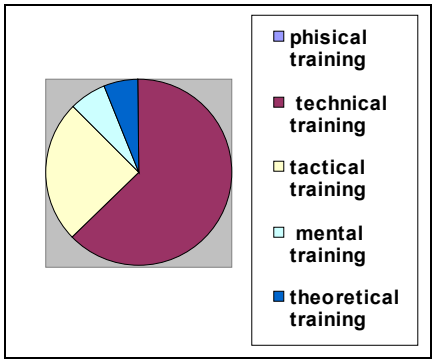

Fig. 1. Post Season Stage

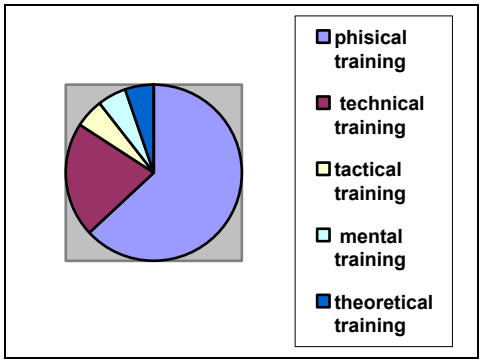

Fig. 2. Recovery Stage

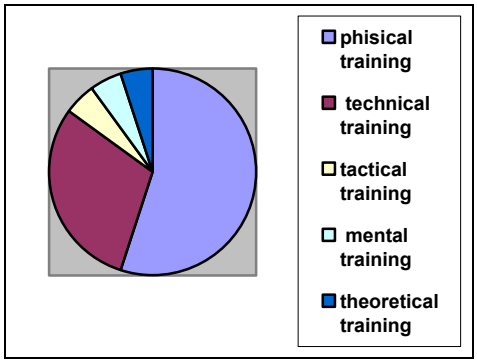

Fig. 3. Land Preparation Stage

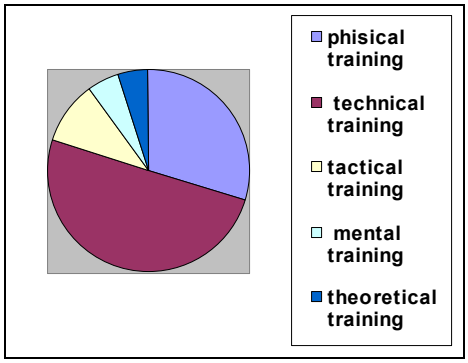

Fig. 4. Pre Season Stage

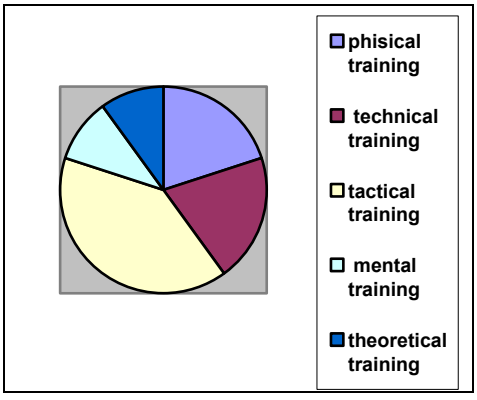

Fig. 5. In Season Stage

Taking into account the recommendations of specialists in sports medicine and making a gradual training for skiers at altitude during a competitive year, we find that is necessary a careful planning of time spent for training in the areas of elevation.

In making such planning we are following some decisive elements:

- athletes included in the two echelons of training are scholars and are depending on their professional training and the structure of the school year
- the success in sport is not yet clarified and cannot make a decision at this time, in terms of another form of education than the daily one. This means that the starting point in training and competition is the altitude of residence and training (family, club).

In order to harmonize the professional training with sports training, ascent to altitude will be done by scientific requirements, dealing with the effect on acclimatization.

Table no 2.

Annual Plan preparation for alpine skiers, junior high and low class children in order to adapt the body to altitude

Numers of days at the altitude				
Months of the year	0-300 m	300-600 m	1000-1500 m	1000-2000 m
April		18	12	
May		19		12
June		18		12
July	14	17		
August		17	7	7
September		22	8	
Octomber		17	14	
November		16	14	
December		9		22
January		15		16
February		12		16
March		15		16
Total	**14**	**195**	**55**	**101**

Number of training days at altitude and competition consumed during one year

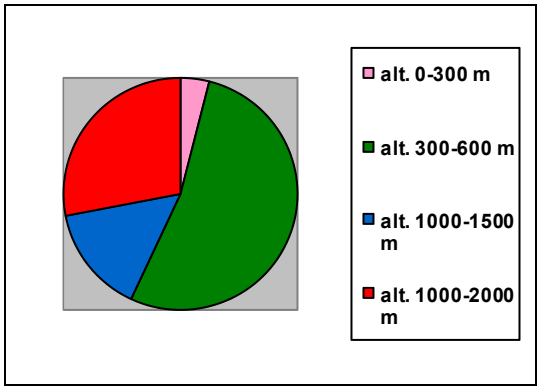

Fig. 6. Graphic stages and days of training and competition in relation to altitude

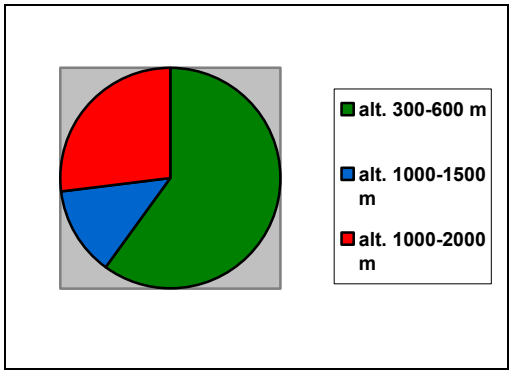

Fig. 7. Post Season Stage
(April, May, June)

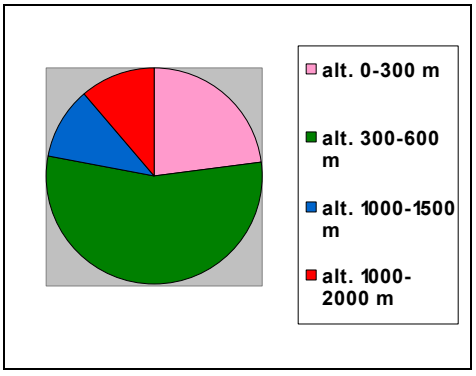

Fig. 8. Recovery and Stimulatin Stage
(July, August)

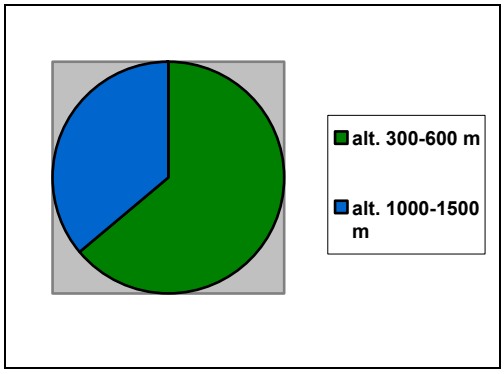

Fig. 9. Land Phisical Training Stage
(September, Octomber)

