Perception of sports and recreational activities in the benefit of life skills in children and teens of Ciudad Juárez, México

Abstract

The present exploratory research aims to describe the perceptions of the benefit encouraged by sports practice in physical-motor, cognitive, social and interpersonal skills in Juarenses children and young people from 6 to 16 years who participated in the summer school. The population consisted of 46 subjects, divided into two groups: infants and preteens participants of a summer sports teaching experience designed and controlled by the Autonomous University of Ciudad Juarez. For the information-collecting the Natural Semantic Networks technique and questionnaire was used, at the same time, for the analysis, the theory of social representations and HJ-Biplot for the data’s representation and interpretation was used. Among the most outstanding findings is evidenced at a perceptive level on the physical-motor skills development with the practice of the following sports disciplines: swimming (59%), aerial dance (58%), indoor soccer (55%) and basketball (54%), in turn, tennis (30%), flag football (26%) and recreation (24%) activities promoted the improvement of cognitive skills; likewise, social skills were encouraged with recreation (33%), flag football (24%) and handball (15%) and interpersonal skills were encouraged with sports such as swimming.
(31%), karate (28%) and dance (14%). In conclusion, the aforementioned learning space called summer school offers participants a perceived benefit of sport beyond the enjoyment by practice, recreation and health. And enables to observe the relationships that our mind and body have with other everyday learning.

**Keywords**

Sport; life skills; benefits; teens; camp.

**Resumen**

El objetivo del presente trabajo consistió en describir la percepción que tienen los niños, niñas y jóvenes juarenses de 6 a 16 años, participantes en el Campamento de Verano promovido por la Universidad Autónoma de Ciudad Juárez (UACJ), respecto de los beneficios que estimulan las actividades deportivas y recreativas en las habilidades físico-motoras, cognitivas, sociales e interpersonales. La investigación se asume de carácter exploratoria, tipo mixta. La técnica utilizada para recuperación de la información fue Redes Semánticas Naturales (RSN); y el cuestionario, a su vez —para el análisis, representación e interpretación de los datos— se usó la teoría de la percepción y el HJ-Biplot. Entre los hallazgos más sobresalientes se evidencia, a nivel perceptivo, que el desarrollo de habilidades físico-motoras se potencia con la práctica de las siguientes disciplinas deportivas: natación (59%), danza aérea (58%), fútbol rápido (55%) y basquetbol (54%); a su vez, las actividades de tenis (30%), tochito (26%) y recreación (24%) promovieron la mejora de habilidades cognitivas. De igual forma, las habilidades sociales se vieron estimuladas con recreación (33%), tochito (24%) y handball (15%) y en las habilidades interpersonales influyeron deportes como la natación (31%), karate (28%) y baile (14%). En conclusión, el Campamento de Verano con orientación deportiva y recreativa estimula y condiciona, en los participantes, una percepción de beneficio del deporte más allá del gusto por la práctica, el esparcimiento y la salud. Y posibilita la observación de las relaciones que la mente y cuerpo tienen con otros aprendizajes cotidianos.

**Palabras clave**

Deporte; habilidades para la vida; beneficios; adolescencia; campamento.
Introduction

Juarez city is located in the state of Chihuahua (Mexico), it has been one of the border towns mostly affected during the last several year by violence and criminality. Since four decades ago when the international industry arrived to the city due to the NAFTA treat, it has brought a very important benefit in the local investments as well as other major problems; migrants from south America and other poor states in the nation had established themselves permanently in Juarez city in their unaccomplished efforts to cross to United States or even return to their original places. These issues have developed not only to the migrants but also the Juarez community that social challenges increase therefore the employment dynamics both at home and at work site have drastically changed (Diaz, Sanchez and Valdivia, 2015).

It has been noticed that the governmental social programs have not created alternative plans (education, economics, health and culture) that favor to the employees, their families, particularly their own kids (Cruz-Sierra 2014). These strategy deficit affects specially children, adolescences and young people, increasing the gap to further education, personal projects and limitations in their basic needs. Many of these children and youngsters cohabit in the streets for long periods of time, spend their time alone or with other similar peers; these facts have margined the Juarez community to social distress during the last several years (Almada, 2005).

Cruz-Sierra (2014) in his study about the edification of young people identities shows that this population is the most affected by violence and governmental abandonment:

Social violence has taken as representation the youngsters face. This population has been most affected by intentional homicides, criminality in general by violent social practices which they become part of it. It can be said that this is a result Trans generational of a variety of violence that involve a wide range of spaces; institutions, relationships and social habits. In this manner a series of connections and effects develop a chain reaction in specific social relationships (p.614).

