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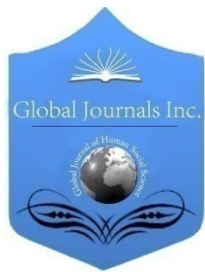
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Masquerade Performance Tradition of Idoma: Issues of Limitation and Methodological Approaches in Research

By Anyebe Ted

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Abstract- This work presents the researcher's experience of a field work on Idoma masquerade tradition. This paper examines the probable difficulties as well as procedures of data collection in masquerade studies. The work states that masquerade performance is the cradle of Idoma civilization. This validates the important place of systemic methodological strategies in researches of this nature. The research shows that Idoma masquerades are conceived as spiritual contraptions which are personified in bodily forms. These play functional roles in the peoples' lives. As a result they are guarded jealously. Findings show that people's understanding of the world around them is sustained by the peculiarities of their cultures and traditions. The paper concludes that tools like oral interviews, participation observation, case studies, holism and behind the scene involvement are important instruments in conducting successful researches in Idoma masquerades. Thus presents that using the qualitative approach to methodology achieves better outcomes.

Keywords: *masquerade, spirits, performance, idoma, worldview, methodology, tools, research, function, procedures.*

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Keywords: *masquerade, spirits, performance, idoma, worldview, methodology, tools, research, function, procedures.*

I. INTRODUCTION

This paper is the outcome of a study conducted to examine contending issues in the realm of Idoma performance traditions. These issues relate to perceptions of the dynamics of performance traditions, artistic processes, functional aesthetics and paradigm-shifts. Other issues raised in the work are stylistic devices and symbolic structures; issues of internal coherence, and the ability of researchers to examine data from the context of derived on the ground evidence of Idoma traditional theatre practices. This study which was conducted in the area of traditional performances encountered numerous challenges. One of such challenges is the fact that masquerades in Idoma are jealously protected and preserved with utmost secrecy. Venturing into the masquerade abode by a stranger is like committing sacrilege. In the traditional abiding places of most masquerades, the tradition remains classified. But the attitude of adhering strongly to secrecy and confidentiality by respondents can present major challenges for researchers. As a researcher factors such as accessibility, receptivity, perceptibility of

respondents and user-friendliness of data are invaluable asserts as these tend to validate data and authenticate empirical presentations. From the findings of this research, it can be said that one of the most difficult areas which a researcher can venture into in Idoma is in the area of masquerade tradition.

In Idoma, and indeed in many other African societies that are still predominantly non-literate conducting researches in the area of the peoples' values systems is very important. For such societies, culture remains an essence, perhaps, their humanity's primary archive that need to be preserved, especially in a fast globalizing world. The continuous preservation of the cultures of the subjugated peoples of Africa, in an increasingly customized world of globalization, can be facilitated by the perpetuation of Africa's numerous indigenous theatrical traditions. Masquerade performance tradition archives both tangible and intangible cultures. Masquerade performances in Idoma are traditional structures that articulate the cultures and mores among the people. This performance tradition presents through the expressive communicative processes that enunciate the people's purview of order and reality. Masquerade tradition can be seen as an iconic culture among the Idoma. It is thus a product of the Idoma artistic enterprise, which explains the people's existence within the inexorable consciousness that gives meaning to their theatrical traditions. Researches in the performance tradition therefore needs to be encouraged. Through researches, the business of documenting the masquerade traditions, which is a major repository of the Idoma people's knowledge systems is also achieved.

Masquerade performances demonstrate at various levels the peoples' philosophy of life which tend to illustrate the relationship between mystical and the mundane aspects of life as one of the ways in which nature is preserved. This performance tradition provides the most appropriate practical enunciation of the people's philosophy, and lifestyles. In spite of this, the performance presents with problematic gains. While researching in masquerade performance can be beneficial, especially to the Idoma, it is ironically not a user-friendly exercise as can be gleaned from the discussion below.