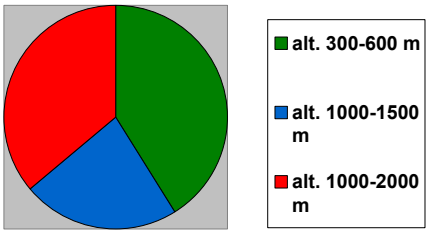

Fig. 10. Pre Season Stage
(November, December)

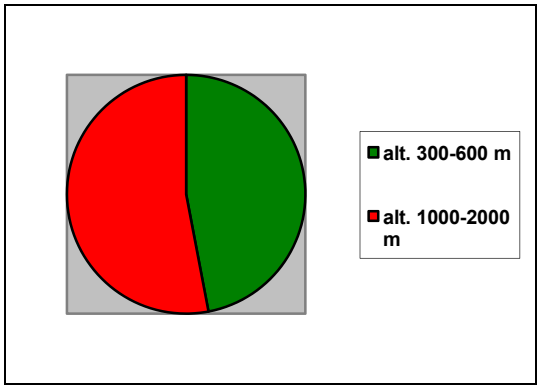

Fig. 11. In Season Stage (January, February, March)

Conclusions

In post season stage months of technical training, April and May, are required four days of training per week to residence (school) and 3 days on weekends at altitude and in June could be done two weeks of training at home and two weeks (vacation) on snow and glacier. Between July-August, considered the recovery and maintenance of physical training, acclimatization to maintain the biological rhythm can be achieved making use of the two altitudes of stimulation:

- 000-300 m altitude for 14 days at sea;
- 1000-2000 m altitude for 14 days in the mountains.

During Land training specific Stage, in September, needs alternation, being required, 5 days at the club and two days per week at altitude and in October, alternating one week at the club and one in the mountains.

During Pre season Stage, the specific training is to be done in November and required a week alternating snow and one on land and in December is required a continuous training of 22 days at altitude (1000-2000 m) with recovery breaks at home, on weekends.

Focused competitive schedule in January, February, March, requires the athletes a great effort to travel to competitions in different development areas. Reconciliation between competition and school without any potential biological damage and acclimatization is done by preparing at home three days a week (Monday, Tuesday, Wednesday) and go to race four days a week (Thursday, Friday, Saturday, Sunday).

According to scientific research results the memory of acclimatization to the altitude determine a maximum recovery efficiency in 24-48 hours, so the best time to conduct the competition.

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 95 - 99
(RECOMMENDED CITATION)

UNIVERSITY SPORT IN USA
(Interview with Cristina Pintilie – USA)

MUREŞAN ALEXANDRU[1], MUREŞAN ALEXANDRA IOANA[2]

ABSTRACT. The achievement of sports scholarships to American universities, by the romanian women athletes led me to look for information about how the American education system ensures integration in school and university for these athletes. Following discussions on the subject I realized that there are large vision differences between university programs from different countries. For a comparison with the Romanian system we devised a qualitative research, conducting an interview by mail, to a student I coached in Cluj, and has transferred to an American university.

Keywords: *volleyball, sport schollarship, university program, social recognition.*

REZUMAT. ***Sportul universitar în SUA (Interviu cu Cristina Pintilie – SUA).*** Obţinerea de către sportive romance a unor burse la universităţi americane m-a determinat să caut informaţii despre modul în care sistemul de învăţământ american asigură integrarea şcolară respectiv universitară a sportivilor. În urma unor discuţii pe această temă am constatat că există mari diferenţe de viziune între programele universităţilor din diverse ţări. Pentru o comparaţie cu sistemul românesc am conceput o cercetare de tip calitativ, interviu dirijat, aplicat prin e-mail unei studente pe care am antrenat-o în Cluj şi care s-a transferat într-o universitate americană.

Cuvinte cheie: *volei, bursă sportivă, program universitar, recunoaştere socială.*

Performantial research provides rational formation of visions and successful policies in the field. Empirical data will often find their optimal applicability in the context of historical, political, socio-economic, and so on, following qualitative research.

Social integration of young, healthy and trained people requires an optimal management of time and priorities during college. I tried to reveal the following aspects:

Presentation of the athlete,

Mechanisms that provide sincere co-interest from student athletes: private sport, sports scholarships,

Athlete and social recognition.

My interlocutor occupies an honorable place in the "hall of fame" of the University of Brooklyn NYC and I will present her through the provided resume.

[1] "Babeş Bolyai University", Cluj-Napoca, email: ducumuresan@yahoo.com
[2] "Palatul copiilor Cluj"

The Cristina Pintilie File:

- 3rd season at Duke
- Assistant coach at Colgate (2007-08)
- Duke Record: 54-13 (.806)
- ACC Record: 33-7 (.825)
- Two NCAA Tournament Appearances (2009 & 10)
- Three All-America selections
- Seven All-East Region selections
- Eight All-ACC selections
- Four-year letterwinner at Long Island (2002-05)
- Led Long Island to NEC Championship in 2004
- Ranked fourth nationally in kills per set in 2003

Could you describe your first important steps in the volleyball career?

I started playing volleyball in fifth grade at Union School Sports Club in Suceava. I did not know than that this wonderful sport that I started in need of a hobby, will bring so many surprises and so many changes in my life. I took a lot of time with this sport, I completely forgot about the playground, and I continued to play volleyball during highschool and college. I started high school in Suceava but I finished it in Cluj Napoca, where I had the opportunity to work with Coach Mr. Ducu Muresan. Sustained by Mr. Ducu, in the second year of college, I arrived in Brooklyn, NYC.

According to the guide of Duke University, in 2007 began your career as a coach; what can you say about volleyball players work during school / highschool?

- In school, and highschool the volleyball players are part of that team. If they are good players, and have sensibility for this sport, parents enroll them in a private club, paying a fee to participate in these trainings. American territory has at least 1000 volleyball clubs. In North Carolina, there are at least 25 volleyball clubs. At this level, there are no scholarships for players, their parents being the only supporters. "

What is the purpose of practicing volleyball at private clubs?

Each player practices this sport for a reason, the most important goal is: recruitment by a good college and recieving a full scholarship (full scholarship) or a partial one. State universities are cheaper than private ones, but it means a lot for a young player to be recruited with a scholarship.

How are the players selected for scholarships?

In the spring season, the clubs start the tournaments, and faculty coaches start going to see the volleyball players during the competition. Usually, these tournaments have at least 50 volleyball courts, with 4 teams on each field. Once the coaches select their players, starts the communication between them. If in first or second year of high school, communication is only through the coach. In the third year of high

school, communication is directly with each other, but through emails; only in the fourth year of high school calls are accepted. Level of competition between universities is very high. A volleyball player can receive emails from all schools. After receiving all the attention, if interested in that faculty will visit campus. An athlete is entitled to five official visits, to different faculties; the faculty must pay for the flight, accommodation and meals. Non formal visits can be numerous but the costs are supported by the player / parent. If the athlete is pleased by the school's offer, she will sign a contract in the fourth year.

What expenses does the scholarship cover?

The scholarship covers the cost of accommodation, school books and food.

Apart from this scholarship, do you have other income from practicing this sport?