An unchained reaction for young people in Juarez city that has pushed them to seek other activities during their leisure time: vandalism, joining gangs, drug addiction,
alcoholism, also the possibility of drug trafficking. These activities are against the basic values which are necessary to an individual’s development. Young people don’t have options to use their free time, lack of employment opportunities and they don’t even know how to create them; it is a reflection of the lack of skills and short and long term goals. (Cruz-Sierra, 2014).

**Leisure time and Recreation**

Time is without a doubt a philosophical concept since its perception varies for each individual, the activity he or she is performing, and even the emotional state he or she is going through. People’s life therefore society in general occurs in a temporary frame. Each day is structure according to a routine that changes according to gender, age, occupation, academic status, socio-economical commitment and personal interests (Peralta, Medina, Osorio and Salazar, 2015).

Aguilar and Incarbone (2005) allude that truly free time is formed for those moments in our lives that remain after satisfying all working or academic obligations thus as the basic, civic and social needs, mainly, free time is when we can choose the activity to perform; in this case, is necessary that freedom prevail over immediate needs. Free time concerning children and young people depends directly on their families, the place they daily socialize and geographical zone.

Social environment dictates how free time is spent in children and youngsters, geographical area, economical resources, social media and communication (especially TV), leisure venues, leisure culture and subculture (videos, music, videogames etc.), fashion trends (especially clothing), family expectations –rightfully thought or dictated- respect to shared time and rhythm of life of their kids (Battle, 1997: s/d).

Therefore the proper utilization of free time plans is an urgent social need (Peralta, Medina, Osorio and Salazar, 2015), in which school, teachers, educational systems, society and government should be a part of it (Salazar, Medina, Manzo and Cortes, 2016), in a constructive perspective: educate for life, develop competent skills, teach healthy life habits and interact with everyone else making the right decisions on free time utilization, therefore

Due to this environment, characterized by the elements above mentioned it is necessary to center the analysis of children and youngsters´ perceptions of Juarez city ages 6 to 16, summer camp participants promoted by the Autonomous University of Juarez City regarding the benefits that physical activity and recreation develop in their learning process, motor skills, cognitive enhancement, social and intrapersonal traits.

Physical and recreational activities as space for learning outcomes are ideal approaches to enhance the development of competency skills under an attractive, motivational and fun scenario for those that involved in the activities. This is the case of the Summer Camp at the Autonomous University of Juarez City, which offers an interactive learning experience, using physical activity and sports as a pedagogic intervention to reach the set objectives.

These physical-recreational-sports summer camps contemplate a simplistic model in open spaces generating learning outcomes while enjoying the spontaneous activity (Juarez, 2012), the leisure time and fun time. Thus the Autonomous University of Juarez City promotes the positive utilization of leisure time through summer events where its participants play, enjoy themselves, learn and develop competency skills in areas such as: cognitive, social, personal and physical-motor which are necessary as an integral formation of a human being.

**Skills for life**

Skills for life can be define as those that are necessary to reach adaptive and positive behavior, allowing individuals to strategically and effectively face the challenges and demands of life (WHO, 2009); among these challenges are included those that affect children and youngsters from Juarez City.

In Mexico, the *Practice of skills for life guide*, developed by the National System for the Integral Development of Families (DIF), mentions that skills for life are tools that allow to develop aptitudes in girls, boys and adolescences to further enjoy life and obtain a physical
and mental health stage. Added through health promotion, the prevention of problems and communication with their peers. During childhood cognitive, physical, emotional and intellectual skills develop very diligently thus enjoying fully their personal life as well as family and society (DIF, 2010).

In the report “Approach of skills for life to reach a healthy development of children and adolescents” —Leena Mangrulkar, Cheryl Vince and Marc Posner (2001) — published by the World Health Organization (OMS), define three large groups of skills when designing programs and strategies focus center in the development of social aptitudes, violence prevention and overall health promotion: social, cognitive and control of emotions.

Subsequently, Choque-Larrauri and Chirinos-Caceres (2009:172) identified and applied three types of skills:

- **Social and interpersonal skills** (including: communication, rejection skills, assertiveness, aggression and empathy).
- **Cognitive skills** (including: decision making, critical thinking and self-assessment).
- **Emotional control skills** (including: stress, and internal increase of self-control).