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II. CULTURAL ISSUES: PROTECTING THE ANCESTRAL PANTHEON

The performance traditions acts like a cultural warehouses of the people. According to the Idoma worldview, masquerades are the spirits. Masquerades are construed as functional ancestors that do periodic visits to the living. Masquerades are vehicles for conveying peoples' prayers, aspirations and hopes for the present and future. Idoma masquerades belong to the ancestral pantheon and embody in words and images, the totality of the people's fate through life. It is believed that the ancestor/masquerade dramaturges play very fundamental roles in maintaining the people's well-being and every precaution is taken to protect them from the predatory hands of strangers. In recent times, theft of masquerades from Idoma by traders that deal with antiquity has increased with ignominy. This has heightened suspicion of non-masquerade members that come around seeking for information about their performances. The protectiveness though genuinely instigated, presents with its attendant restrictions to the researcher.

The link between Idoma masquerade performance and the wellbeing of the society is firmly rooted in the traditional psych. Perhaps the phenomenon of transcendentalism in Idoma worldview as extrapolated in the principles of traditional performances tells this story better. The tendency to intermesh secular and spiritual experiences can be explained in the various examples of Idoma masquerade performances. Some of them are: *Alekw'afia*, *Ikyahoho*, *Ogrinye*, *Ikpachukwu*, *Oboche*, *Akpmobe*, *Iglo* and *Okpma*. The core essence of these masquerades is that the performances use the theatrical medium to physically articulate and demonstrate the collaboration between Idoma worldviews and the realities of social life.

Masquerade performances and all the associated theatricalities, in many ways reinforce the close relationship between the physical and the spiritual world. In Idoma, the spiritual aspects of life and the social aspects coalesce even in everyday life. For instance, it is believed that everything that happens in a man's life has a spiritual inception. That is, every physical occurrence has a spiritual antecedent. Incidences of rain or drought, achievements or failure, health or sickness are believed to have spiritual conceptions. To this extent, even the names that people bear are believed to be spiritually efficacious. The rapport between the physical, spiritual and social entities provides the major foundations upon which the masquerade conception in Idoma worldview is founded. In this intermeshing relationship, Idoma traditional religion provides the society with the essential devices (theatre in this instance) that rationalize the physical/spiritual collaboration.

According to the Idoma belief systems the collaboration, convalescence and continuity give rise to the various events in the society. For instance, it is believed that even though man exists in corporeal form, his real being is made up on both spiritual and body aspects. Similarly, an ancestor makes appearance in corporeal form but it conceived as spirit. The Idoma name for spirit is *alekwu*, masquerades are called *ekwu*, a short form of *alekwu*. This explains why the manifestation of religion, expressed in worship, propitiation and other attendant extensions of social and even political activities, provide the superstructure of the belief system. Theatrical activities like mime, music, dance and masquerade performances belong to the superstructure in the social substratum. Theatre in Idoma can then be viewed as one of the oldest ways in which man attempts to rationalize the incomprehensibilities of life. Traditional theatre practice in Idoma is in this sense, part of man's social mode of apprehending and coming to terms with the spiritual realities of his universe. With this understanding at the background, traditional Idoma communities do all they can to protect their masquerades from perceived bandits. In the circumstance, anyone attempting to examine a masquerade, and the person is not a member of the masquerade group becomes a ready suspect.

III. CULTURAL ISSUES: CANONIZATION OF WORLDVIEW

From what has been said so far, one can say that Idoma masquerade performances impact on social relations through manifestations of social characteristics, which are in turn factored by spiritual antecedents. Idoma are then among the many societies in the world where the theory that relates theatre to religion is informed. With the Idoma case in mind, one can agree with Rotimi (1983) who argued that "theatre is born of religion" (p.44). Through the beatification of ancestral figures, the various aspects of Idoma worldview in the pantheon are objectified. This view substantiates the theory that theatre has religious origin.