It is illegal to earn more money, either by participating in beach volleyball tournaments, sponsors, etc. If the players receive money besides the scholarship, they will be removed from the team.

How is the college volleyball activity organized?

In total, there are 335 colleges in I Division, 302 in II Division and 447 in III Division. I Division universities have scholarships; usually universities that are in the top 200, have allocated 12 scholarships per team. One team can be up to 22 players. If there are only 12 full scholarships, other girls without scholarship have to pay school fees, food and accommodation. If they do not have the grades requested by the Secretary office, they are sometimes helped to enter the faculty, just because they are members of the volleyball team. (Eg at Duke, where I train, it costs $ 52,000 per year, if an athlete receives a full scholarship, she will not have to pay $ 200,000 for the school along the 4 years).

What conditions must be met to be part of the team?

To be a member of the volleyball team, one must have at least 4 subjects in the schedule and maintain a certain average. If an athlete doesn't have good grades or the 4 subjects, she will be suspended for one semester until the situation is remedied. If the situation is not improoved, she will be expelled from the team. They can still go to school but can not participate in volleyball training.

How is the U.S. national volleyball team made?

There are no national teams on the territory of America, but there is the possibility to participate in the annually selection for the national team.

How is this selection for the national team made?

The selection is very different from the one in Romania. The college volleyball is considered an autumn sport. The matches start in late august and end in mid-november. Each school is part of a "conference". At the beginning of the season, each team plays 2-3 tournaments with teams from other conferences. After these tournaments,

each team plays against teams from the same conference twice, at home and away. It depends on the Conference you play in, at the end of the season you will have a tournament or will be selected based on the position you achieved at the end of the season. In the spring season, there are only trainings and four tournaments and results are not taken into account for the school record.

What happens to the players after they finish college?

After graduating college, you can participate in clubs for adults. Each person pays the fee, this activity is only for entertainment.

In the end, I would like you to describe the volleyball activity in the social context.

Social recognition is very high, it is rewarded with diplomas; no material rewards, but in school, conference and national levels, athletes achieve the necessary fame and respect. At the end of the season, each conference will award the best team or athlete in the various categories.

Analysis of the interview with Cristina Pintilie – USA

In the U.S. operate over 1000 volleyball clubs. Students play volleyball in school. Interest is largely academic scholarships achievement. The selection for university starts in tournaments organized in the spring. Rules imposed to coaches relieve athletes from the stress of negotiations by regulating periods and mids of communication. It is considered that schoolgirls can be easily manipulated; in certain classes discussions take place in the presence of the coach or parent. Child social protection works. Universities visits include parents on institutions' costs. For the school it is also an investment (Giddens, A., 1983).

Scholarships cover high school expenses. Other sources of revenue sports are prohibited. Corruption is stopped. Number of scholarships is different, depending on the size of the university. It is ensured an equal number of scholarships for girls and boys. Sports scholarships achievement is strictly related to school standards.

The Championship is played between Conferences. Prepared charts and tables provide a great social recognition.

Conclusions

The American Physical education system provides young people with the opportunity to practice several sports in school.

According to their abilities, tehy choose and are selected for academic performance sports that bring substantial scholarships.

Candidates for these scholarships are interested in co-participation in sports training process, but also to the academic one.

All teams meet amateur sports status, which ensures fair competition based on match statistics and a climate of fair play.

Coaches can be evaluated by their performance under similar conditions of preparation.

The system provides equal opportunities to both selection and school training.

University scholarships distribution ensure the equality between genders.

The value of sports is assessed through various forms of symbolic recognition (Womack, Mari., 2003),with great social impact.

Analysis of these mechanisms predispose to adapt our system to reflect the reality of the world where the liberal leverages talent and value.

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 101 - 105
(RECOMMENDED CITATION)

A DEVELOPMENT PROJECT OF A SPECIFIC INFRASTRUCTURE FOR LEARNING AND PRACTICE OF GOLF

GANEA I. VIRGIL[1], DAMIAN OCTAVIAN[2]

ABSTRACT. Based on the latest findings and statistics on the implementation of golf as a sport in Romania, it has been found that it is more accessible and cheaper to promote than swimming, handball and other traditional sports. In the future any village or town can afford to arrange and facilitate an infrastructure for learning and practicing golf.

Keywords: *golf, university sports, equipment, project, feasibility calculation*

REZUMAT. ***Proiect de amenajare a unei infrastructuri specifice în vederea învăţării şi practicării golfului.*** Pornind de la cele mai recente constatări şi statistici privind implementarea golfului ca sport în România constat că acesta este mult mai accesibil şi mai ieftin de promovat decât înotul, handball-ul şi alte sporturi tradiţionale. În perspectivă orice sat sau comună îşi poate permite să amenajeze şi să faciliteze o infrastructură pentru învăţarea şi practicarea golfului.

Cuvinte cheie: *golf, sport universitar, bază materială, proiect, calcul de fezabilitate*

Situation in the world

There are prejudices in our country related to the sport. One of these, and the most harmful of its development, is that the gulf can be practiced only by a privileged category. This statement is completely false, golf being a sport practiced by many people in countries as - USA, Great Britain, Ireland, Sweden, Japan. It is practiced widely in Europe, Asia, Australia, New Zealand and the Americas. Area of spread is comparable to that of tennis, and in the very near future will become Olympic sports. For example Ireland has 400 golf courses to a population of approx. 4 million inhabitants, which means a golf course per 10,000 inhabitants. Respecting proportion, Cluj could have 30-50 golf courses.

There is a specialized segment of tourism that offers golf packages around the world.

Wide spread of the sport is due to the fact that it can be practiced by everyone from ages 3-4 years to the most advanced, exceeding in this area tennis or skiing.

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With a strong social character, it is practiced throughout all the year, the only limit is the limit of ground frost, although it is practiced in this in some areas.

Golf sports activities does not include miniature golf, this one being a leisure activity.

Motivations

This project tries to cover a "white spot" on the sporting map as it is today in our country.

Faculty of Physical Education and Sports, sports education institution specializing in academic and training specialists can no longer ignore a very popular sport worldwide, with a huge number of practitioners and mobilize some of the highest amounts in infrastructure, training, education, research and equipment.

This sport is increasingly requested as recreational in nature, both Romanian and foreigners (businessmen, doctors, teachers, etc.) which are temporarily or permanently in Romania.

Julius Park Haţeganu arrangement lends itself to a simple type school as its showed in the mapping form attached.

The project intends to attract extra-budgetary sources in the idea of self-financing:

1. Optional course fee for students FEFS
2. Optional course for students with fees from other faculties
3. Private golf lessons with fee
4. Diversifying the Faculty of Physical Education curriculum and Sport, increasing the number of hours and adds to the staff.
5. Attracting more students in the Socrates – Erasmus program.
6. Attracting foreign teachers in mixed programs with Babes Bolyai University.

Institutions and Regulations

Gulf is based on a strong set of rules, etiquette and conduct. Like any sport, the Gulf has its regulatory institutions and coordination. Two regulatory bodies governing different areas work simultaneously on a global scale:

Royal and Ancient - St. Andrews, Scotland, United Kingdom

USGA - United States Golf the Association

The regulations of this two institutions are similar and there's no contradictory terms between them. The only difference is considered only by the specific of location the game took place and a player which plays by rules will have no problem playing in different areas. Romania falls under the territorial coverage of R & A.