Mangrulkar, Vince and Posner (2001) consider the following informational content, which can apply skills for life (figure 1):

**Figure 1. Informative content to accompany the development of skills for life.**

<table>
<thead>
<tr>
<th>Specific areas of content</th>
<th>Example of informative content</th>
</tr>
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</table>
| Prevention of violence/conflict resolution. | - Stereotypes, beliefs, powers and cognitive guidelines that support violence.  
- Identification of possible conflictive situations.  
- Violence levels perpetuated by the media.  
- Rolls of aggressor, victim and spectator |
| Alcohol, Tobacco and other substances. | - Social influences on alcohol, tobacco and other drugs.  
- Potential situations to receive a drugs offer.  
- Incorrect perceptions about levels of alcohol and tobacco and the usage of other drugs in the community and by friends.  
- Alcohol and tobacco effects and the usage of other drugs |


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In their meta-analysis Beelman and Losel (2006) consider that programs enhancing social skills to prevent violence, have a greater impact in older than younger children. They also concluded that participants in these programs registered positive changes in their self-perception, affective ties with school, social behavior and academic performance; as well as a significant reduction in their problematic manners.

**Experiences in enabling strategies for life through extended sports programs**

Similar studies concerning skills teaching for life in extended hours has demonstrated significant results with a positive impact in students, especially in three areas: in their feelings, behavior and academic performance (Durlak et al., 2010).

Cecchini, Montero and Peña (2003) recaptured, from Steven Danish, the *Development of skills for life model* and add one more intervention, sports, obtaining substantial improvements on their personal feedback, delay on rewards, the criterial and process self-control, opinions related to the concept fun and the personal sport’s behavior. Such project...
shows the effectiveness of induced physical practice to enhance in both children and adolescences their social relations and community building.

Salazar, Medina, Jimenez and Gonzalez (2014) apply a physical-sports intervention in Mexican children from social vulnerable violent communities and criminology; results showed that there was a decrease in their conflictive ways through games and sports as well as improvement in their assertiveness (Interpersonal skills).

As previously seen camp and sports implemented at the same time allows an ideal combination for motor skills stimulus (Ramirez, Viciana and Suarez, 2004; Rodero, Barbosa and Esmeral, 2015) cognitive (Health Minister, 2005) and social (Cecchini et al., 2003).

Therefore the present study seeks to describe the intentional sports and recreational practice with behavioral strategies —known as skills for life— allowing the participant to perceive its benefits beyond enjoyment and physical expenditure.

Methods and Materials

Research design

The goal of this study, of exploratory character (Cubo, Martin and Ramos, 2011); focus on describing self-perception of benefits on stimulated sports practice over the physical-motor, cognitive, social and interpersonal skills in children and adolescences from Juarez City ages, 6 to 16, which participated in a summer camp. Cubo et al., (2011) agree the nature of these investigations surge due to non-existing/limited studies. The results of the study of exploratory character formed an approximated vision to the topic discussed (Hernandez y Baptista, 2010).

After reviewing the bibliography concerning the topic under study is noticeable that great part of the work has emphasized the quantitative and biological part, not fully attending aspects related to perception and acquisition of skills through summer sports practice. Based on this it was decided to study the orientation provided by sports and multiple
disciplines to stimulate motor, cognitive, social and interpersonal skills, in participants of a summer camp.

The summer sports/recreational camp took place during the months of July and August (five weeks) 2014, at the sports complex of the Autonomous University of Juarez City. Data collection took place during the last week of the summer camp, once all participants had a chance to practice daily (Monday through Friday) several disciplines: swimming, volleyball, basketball1, aerial dance, tennis, indoor soccer 2, soccer, karate, flag football3, recreational activities and handball4.

Subjects

46 children pre and adolescents participated in the sports and recreational learning summer experience design and controlled by the Autonomous University of Juarez City (table 1). The selection of subjects was planned through a probabilistic sample (Zorrilla, 2004). The process to select subjects was conducted randomly, grouping three subjects by age range and gender, ages 6 through 16.