The masquerade theatre, which is the most popular art form in Idoma, revolves around ancestral celebrations. The masquerade theatre in this view is the presentation of a functional aesthetic model, which portrays the entrapment, or localization of spirit beings in socially constructed functors. These perform both theatrical (social) and religious (spiritual) roles. This is why religion and theatre in Idoma cannot be separated from each other. The dramatic quotients of traditional theatre in Idoma, like the theatre of other peoples of the world, patronize ancestral cannons. The ancestors in turn intermediate, and in the process, regulate the cosmic systems that continuously threaten the well-being of man. The situation is however not peculiar to the Idoma alone. Soyinka explained this point in

reference to Yoruba ancestors. In his view, Soyinka (1976) the ancestors,

Are represented in drama by passage-rites of hero-gods, a projection of man's conflict with forces which challenge his efforts to harmonize with his environment, physical, social and psychic ... a prefiguration of conscious being which is nevertheless a product of the conscious creativity of man. These emerge as the principal features of the drama (pp.1-2).

In traditional societies such as Idoma, the people device and bring to the society's drawing board, social questions, morality standards, behaviors and regulation of aesthetic sensibilities through the vehicle of traditional theatre. Masquerade enactments essentialize these values. These visually depict "a multi-level experience of the mystical and the mundane" (Soyinka 2). In this way, ancestors, "which come alive in the form of masquerades" (Nzewi 47), perform in the theatrical medium and serve social functions by appealing to societal aesthetic, social standards and spiritual sensibilities. Apart from this, ancestors who make appearances in masquerades forms serve judicial functions in Idoma. Encapsulated in the masquerade form, ancestors exercise authority by trying criminals, resolving disputes and taking other legal decisions for, and on behalf of society. It is interesting to note that many societies like Idoma, Nupe, Yoruba, Ibos, Ijaw, Igala and other communities in Nigeria, believe and employ their ancestors, in the form of masquerades, to control and regulate the activities of the living. This view is further enunciated by Amali-Idris (1992),

At the spiritual and invisible level, the ancestors and the gods of the land play significant roles in uplifting and maintaining social ethics and morality... This belief in the unseen is strengthened by the physical enactment of the ancestors in masquerade forms which are fundamental to the existence of rural ... institutions. For example, the Idoma *Alekwafia* masquerade comes out to enforce law when the "law breaking" is very serious (p.58).

The functions rendered by masquerades are made possible through the theatrical medium and take place in designated venues within the community. The specific time, date and venue of the performance are regulated by the programs of the day to day calendar. Sometimes the exigencies of the moment also determine the time, venue and period of performance. The masquerade theatre is an organized performance that is entrenched in the traditional frame of other societies apart from Idoma. For instance, the use of traditional theatre to inform on social and religious life can also be found among the Ibos of Nigeria. According to Nzewi (1983), traditional theatre,

Is highly rationalized and organized representations. It becomes necessary every year to

fix the actual dates and days to agree with prescribed market days, lunar cycle and features of the moon, as well as the seasons. The organization... would start with advanced acquisition, renovation, repair and replacement of props, costumes etc... the arena would reflect the nature of audience-actor interaction associated with the scheduled activities. And quite often the audience-actor relationship help to determine the arrangement and development of the presentation. The philosophical and psychological ideations about an event basic to its concept were tied up with, and regulated, the artistic, aesthetic and utilitarian features of any given traditional theatre type (p.17).

To this end, Nzewi amply describes, in lucid terms, the many features of masquerade theatre. The various events that characterize the practice of theatre in Idoma are sufficiently reflected in this description. The utilitarian conception of masquerade performance is informed by the cultural attitude of a society that defines its world in terms of the unity or communion between social and spiritual aspects of humanity. In societies where the potency of supernatural forces, the mythic and the mysterious, the legendary, nature forces and deities define the ethno-aesthetic and artistic standards, much protectiveness will be given to those forms. This framework of shared fundamental traits activates the distinctive artistic values expressed in Idoma masquerade performances.

Perhaps, this accounts for the issue of apprehension and anxiety which the Idoma people feel when researchers attempt to have access to data on their masquerades. Since the Idoma are not prepared to mortify their ancestors, the people use every means to protect their kindred masquerades. This posed serious limitation for researchers.