Association of professional players is PGA, and in Europe the branch operates is PGA of Europe. This body collaborates with R & A, USGA and the EGA and has responsibilities in the promotion, education, organizing competitions and arbitration.

EGA is a Europe Golf Association which includes independent national federations and clubs. EGA has responsibilities in the Gulf practicing amateur level.

Academy of Golf and Sport Faculties aim to identify, educate and promote the future of the amateur and professional players.

Situation in Romania

In Romania golf did not have a natural development as it was a forbidden sport before 1989. Before the communist period there was a field of 18cups that could meet the royal family and foreign citizens. Period of prohibition stopped the natural development of golf in our country, the gap with the rest of the world being huge.

The investments in this sector in our country are few and had aimed to promote the sport, the assembly of a group of players and not least his image brings facilities for the tourist or commercial interests.

Existing golf courses:

• Paul Tomita Golf Club - Pianu de Jos, Alba County - 18 cups
• Tite Golf Resort - Timisoara - 9 cups
• Lac de Verde - Breaza, Prahova - 9 cups
• Diplomatic Club - Bucharest - 6 cups
• Golf & Polo Club - Potigrafu, Prahova - 9 cups
Driving Range:
• Golf & Country Club Bucharest - Zurbaua, Ilfov
• Driving Range Cluj-Napoca – Calea Turzii
• Kings Land, Blue Golf Club - Ineul by Cris
• The Sânpaul - Cluj (in planning "Transylvania Golf Club")

There are ongoing golf courses projects development in several areas in the country. In Cluj is established The Golf Club "Transilvania Golf" with a proposed golf course, Driving Range and Golf Academy. Also works in Cluj the largest national distributor of golf equipment.

Opportunity

With the first generation of golfers, after 1989, is found an occurrence of a new wave of players and an increased interest in this game. European integration offered the opportunity for a golfer to come in contact with players from countries with tradition in golf and give them the chance to have access to facilities or Golf Driving Range. So, in the country, the number of practitioners is greater than the number of players legitimized to the existing clubs.

Moment is favorable from the perspective of the existence of an entire market segment that is not covered by any of the sports disciplines can be practiced in our country currently. We refer here to the age segment 35-70 years who have not systematically practiced sports and who therefore have limited options in practicing any sport.

In addition, the partnership with the University of Ulster in Northern Ireland provides access to information, literature, teaching materials, methods and systems of learning, going to the exchange of lecturers and students. This partnership offers the chance to take advantage of the expertise of one of the most advanced countries in the world in this field.

Objectives

Faculty of Physical Education and Sport does not propose to produce professionals able to train and prepare athletes at the highest level, but only to popularize the sport among graduates and to familiarize them with these rules, etiquette and behavior so be able to notice, to initiate and guide the players at amateur and eventually to professionalism level. Thus, the main objective of this course is designed to cover a huge gap between how he is known in Romania and the existing world.

Target

Because golf can be practiced at any age, golf player profile extends them to youth 7-10 years until retirement. Youth may be attracted to practice this sport as a major sports or as complementary sport with skiing or tennis. Since golf does not required a special physical training for many people playing it can be an option to those who for various reasons cannot practice other sports. Anyone can practice golf with all the benefits of physical activity outdoors.

Means

A golf course, must contain theoretical modules such as golf history, rules, dress and etiquette, game systems, ways of organizing competitions, computing and disability score, biomechanics, equipment. The practice may include learning and practicing swing, pitching and chipping, putting.

The practice can be taught and practiced in an area in Sports Park Julius Hatieganu and can contain a putting green, sand bunkers and chipping area. Swinging can be practiced on a mat and a synthetic mesh. Practical module may include a trip to Cluj or Driving Range Golf Course in Lower Pianu.

With the support of the Club "Transylvania Golf" can be organized hours of demonstrations and practical training of students. The main national supplier of golf equipment, Golf Store expressed willingness to create a partnership with the Faculty of Physical Education and Sport on the field. Golf Store will provide preferential golf equipment, sponsorship and support from the world's major manufacturers of equipment.

Outlook

In the very near future new Golf courses are expected to be built near major cities. With its implementation, by the appearance of new golf courses and of golf athletes, this sport will rapidly gain in popularity recovering from gap, but without claim to equal countries with tradition in the field.

In addition, by entering the Gulf in the Olympics is expected an increase of interest in the Romanian public.

Conclusions

Romanian geographical areas provides all the necessary resources for planning a school field, with the aim of learning and practice of golf as a sport for everyone.

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 107 - 111
(RECOMMENDED CITATION)

WALKING RECOVERY BY FUNCTIONAL ELECTRICAL STIMULATION (FES). CLINICAL CASE

RĂDUCANU GELU[1, 2], RĂDUCANU NICOLETA[3]

ABSTRACT. A wide range of procedures and devices are used for the recovery or correction of important deficits generated by neurological pathology (Liberson, 1961). Functional Electrical Stimulation (FES in specialized literature) defines the complete set of techniques and methods to apply the electrical stimulus which results in the production of muscular contractions. The FES techniques applied in the walking treatment and recovery for hemiplegic patients with the aid of the ODFS (Odstock Drop Foot Stimulator) stimulator, compensates, by electrical stimulation, the walking deficiencies of patients who cannot raise the toe at the gait moment ('drop foot') (Popescu, 2004). Walking recovery assessment using those techniques is done by tests which consist of the measurement of the performed speed and effort (PCI – Physiological Cost Index) (Popescu, 2004).

Keywords: *neurological deficiencies, walking recovery, FES (Functional Electrical Stimulation), PCI (Physiological Cost Index).*

REZUMAT. ***Recuperarea mersului prin stimulare electrică funcţională (FES). Caz clinic.*** Pentru recuperarea sau corecţia deficitelor importante generate de patologia neurologică, se folosesc o gamă largă de proceduri şi dispozitive. Stimularea Electrică Funcţională (FES în literatura de specialitate) defineşte întregul set de tehnici şi metode de aplicare a stimulului electric având ca rezultat producerea contracţiilor musculare. Tehnicile FES aplicate în tratamentul şi recuperarea mersului pacienţilor hemiplegici cu ajutorul stimulatorul ODFS (Odstock Drop Foot Stimulator), compensează, prin stimulare electrică, deficientele în mers ale pacienţilor care nu pot ridica vârful piciorului în momentul păşirii ('drop foot'). Evaluarea recuperării mersului utilizând aceste tehnici se face prin teste care constau în măsurarea vitezei şi a efortului depus (PCI – Physiological Cost Index).

Cuvinte cheie*: deficienţe neurologice, recuperarea mersului, FES (Stimulare Electrică Funcţională), PCI (Physiological Cost Index).*

The patient O.A., aged 56, male, suffers an ischemic cerebral vascular stroke 6 weeks ago. Subsequent to the said stroke, the motion deficit is expressed at the level of the right side hemicorp. The medicamental treatment and early started recovery

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exercises bring the patient to the phase of the possibility of preserving the biped standing and to the start of walking reeducation (Liberson, 1961). Besides specific kinetic exercises, Functional Electrical Stimulation (FES) procedures are applied at the level of the lower limb in order to stimulate the tonus, decrease atrophy, reduce muscles spasms and improve blood circulation (Popescu, 2004)).