<table>
<thead>
<tr>
<th>Table 1. Study sample</th>
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<tbody>
<tr>
<td>Age</td>
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<tr>
<td>Gender</td>
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<tr>
<td>Women</td>
</tr>
<tr>
<td>Men</td>
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<tr>
<td>Total</td>
</tr>
</tbody>
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Technique

The technic utilized to gather information was the Natural Semantic Networks (NSN), through a survey ad hoc designed. NSN are used to study the meaning in a natural way, since the results are obtained directly from the subjects; therefore avoiding artificial taxonomies (Valdez, 1998). Due to its versatility, it has shown —as a technic— the value identifying

1 On the border cities (with United States of America) colloquially referred basquetbol to basketball.
2 Also called indoor soccer o soccer 5, a sport which combines traditional soccer and indoor soccer.
3 Known as flag football, a modality of football (practiced en EE.UU).
4 Colloquial expression in Mexico and mostly in the border zone. In Spain and other Spanish-speaking countries refers to balonmano.

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psychological concepts on various fields of study (Young, 2001). The selection mechanism are explained by memory using; meanings, words, concepts or images which the subjects associate to objects (Zermeño, Arellano and Ramirez, 2005 and 2010)

A survey was designed to collect the written answers directly from the participants; this approach is utilized in both qualitative and quantitative research (Tenorio, 1995). The survey’s main characteristics are founded in the research objectives, variables and empirical parameters, as well as the population to study and the application circumstances.

Each participant was asked to associate the words with the learning outcome experimented on each discipline. Subsequently, the words were classified to semantic fields associated to the benefits of each skill.

In order to reach consensus and the interpretation of the experience learned on each sport, the theory of perception was implemented. This is the process where an individual transition from meanings to environment (Gibson, 1990).

Allport (1974): Is the conscious cognitive process that consist in the recognition, interpretation and meaning during the development of trials related to sensations product of the social and physical environment, where other psychic processes such learning, memory and symbolization intervene (p. 7).

Pastor (2000): Perception is the active process where the individual acquires information in the environment that surrounds him/her. Perceptive activity builds consistent representations of the environment from patterns linked to the brain’s neuronal activity, thus facilitating survival of an individual on his/her environment through two venues: providing content to cognitive activities and guiding future actions (p. 15).

The previous definitions indicate to us that society’s perceptions about its environment create necessary trials for decision-making processes; each individual will give them form and meaning to the notions that receive from the world based on cognitive thoughts and personal memory characteristics. There are diverse factors that configure perception; such as,
expectations, experiences (interactions) and motivation. These qualities could produce a variety of different impressions, since they interact among themselves in a dynamic way.

In other words the informant had the possibility of participating during the summer sports sessions (five weeks), in groups, with the same instructors and the sessions were very similar for all of them. Their sociodemographic situation is alike, since they are from the same city, they don’t participate in extracurricular activities and have a similar age range.

Data analysis

Data analysis required descriptive bar graphics as well as HJ-Biplot a multivariate technique allowing observing —in a same factorial plan— all variables and subjects involved in the research.

Biplot, according to Gabriel (1971), is a graphic representation of a data matrix $X_{(n \times p)}$, resulting from observing $n$ individuals in $p$ numerical characteristics. According to Galindo (1986), is a joint mode representation form of individuals and variables of a given matrix. The biplots are useful describing graphically data. HJ-Biplot is a graphic multivariate representation where the markers have been selected in a way that both can overlap in the same reference system with maximum quality in its representation (Galindo, 1986).

MultiBiplot statistic program —developed by Jose Luis Vicente Villardon— from the Statistic Department, Salamanca University, Spain, was utilized to implement HJ-Biplot.

Results

Results were organized in general analytical results after systematization of the information, the first one, concerning relationship between sports and learning of motor skills, then social, cognitive and interpersonal skills. Finally, an analysis associated to sports with major impact in developing skills for life is shown.


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Results achieved on the perceived relationship of motor learning and practiced sports, are shown in figure 1. As it can be seen, swimming and aerial dance, with 59% and 58% respectively, are the disciplines with major motor impact on children and adolescents in Juarez city, followed by indoor soccer (55%) and basketball (54%). Reviewing the data is only correct to mention that such sports/disciplines stimulated motor skills such as; improvement of the posture, equilibrium, orientation, rhythm, reaction and motor promptness.

Indoor soccer is the discipline with major motor impact in children, while for preadolescence is the aerial dance. Leaving at the end, both, recreation and recreational activities (figure 2).

Concerning cognitive skill in children and preadolescences appears to be stimulated by tennis (30%), flag football (26%), and recreation (24%). Recreational activities, such as indoor soccer and volleyball offered less impact of the two groups’ analyzed (figure 3).