IV. DOMINATION OF THE LITERATURE BY FOREIGNERS

It is paradoxical that in spite of the deep rooted attempt to prevent people from having access to Idoma masquerades, a large percentage of the volume of literature available in the Idoma masquerade performance come from foreign sources. Nevertheless, the explanation for the contradiction may not be too farfetched. Perhaps, the account lies in the very nature of the masquerade. Regarded as an ancestral pantheon, Idoma masquerades are presented with mystical and spiritual cantata. The religious receptacle that shrouds the masquerade tradition may have distanced many of the Idoma literate population who would rather prefer to keep safe distance. In the course of this research, I realized that the more literate the average Idoma is, the more detribalized he became. I found that for the educated Idoma, the dividing line between cynicism and ethnicism is Western education.

As far as the attitude to the masquerade tradition by a number of educated Idoma is concerned, cynicism and western education coalesce in the mid region of mare. The tendency to conceive the masquerade form as a fetish tradition is likely responsible for the dirt of literature written by indigenes.

As a result, the most highly quoted sources of Idoma art are: Roy Clive Abrahams, Robert G. Armstrong, Sydney Kasfir, William Fagg, Frances Neyt, Alvin Magid, Essenstadt, S. N., Adam and Marie Jeane. Others are Erim, O. Erim, V. G. Okwu, Shamsudeen O. O. Amali and Idris Amali. Of these thirteen canons, nine are of foreign origin. And out of the remaining four, only three are Idoma. Erim, O. Erim, even though of Iyala extraction, is from Cross River State of Nigeria. Like V. G. Okwu, Erim too was a historian, indeed a highly celebrated scholar. Two concerns are flagged by this scenario. While the issue of indigenization lurks in the corner, the manner of presentation and the reading given to masquerade present some red herring of disturbing magnitude. One, none of the foreign authors centered their works on masquerade as an art in the theatre paradigm. R. C. Abrahams, R. G. Armstrong, Alvin Magid, Essenstadt, S. N. Adam and Marie Jeane were ethnographers, while Sydney Kasfir, William Fagg and Frances Neyt are art historians. Of the indigenous authors, Shamsudeen, O. O. Amali's works are essentially on oral literature, while Idris Amali has worked extensively on the language and poetry aspect of Idoma oral performances. That is, strictly speaking, this researcher did not find any author of recognized scholarship who treated the masquerade art of Idoma people from the perspective of theatre or performing arts. This is not to say that they may not exist. They may but I did not find any in the course of my research. This absence of pilot studies, indigenous or foreign, present serious limitations for researchers.

V. THE ISSUE OF ORTHOGRAPHY, ORAL TRADITION, TECHNOLOGY AND GLOBALIZATION

Another issue which confronts the researcher in Idoma masquerade performance is the lack of a universally acceptable orthography. In Idoma, Westernization and its accompanying perilous inundations have seriously impeded the development of cultures and traditions. This is exemplified by the fact that up till the time of this paper, Idoma people have not been able to develop an acceptable Idoma orthography. This is a major setback that can inhibit research.

Closely tied to this is the problem posed by what I call in this paper as "cultural dumb show" ¹. The inability to communicate and document in one's mother tongue is a major obstacle hindering the development of Idoma people. Because of lack of orthography, English has become the first language of many Idoma people,

especially the literate class. That the language is only spoken but not written makes it very difficult for the people to have complete education. Perhaps this explains the inability of the indigenous Idoma to develop their own literature. This problem may have aggravated the associated recurrent of problems of social, cultural, economic and technological underdevelopment. There is no way a foreign language can sufficiently represent, interpret or decipher cultural expressions and thoughts of another language. Inhibited by the trajectories of cultural patina, the average educated Idoma thinks first in English and translates his thoughts later to Idoma language. This bifurcated conflation can only lead to confusion that blurs the edge of development. Ngugi (1986), refers to this festination as the

The ... cultural bomb ... **[which] annihilate[s] a people's belief in their names, in their languages, in their environment, in their heritage of struggle, in their unity in their capacity and ultimately in themselves. It makes them see their past as one wasteland of non-achievement and it makes them want to distance themselves from that wasteland. It makes them want to identify with that which is furthest from themselves; for instance, with other peoples' languages rather than their own** (p. 3).