The ODFS (Odstock Drop Foot Stimulator) Stimulator is used for walking reeducation as it compensates, by electrical stimulation, the patient's walking deficit, a patient who cannot raise his toe at the gait moment („drop foot"). The Functional Electrical Stimulation consists of the production of contractions in the paralyzed muscles through the electrical stimulation of the nerves with surface electrodes. By sequential activation of the groups of muscles, for example, at the level of the limbs, o complex movement may be produced by miming activities which, prior to affectation of the central nervous system were voluntary affected. (Poboroniuc, 2002)

A necessary condition is that the nerve of the muscle which is desired to be activated must be still functional. The electrical stimulus is supplied by a device called neuro – stimulator, by the intermediation of electrodes located on the surface of the skin. Walking correction of the deficient dorsal bend is done by the stimulation of the external sciatic popliteal nerve (SPE).

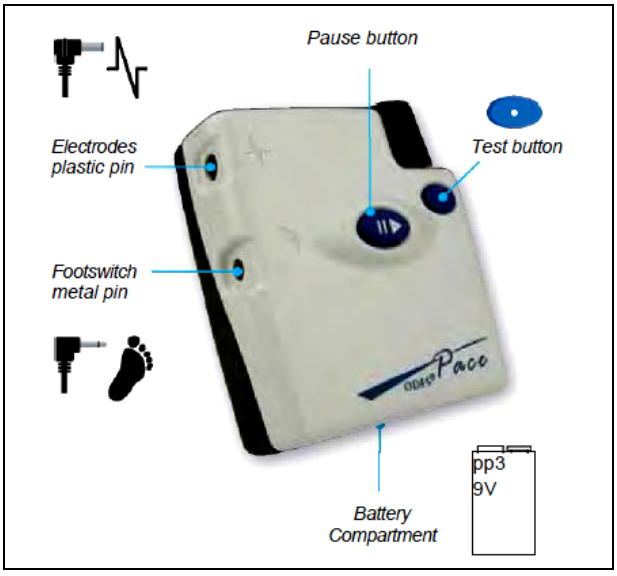

Fig. 1. Odstock Drop Foot Stimulator

Two electrodes are used, the first electrode – the active one, is located in the vicinity of the fibular head of the paralyzed inferior limb and the other one, the negative electrode, near the tibia.

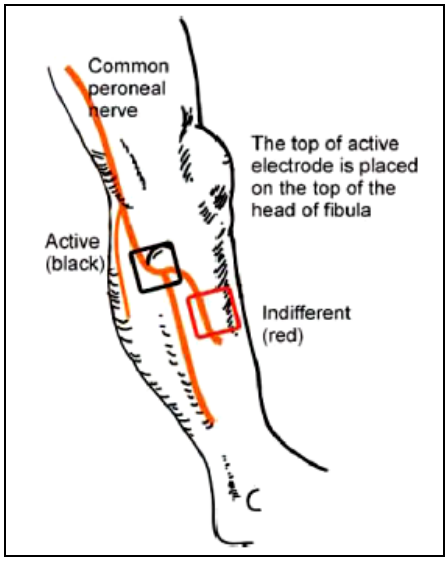

Fig. 2. Position of electodes

Electrical stimulation is done by rectangular shaped current impulses. In the case of muscles having the motion neuron intact, stimulated with surface electrodes, the electrical signal becomes a train of rectangular impulses of a frequency between 20 Hz and 40 Hz and pulse duration between 5 μs and 350 μs. The current intensity varies between 20 mA and 100 mA.

During two consecutive sessions, the patient is guided to the correct positioning of the electrodes, of the switch and to the set up of the stimulation level in order to obtain the functional movement of the foot. At the same time, the internal parameters of the device are adjusted (current, mono/bi-phase wave shape, electrical signal increase and decrease speed).

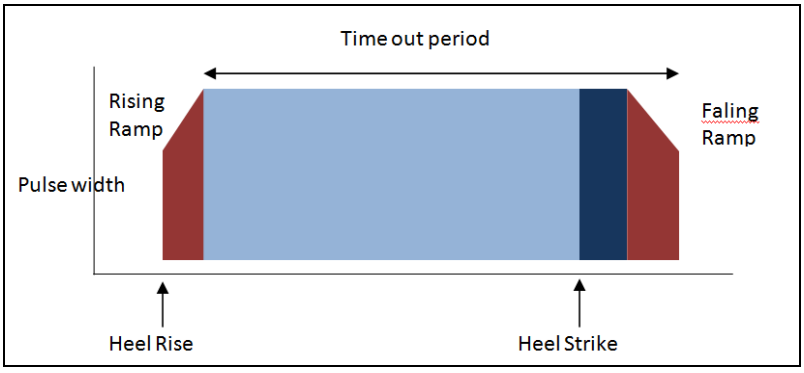

Fig. 3. Envelope

The recommendation is that the patient uses the device on a daily basis, two-three times a day. The corrections at the walking level may be assessed during such sessions. Periodical assessment tests consist of the measurement of the moving speed with/without stimulation on a 10 m distance and the measurement of the effort done on the basis of the PCI measurement (Physiological Cost Index) (Ruhston, 1997).

PCI measurement is based on the hypothesis that the energy consumed though walking by the skeletal muscles is proportionate with the increase of the quantity of oxygen taken in by the respiratory system. This increase is in its turn proportionate with the increase of the heart beats per minute (HR [beats/min]), the heart intensifying its activity for the transport of oxygen through the body. Thus, the calculation of the PCI parameter may be done with the relation

$$\mathbf{PCI = [(HR_{walk} - HR_{rest}) / speed]\ [beats/m]} \quad \mathbf{(1)}$$

The performances achieved on the basis of this neuro motion recovery technique are calculated as a percentage for each test session, using the following relations:

$$\mathbf{Pv = [(Speed_{with\_FES} - Speed_{without\_FES}) / Speed_{without\_FES}] \times 100\ [\%]} \quad \mathbf{(2)}$$

$$\mathbf{_{PCI} = [PCI_{with\_FES} - PCI_{without\_FES}] \times 100} \quad \mathbf{(3)}$$

The patient is asked to walk 10 m. The portion to be tested must have by 1 m extra as compared to the 10 m length, sufficient for acceleration and deceleration, prior and after the coverage of the 10 m.

The patient covers this distance 4 times. He is timed each time. The pulse/cardiac frequency is measured prior and after each covered distance. The first and second test are used to show the difference made by the device and the 4th is used to see if there is any immediate training benefit. Walking speed is a good indicator of the quality of gait; this is used as the main indicator of progress with the device.

Tabel 1.

Table to record time, speed and HR for calculate P_V and P_{PCI}

10 m test			
	Time	Speed m/s	HR b/min
Test 1 (repaus)	12.3	0.81	88
Test 2 (without EFS)	11.5	0.87	84
Test 3 (with FES)	9.8	1.02	90
Test 4 (without FES)	10.2	0.98	88
Ortotic efect		17%	
Carry over effect		5%	

$$P_V = 17.24\%$$

$$P_{PCI} = 41.33\%$$

A positive P_V percentage parameter or a negative P_{PCI} parameter confirm an improvement in the recovery process.