As it can be observed the discipline of tennis has the most impact in the cognitive skills in children while recreation has for preadolescences.
Social skill obtained the lowest levels of perception, it had some minor impact on developing areas such as: communication, conflict resolution, leadership, facilities of bond of union, collaboration and cooperation and teamwork; however, it is an opportunity area to empower next intervention. According to preadolescents and children; recreation (33%), flag football (24%) and handball (15%) are the activities with closer link to social skills (figure 4). It is important to mention that with group gathering and interaction, sports oriented to competition do not generate a development in social skills.
Regarding development of interpersonal skill, sport activities that had major stimulate impact on self-consciousness, trust, interest, self-motivation and commitment —according to children’s perception— were: swimming (20%), karate (26%); nevertheless, preadolescences had swimming at (11%), and dance (7%) (Figure 5).

As noticed individual sports are a magnificent option to enhance the development of skills that represent a challenge to youngsters.
Motor and cognitive skills had major achievements during the intervention, however social and interpersonal skills did not see an increase over 30% (figure 6). Nonetheless reviewing each sport/discipline there are evidences of a point of encounter among three or four skills. These sports are: swimming, dance and recreation.
Following the HJ-Biplot plan 1-2 is presented, since both the individuals’ classification and the structure of the variables’ covariance are important. Such plan shows absorption of inertia of 36.48%.

HJ-Biplot’s vectors show each of the activities which whom skills are related to. The dots on the plan represent each of the children and preadolescents, green refers to physical-motor skill, yellow, cognitive skill, pink, interpersonal skill and blue social skill.

HJ-Biplot’s plan 1-2 confirms the relationship found between skills and activities. As it can be observed, physical-motor skill has a positive relationship with the majority of the sports (basketball, volleyball, aerial dance, indoor soccer, swimming, and soccer) this according to children and preadolescents from the city of Juarez, nevertheless it can be detected a negative relationship with recreation. At the same time it is possible to observe the relationship that exist among interpersonal and social skills with recreation, separated themselves from the other activities.

Observing the variables (vectors) positive strong relationships are found amongst aerial dance, volleyball and basketball, as well as with soccer and swimming. Nonetheless,
according to children and preadolescents these variables are found practically independent of the recreational activities.

Discussion

According to the results and contrasting them with similar research/publications — such as those of Beelman and Losel (2006) as well as Durlak et al., (2010) — it is confirmed, summer sports and recreational camps as an alternative and controllable venue for learning, allowing the development and interaction of competently skills with ludic approach and


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sports. Furthermore, it offers the possibility to contemplate summer camps as a positive action to prevent violence in this age group, enhance rebuilding of social structure and development and strengthening of the community (Edward, 2015).

Furthermore, skills for life development improve positive attitudes towards formal and informal (traditional) education formats, having a direct impact on their social and personal development (Cecchini et al., 2003; Ramirez et al., 2004). In other words; school and family are not exclusive elements in the successful formation. Even when this study is not an in-depth direct associations, it allows to build instruments that can measure the intervention regulated by sports, its impact on youngsters’ cognitive and personal life.

It is manifested that after school activities or during vacation periods are essential to stimulate learning outcomes through ludic approaches and sports. Furthermore, it showed a reduction in conflictive and problematic behaviors, similar to other studies (Salazar, et al., 2014).

It was also observed sports stimulation influence associated to other variables of control, organization, infrastructure and teachers, which allows the acquisition of significant learning (Cecchini et al., 2003). During this intervention the disciplines/sports with major results for skills for life formation were: swimming, flag football and recreational activities. Without a doubt these disciplines represent a methodological opportunity to establish causal or associative relationships,

It also distinguishes major bonding of motor skills with sports (Ramirez, Viciana and Suarez, 2004; Rodero, Barbosa and Esmeral, 2015) recreation associates with social and interpersonal skills. Additionally, major motor development is perceived during childhood and social and interpersonal skills benefits are prevalent during adolescent.

Conclusion

The present research permits to distinguish the importance and efficiency of summer camps as an attractive and motivational form for participants and as an educational format, in open spaces and spontaneous for organizing entities.


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It is detected that sports promotes learning for life (cognitive, social, interpersonal and motor), allowing users to envision problematic situations and type of learning they should utilized to continue participating in the game or sport. Consequently it would be desirable to take advantage of these ludic scenarios (summer camps), to stimulate, develop and boost the capabilities, skills and talents of those that participate.

Finally, it will be important to continue finding out with new methodological techniques and studies design with a critical approach, the real impact that inductions through sports as a recourse and mentor element in children and adolescents.

References


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