Although in principle, the colonial masters may have long left the shores of Nigeria, the machinery for cultural assault is still perfectly in place. The presence is noticeable in the different phases of multilateral imperialism like globalization, imposition of lingua franca (English language), and American Democracy. The device is intended to retard development, the continuous impoverishment of the colonized world, and other strategies that keep them in perpetual servitude. The mechanism is working perfectly according to the design in many parts of Africa.

This situation, coupled with other teething problems associated with underdevelopment have entrenched the predominance of oral tradition in the construction of theatre forms among Idoma people. Nevertheless, even though much of Idoma traditional theatre practices are essentially oral, the viva voce tradition was and is still an important source of history. The fact still remains that many of the problems associated with the practice of masquerade tradition results from lack of better and scientific documentation. Even at the dawn of the 21st century, much of the practices still remain essentially oral.

These have affected the value and authenticity of the available literature, especially those provided by foreign authors. Even though masquerade performances are endorsed by the communal presence and celebrated by the people of that community, the masquerade groups do the performance proper. By implication, majority in the communities where the performances take place are ignorant of the pre

performance plots, designs and technical details behind the scene. This situation pose serious limitation for researchers most of who are not allowed to step beyond the performance arena. As a result, the data available to most foreign researchers are limited to the visual knowledge of an already made masquerade. The other details of what the masquerades really constitute are lost to the researchers who are not an insiders.

Globalization has resulted in the commoditization of the ancestral pantheon. Art collectors in Europe have made the sale of African masquerade parts very lucrative business. In recent times there have been many cases of masquerade theft. Traders dealing with antiquities connive with some village miscreants to steal ancestral masks. These masks eventually found refuge in museums and galleries in Europe. This has not helped the development of the masquerade tradition. Rather, it has presented as serious problems for both the Idoma people and for researchers especially who are often regarded as masquerade creeps.

VI. DOCUMENTATION AND THE IDOMA LIFESTYLE

Traditional Idoma people, in their pre-literate disposition, are very suspicious of documentation in books and other print media. Among the Akweya people, for instance, kindreds and lineages own masquerades. Only members of the particular lineage can have direct access with their ancestral masquerades. Others are not. This is the situation is peculiar with ancestral masquerades. The secular masquerades are open to all in the community, but

sacred masquerades are restricted to members only. The situation is worst for people who are not from the community. For instance, this I had attempted to record the performance of *Okpma* masquerade in Adim on March 28th 2006. The attempt ended in a fiasco. *Okpma* masquerade is very highly respected and celebrated among Akweya people. It is performed publicly but documenting the performance through photograph or any electronic format is outrightly prohibited.

The attempt to photograph the masquerade during the performance was greeted with stiff resistance. It took a long time getting the Royal Fathers of the different kindreds to understand that an attempt to document the masquerade tradition of the people is not in any way inimical or harmful to the preservation of their ancestral cannons. Even though they understood the point, and I was permitted to record performances of some masquerades, as for *Okpma* and Iglo, they blatantly refused. For this reason, pictures of the masquerades studied in this research are not presented. Even though I was allowed to participate in some of the masquerades, as a matter of cultural policy, the idea of photograph was prohibited.

It is important to note that the Royal Fathers and elders in Idoma can be more understanding and cooperative in the matters of masquerade protection. Particularly in Akweya, dealing with the teeming youths posed serious problems. In the course of my field work the youths proved to be rather intolerant. They constituted themselves into an opposition group, and at every given opportunity, accosted whoever attempted to photograph or record masquerade performances.



Second from left to right, Chief Hycenth Ogbu (*Agabaidu*), Chief Ingwanya *Ailekplor* and some members of the Chief's cabinet. Picture taken by author on 26th April 2008.