Investing in people!

Ph.D. scholarship, Project co-financed by the SECTORAL OPERATIONAL PROGRAM FOR HUMAN RESOURCES DEVELOPMENT 2007 - 2013

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Contract nr.: **POSDRU/88/1.5/S/60185 –** "INNOVATIVE DOCTORAL STUDIES IN A KNOWLEDGE BASED SOCIETY"

ACKNOWLEDGMENT

This work is partially supported by Collaborative Applied Research Project PCCA 180/2012: *A hybrid FES- exoskeleton system to rehabilitate the upper limb in disabled people – EXOSLIM*.

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STUDIA UBB EDUCATIO ARTIS GYMN., LVII, 4, 2012, pp. 113 - 121
(RECOMMENDED CITATION)

ANXIETY AND SWIMMING PERFORMANCE

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ABSTRACT. Anxiety is defined by many authors as the "fear without object". The sources of anxiety are: fear of failure, fear of defeat as a threat to self-esteem, self-image. Conservative attitude is at stake; and also fear of making mistakes, of not being able, or not being able to control the situation. The excess of anxiety influences physical capacity of the athlete. The answer "fight or flight" is a self-protective reaction of the organism. The closure of the contest is accompanied by phenomenon activation. If it is added to the anxiety caused by fear of success or social status or the threat of self-image, we can see an exacerbation of activation, increased secretion of adrenaline, leading to loss of coordination, precision and lucidity (Epuran M, et al, 2001). Objectives: given the importance of psychological factors in high-performance racing activities, it seems justified to investigate the level of anxiety before and after competition in athletes. Method: we have applied the SCAT questionnaire before and after competitions. The results of our research show a decreased level of anxiety after competition. Conclusions: competition leads to a moderate level of anxiety in athletes. Athletes show higher levels of anxiety score before competing and have a tendency to decrease the anxiety score after competitions.

Keywords*: anxiety, SCAT questionnaire, athletes*

REZUMAT. ***Manifestarea anxietăţii în înotul de performanţă.*** Anxietatea este definită de mulţi autori ca fiind "teama fără obiect". Sursele anxietăţii sunt: teama de eşec, de înfrângere – ca ameninţare a auto-stimei, imaginii de sine, autoaprecierii, atitudinea în joc este conservativă; cât şi teama de a nu greşi, de a nu fi capabil, adică de a nu fi în stare să controleze situaţia. Excesul de anxietate influenţează capacitatea fizică a sportivului. Răspunsul „lupţi sau fugi" este o reacţie autonomă de protecţie a organismului. Apropierea concursului este însoţită de fenomenul de activare. Dacă la el se adaugă anxietatea provocată de teama de succes sau de ameninţarea statului social sau a imaginii de sine, vom constata o exacerbare a activării, creşterea secreţiei de adrenalină, ceea ce va conduce la pierderea coordonării, preciziei şi lucidităţii (Epuran M ş.c. 2001). Obiective: având în vedere importanţa factorilor psihologici în activitatea competiţională de înalta performanţă, ni se pare justificată sondarea amanunţită a nivelului de anxietate pre şi postcompetiţională la sportivi. Metoda: Am aplicat chestionarul SCAT înainte şi după competiţie. Rezultatele cercetarii noastre arată scaderea nivelului de anxietate după competiţie. Concluzii: competiţiile duc la un nivel moderat al anxietăţii la sportivi. Sportivii manifestă o tendinţă de scădere a scorului anxietăţii postcompetiţionale.

Cuvinte cheie: *anxietate, chestionar SCAT, sportivi*

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Introduction

Many authors define anxiety as "the fear without object", consisting insecurity, fear, worry, anxiety is a diffuse feeling or threat. After Spielberger, (1966), cited by Epuran (et all 2001) “trait anxiety describes a characteristic relatively stable, focusing on individual differences in anxious behavior that characterize different individuals. But anxiety can refer to a complex of reactions or responses to a transitory state or condition of the body, which can vary in intensity and fluctuate over time. This is the meaning of the anxiety state. Anxiety in relation to behavioral activity is manifested by disorganized, low performances, tendency to overcome discomfort trough defensive mechanisms. Anxiety sums psycho physiological behavior and performances. In respect to the athletes, we can say that anxiety is conditioned by the need for performance, the success of the performer, but also the possibility of failure.

The objective of this paper was to analyze comparatively the level of anxiety before and after the competition, in swimmers, in relation to performances, given that anxiety levels differ significantly in athletes in relation to their performance.

The research

The study was conducted on a total of 16 subjects, swimmers, members of the team "Swim to perfection", from Cluj-Napoca who participated in the contest "Transylvania Swimming Cup" first edition, held at the Swimming Complex "Universitas "Cluj-Napoca, during 18-19.02.2012.

Materials and methods

It was used in the Romanian version, the questionnaire SCAT - Sport Competition Anxiety Test developed by Martens and colleagues, which is a psychometric questionnaire for self-reactions to stress. Applying the test was made with the informational consent of the subjects and did not require special approval, because is used for the purposes of academic research. The test was applied in two stages: before the contest (T1) and after the competition (T2). SCAT was used to measure trait anxiety in competitive situations. The test consists of 15 items, scored on a scale of 1-3 (1 = rarely, 2 = sometimes, 3 = often), except for the questions 1, 4, 7, 10 and 13 with a score of 0. The items 6 and 11 have reverse scores (rare = 3, sometimes = 2, often = 1). For each item, the subject must respond according to how they felt generally in tournament situations. SCAT results are obtained by summing responses to questions.

The SCAT scale includes the following items:

1. Competing against others is socially enjoyable.
2. Before I compete I feel uneasy.
3. Before I compete I worry about not performing well.
4. I am a good sportsman when I compete.

5. When I compete, I worry about making mistakes.
6. Before I compete I am calm.
7. Setting a goal is important when competing.
8. Before I compete I get a queasy feeling in my stomach.
9. Just before competing, I notice my heart beats faster than usual.
10. I like to compete in games that demand a lot of physical energy.
11. Before I compete I feel relaxed.
12. Before I compete I am nervous.
13. Team sports are more exciting than individual sports.
14. I get nervous wanting to start the game.
15. Before I compete I usually get uptight.

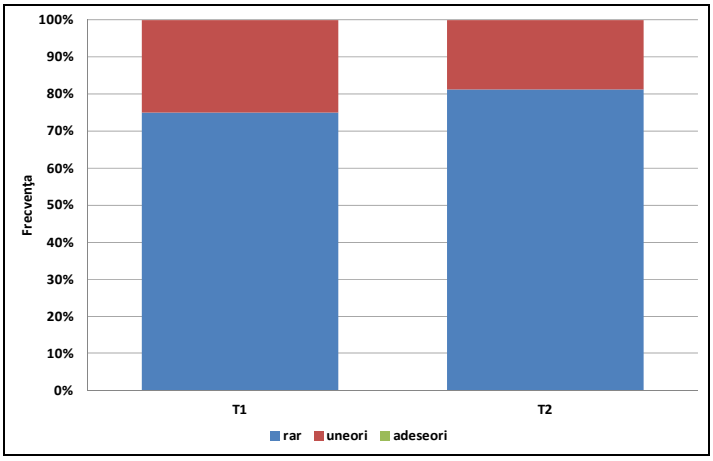
SCAT score: less than 17 indicates a low level of anxiety, 17 to 24 indicates an average level of anxiety and more than 24 a high level of anxiety.