On the one hand, the custodians of Idoma tradition were aware of the implications that lack of documentation has had on the development of the area. The far-reaching impact of a well-developed language, the understanding and widespread dissemination of information with signs and symbols of all kinds, as understood within the context of an indigenous language system, were not lost on these paramount rulers. They consented even to photographic documentation of the masquerade performances as indigenous symbolic structure for posterity. But on the other hand, the youths vehemently opposed the view. On a number of occasions, the youth had accosted this me, seized my camera and threatened to break it. But thanks to the prompt intervention of *Oj'Ankpa*, *Agabaidu's* second in command. When, at an instance, he came into the matter in Otogwi, the boys took to their heels. At one point, during the course of my research, one *Anagbogbo* masquerade mistook a young man for me and gave him serious trashing. When the case came up before the Council of Chiefs' meeting two days later in ²*Ogakwu's* palace at Otogwi, the boy who wore that *Anagbogbo* masquerade that day was sanctioned. He

was barred never to perform again in his lifetime. His *Anagbogbo* costumes were confiscated and handed over to the representative of *Ogakwu*. To this extent, it was clear that this research received the backing of the Akweya traditional Council.

At one instance, *Ogamode*, Chief Peter Oglegba, in order to put his authority behind this work, appointed this author as his official photographer during his coronation, which took place in Adim from 19th to 26th of April 2008. It was a seven day event. The then *Orgbabe*, Chief Adei Okpe, also endorsed this permit. The *Otrugboko* of *Ekwe-Ogbe* kindred also shared the view that the traditions of Akweya-Idoma should be documented. With the Royal Fathers, the custodian of traditions solidly behind this research, the constraint in gathering data for this work was minimized to an extent. As a result, a tradition that has never been documented before or put in print in the history of Akweya are, for the first time researched in this work. This difficulties discussed here are important information that researchers would need to be aware of as they go to the field. A pre-informed researcher is better equipped to carry out his study.



Seven *Analoo* masquerades awaiting call for performance in Ogyoma-Akweya. Picture by author on 2nd December, 2006.

VII. RECOMMENDED METHODOLOGY FOR RESEARCHING IN IDOMA MASQUERADE PERFORMANCE

This section deals with the methods of data collection recommended to researchers that choose to work in this study area. Having undergone a level of experience this author has proposed some suggestions in studying the masquerade theatre traditions of Idoma. It is advised that researchers should employ a multi-disciplinary approach since, in the main masquerade performances assume a multimedia form. The inductive nature of this methodological approach and the special significance that it gives to participants' perspective necessitate the use of models that can give credence to the experiences of the people that are studied. The understanding is that the people whose theatre traditions are to be studied should give voice to what is written about them. By using the qualitative research methodology, the study will be capable of analyzing the people's theatre activities based on their interpretations. The fact that qualitative research can be adequately employed in the investigation of behaviors as they occur in natural situations where there are no manipulations of conditions or experiences can be a perfect justification.

The masquerade by its very nature is a cultural material. In the study of a purely cultural art form, it is important to use models that will fully appreciate what the study considers as important facets of the people's values, politics, essence and cosmogony. This is why qualitative research method is considered most appropriate for such studies. Other tools that can be used following the multi-dimensional approaches employed include:

VIII. ORAL INTERVIEWS

The interview method can provide the researcher with opportunity to discuss face to face with the masters and owners of the masquerade art. With this methodological tool, the researcher has the advantage of exposition to original materials and data, which is capable of providing greater dependability and validity. One can design the format of the interviews to reflect semi-structured form and to be applied in three phases. Since masquerade performances are mostly associated with festivals and ceremonies in Idoma, the researcher can schedule some of the oral interview sessions to agree with the period before the festivals. Another interview session can be arranged for the periods during the selected festivals when masquerades perform. Other interviews can yet take place after the performances.

Also to be noted is the fact that some masquerades perform on days other than festive periods. For instance, some masquerades perform during burials. For such performances the researcher

can arrange interviews without necessarily waiting for a particular time of the year as is the case with festival associated masquerades performances.

In using the interview method the following category of persons recommended for consultation are:

- a) the Royal Fathers of the different Idoma communities who by tradition have ancestral connection and are more properly positioned to discuss matters concerning the ancestral masquerades of their kindreds. The Royal Fathers referred to here are not the political heads whose origin is entrenched in modern institutions of the Local Governments Administration in recent historical records. The reference is to traditional kindred heads that intermediate between the people's ancestors and the living. These are the *Ond'Ajes*, *Och'Ojilas*, *Och'Nokwus*, *Och'Ajes* of the different kindreds in the Idoma communities under study. These luminaries can offer the researcher with very useful information about the different masquerade practices, origins and history through the ages;
- b) other custodians and keepers of kindred masquerades. These are usually the oldest men in the kindred. In Idoma worldview, old age gives spiritual empowerment to occupy revered positions in societies. For instance the *Ad'Alekwu* who draws much respect and reverence from the people;
- c) the leaders and custodians of society based masquerades that are not kindred based. For instance, *Animawowo*, *Omunkpara* and *Analoo* masquerades of the Akweya, as well as *Ukpokwu*, *Ogantete* and *Ogarumpa* of *Aiy'Ona* communities in Idoma. These are secular masquerades performed purely for entertainment and other social events. They have their leaders separately from the lineage inclined masquerades who have more critical consequences,
- d) the leaders and custodians of community based but secret masquerades like the *Ikyahoho*, *Onyompko*, *Achukwu* and *Ogblo* masquerades,
- e) the performers themselves, if the researcher is able to access them. By engaging with the performers using unrestricted interviews, invaluable data can be collected.

The privileged positions of these groups of respondents makes them better informed about masquerades more than other members of the public. As a result they are able to provide the researcher with useful information regarding their operations and practices. When these groups are involved in the process of data collection, the study will be able to give appropriate academic readings to the research. This will enable the researcher's close identification with the physical entity of the masquerades even during the pre-performance stages.



It is important to note this because, very often, researchers make lots of assumptions based on what they already know or what they think they know about their case studies. Most often researchers, equipped with certain levels of confidence, assume that they know quite a lot about their case studies before they go into the field. Once in the field they soon find out that they took too much for granted. Such assumptions in a culturally closed area like the masquerade tradition of the Idoma can be very misleading. It can be misleading because, shrouded with utmost secrecy, the body of knowledge which exists in the practice of masquerade is essentially representational and symbolic.

Sharrock and Anderson (2009), identified the notable position of close relationship between the researcher and the owners of the subject matter. They noted that the researcher must as a matter of necessity, accept his level of ignorance. They discouraged the overuse of abstract assumptions. This will enable the researcher to treat with respect, meanings as understood by the "natives". He would then discover "meaning as an achievable phenomenon" (p. 133).

IX. PARTICIPANT OBSERVATION

As noted above, Idoma, masquerade performance is a physical expression of the people's socio-spiritual life style. Information about the coming into being of the masquerade is most often classified. But top secrecy is enforced only in the practice of the ancestrally predisposed masquerades. The secular masquerades are not treated with so much secrecy. Adequate consultations with the community leaders can facilitate the researcher's required access to the masquerades during performances.

Applying the participant observation tool for collecting data enables the researcher to personally venture into the "official" residence ³*p'Odoko* from where the masquerades are constructed. As argued by Dalton (2011), "the method of participant observation enables the researcher to see, note, and describe certain latent practices and codes, which can be referred to as 'inner circle'" (p. 21). In the course of research, specifically took advantage of this instrument. Equipped with this tool it was easier for me to understand the fundamental philosophy underlying public presentations of masquerades. Concerning this instrument, Eneoma (2004) said, "participant observation means experiencing the case study live" (27). That is having close and personal study of the subject matter at very intimate level. This to a great extent can increased the validity of the data collected. Using participatory observation, this author was enabled to have better and deeper knowledge and insight into the values and customs that gave birth to the masquerade tradition of the Idoma.

X. CASE STUDIES

This tool is used to study specific masquerades per time. The instrument makes it possible for the researcher to study and concentrate on one specific masquerade and a specific performance per time. It enables the researcher to zero in and have enough time to study each masquerade in detail within a given period. Using the tool, the researcher is able to properly appreciate the levels of meanings and representations of symbols at every particular instance. The data that can be gathered through this method always proves to be very essential in the formulation of theories, concepts and probable conclusions.

In addition, the approach which is applied each time the masquerade in question is performing, allows the researcher enough time to concentrate and study the performance in its real and natural state. In this way performances are studied in their original form. This prevents situations where performers would be conscious that someone is recording them. It prevents unnecessary exaggerations such as melodramatic performances inherent in the Western theatre practice.