Statistical interpretation of the results was performed with SPSS v.17 software and v.2.7.2 StatsDirect. Graphical representation of the results was done with Excel software (Microsoft Office 2007). For testing the normal distribution we used the Kolmogorov-Smirnov test. In uniformly distributed values, we used nonparametric Wilcoxon test. Confidence interval taken in account was $\alpha = 0.05$ (5%).

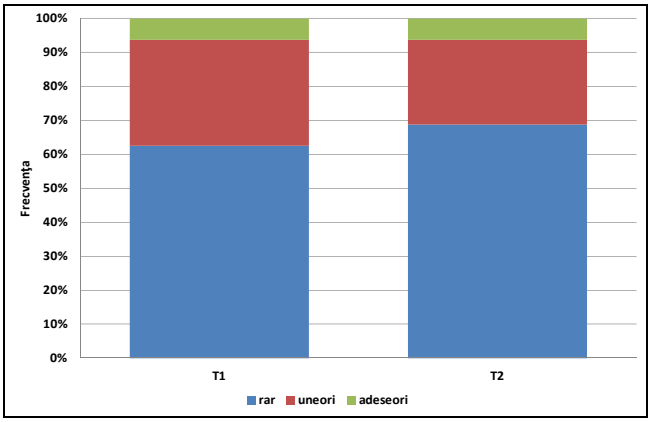
The Results

The frequency of responses to the 10 items is shown in the following figures (except for the items no: 1, 4, 7, 10, 13 which no matter the answer they had 0 score):

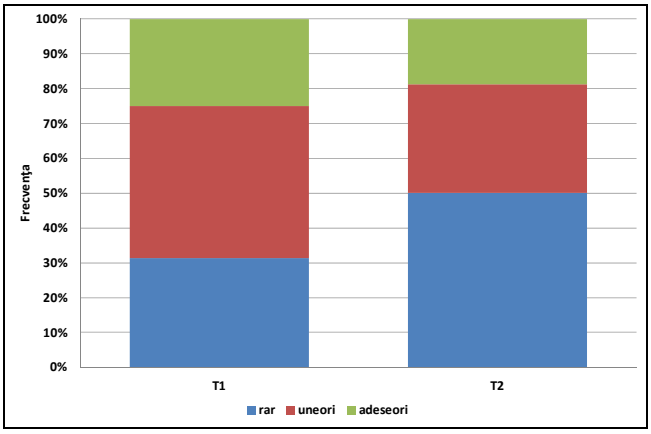
Item no 2



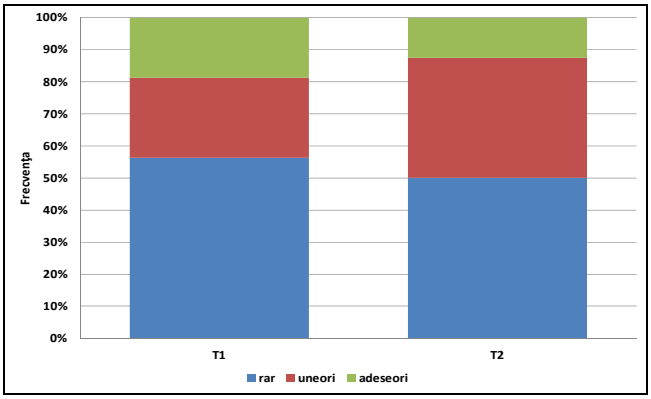
Item no 3



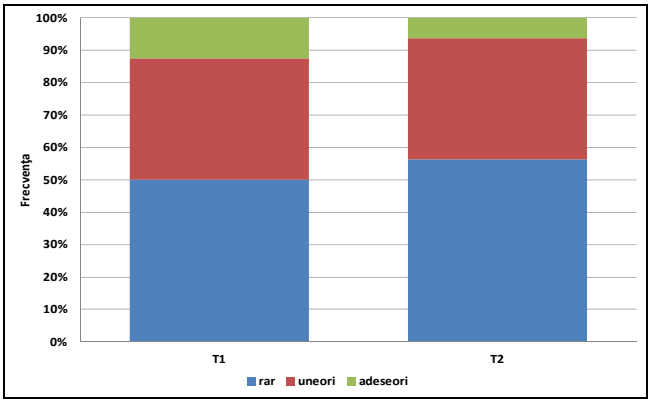
Item no 5



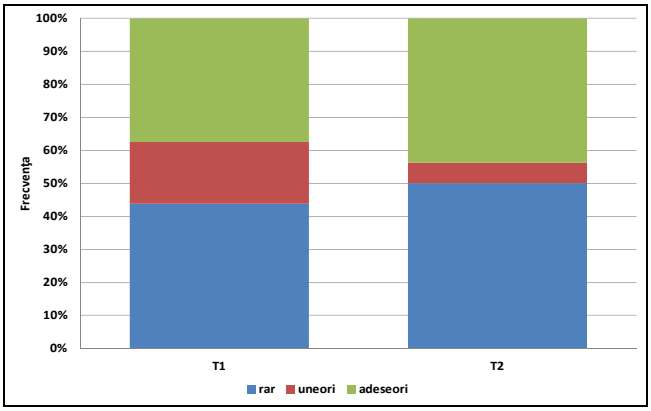
Item no 6



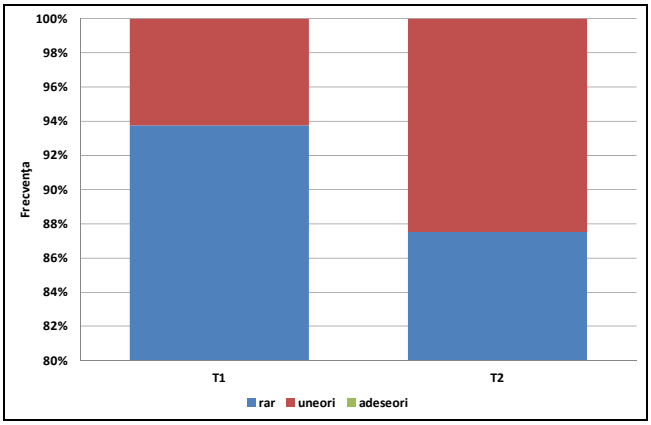
Item no 8



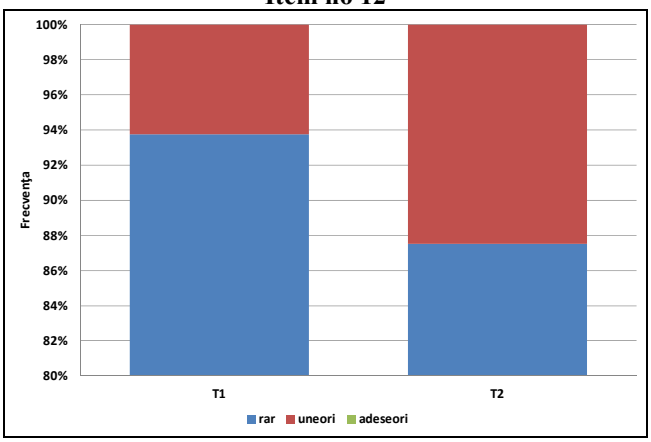
Item no 9



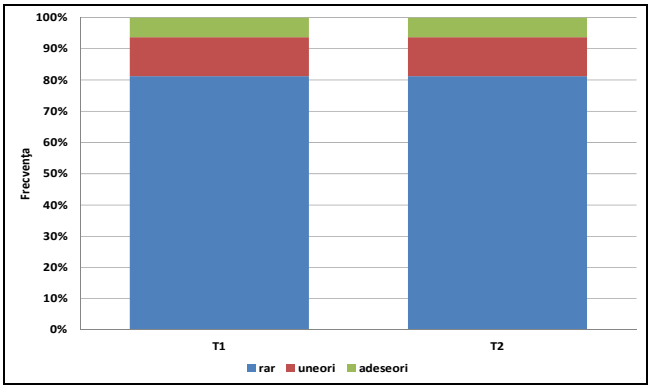
Item no 11



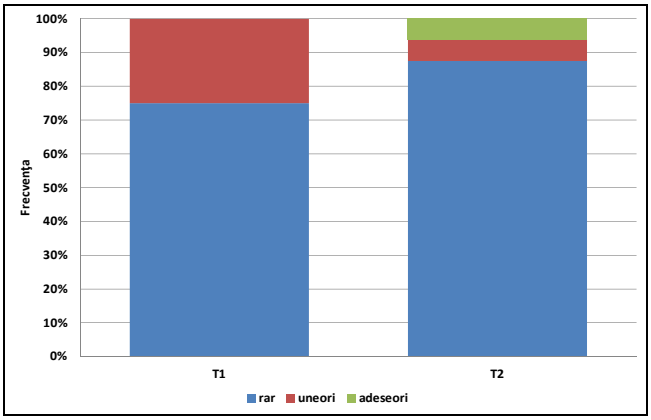
Item no 12



Item no 14



Item no 15



Descriptive statistical analysis of the questionnaire Martens, total score of the perceived anxiety at studied moments is shown in table no 1.

Table no 1.

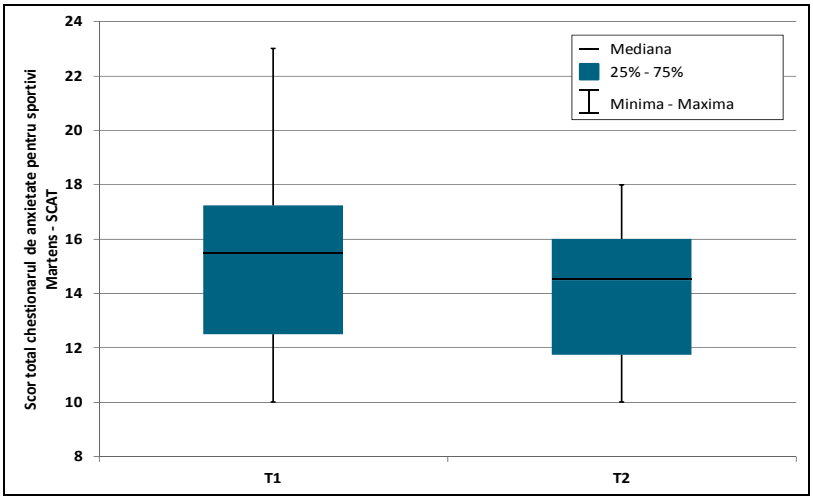
Moment	Average	Standard Deviation	Standard Error	Confidence Interval (95%)		Minimal	Maximal	Median
T1	15,1875	3,525502	0,881376	17,06611	13,30889	10	23	15,5
T2	14,125	2,777889	0,694472	15,60523	12,64477	10	18	14,5

We compared the total score between moments, with statistically significant differences between ranks, on the two moments. The results are shown in table no 2.

Table no 2.

Difference between ranks T2 – T1	N	Average	Sum	Statistical signification (p)
Negative	12	7,83	94	**0,0067**
Positive	2	5,5	11	
Equal	2			
Total	16			

In table no 3 we can se the total score SCAT on moments, with a decrease level in T2, which indicates a lover level of anxiety post competition, compared to T1.



Graph no 3. Total score SCAT on moments

Rank analysis of the two moments (T1 and T2), for the 10 items sows statistically significant differences between ranks for item no 5 (p = 0,046) and item no 11 (p = 0,014). The results are shown in table no 4.

Table no 4.

Item no	Ranks difference T2 – T1	N	Average of ranks	Sum of ranks	Statistical signification (p)
2	Negative	2	2	4	0,564
	Positive	1	2	2	
	Equal	13			
	Total	16			
3	Negative	1	1	1	0,317
	Positive	0	0	0	
	Equal	15			
	Total	16			
5	Negative	4	2,5	10	**0,046**
	Positive	0	0	0	
	Equal	12			
	Total	16			
6	Negative	1	1,5	1,5	1
	Positive	1	1,5	1,5	
	Equal	14			
	Total	16			
8	Negative	1	1	1	0,317
	Positive	0	0	0	
	Equal	15			
	Total	16			
9	Negative	2	1,5	3	1
	Positive	1	3	3	
	Equal	13			
	Total	16			
11	Negative	7	4	28	**0,014**
	Positive	0	0	0	
	Equal	9			
	Total	16			
12	Negative	0	0	0	0,317
	Positive	1	1	1	
	Equal	15			
	Total	16			
14	Negative	1	1,5	1,5	1
	Positive	1	1,5	1,5	
	Equal	14			
	Total	16			
15	Negative	3	2	6	0,705
	Positive	1	4	4	
	Equal	12			
	Total	16			

Conclusions and discussion

Our results show a lower level of anxiety for all swimmers after the race compared to a slightly higher anxiety before competition. Competition leads to a moderate level of anxiety in athletes. Athletes show higher levels of anxiety score before competition and have a tendency to decrease the anxiety score after competitions. We have to consider the state of anxiety throughout competitive activities, especially in athletes who because of past poor results have lower expectations of success, and knowing that the anxiety level is in direct relation with the results obtained during competing or prior from competition experience. This concerns largely the work of the coaches and athletes.

Researches conducted by Burke (et al, 2002) on basketball players show a decreased level of anxiety before competition. Further more some authors suggest that an optimal level of anxiety is important in order to increase performances. (Gregor A, 2005) According to different authors the level of anxiety depends on the type of competition, gender (Hulya FA et al, 2006), and there is a negative correlation between age and the level of anxiety. (Wilson G & Steinke JS, 2002)

The SCAT questionnaire was applied by some author before and after competition in close relationship with the obtained performances (Movahedi A et al, 2007) and according to gender, behavior and parental influences. (Norton PJ at al, 2000)

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