With the use of this tool, the researcher can avoid doing what other researchers do previously. Previous researchers, particularly non-indigenous scholars, would routinely request the people to do a performance, as if masquerade plays were some typical "wait and take" practices that could be commissioned for fee-paying audiences. Such approach would invalidate originality because the players, conscious of the fact that they are being recorded or videoed, would attempt to add color and vibrancies that are not included in normal performances. This would not be African traditional theatre in practice but African performers in Western command.

XI. HOLISM

This approach is necessitated by the understanding that masquerade theatre in Idoma cannot be treated in isolation of other aspects of their living systems. Aspects like cosmology, history, religion, politics, philosophy, environment, ecology and other psycho-social conditions that regulate their life styles are embodied in the masquerade performances. The researcher can employ this approach by having this understanding at the background. The understanding forecloses the presentation of the masquerade being as the merging of social and the spiritual aspects in cultural performances. The use of this instrument foregrounds the logical connection between the masquerade theatre of Idoma people and the expression of their thought pattern, language, perception of law and order, habits, aspirations, social and political organizations, cosmic valuations and dreams. The data collected through this process can help the work greatly in presenting the

understanding of the masquerade as the physical expression of the people's essence.

XII. BEHIND THE SCENE INVOLVEMENT

Every important and revered masquerade in Idoma undergoes a series of preparations before the final performance in the open arena. This preparation takes place in a venue called *Odoko*. *Odoko* is the abode where masquerades make their initial acquaintances and dramatic proceedings with the elders and those who are responsible for its coming into being. From *behind the scene* the researcher can witness vital aspects of the masquerade's cultural repository. For instance, the researcher can access relevant information about the mystery dimension of Idoma traditions. This can prove very important in conceptualizing masquerade practices as part and parcel of Idoma theatrical tradition. The researcher will discover through this instrument the important place of the mysterious essence and the intradermal embodiment in Idoma worldview. Working with the owners of the masquerades in their own abode will provide the researcher with very important data for research. Pre-performance dramatic plots are very essential in understanding the masquerade performance in the arena. Equipped with this the researcher can have the privilege understanding some vital activities concerning the form. This tool provides the researcher with a rare opportunity to study the Idoma performance tradition from within their closet.

XIII. CONCLUSION

This paper has attempted to discuss the relevance of important background cultural manuals for would be researchers in Idoma masquerade performances. It has bent backwards to interrogate expected outcomes of such researches. The paper used recent field experiences to highlight some of the probable difficulties that a research is likely to face when conducting studies in the area. An area that is shrouded with much secrecy and confidentiality can pose major challenge for researchers. Recognized as an important aspect of culture that the people guard very jealously, masquerade performance is a very difficult terrain in Idoma for researchers. The paper has attempted to provide an academic compass for future researchers by presenting advance directories. Issues relating to perceptions and the dynamics of performance traditions, artistic processes, aesthetics are not as tangible as other aspects of material cultures. As a result caution and cultural education are scholarly guides that future researchers would need to be equipped with.

XIV. ACKNOWLEDGEMENTS

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Notes

1. "Cultural dumb" This expression refers to the attitudes of Western civilization which predisposes the recipients to leave everything that are indigenous and assume in its place the Western cultures. It is a figurative illustration that is reminiscent of the character of dumb.
2. *Ogakwu* is the title of the Second in Command of the *Och* Idoma. *Och* Idoma who is the head of the Idoma Traditional Council leads with the assistance of the Council of Chiefs with its hierarchical order. The *Ogakwu* acts as his Deputy.
3. *Ip'Odoko* is the abode where masquerades make their initial acquaintances and dramatic proceedings with the elders and those who are responsible for its coming into being.

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Exploring Linguistic Impairments of the Patients of Broca's Aphasia and Wernicke's Aphasia in Bangladesh

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Abstract- Language performance of human beings is inseparably related to their brain. There are some specific areas in the brain that are responsible for language understanding, organizing and producing. Broca's area and Wernicke's area are two such types of crucial areas of the brain which are, if affected or injured, responsible for linguistic problems, respectively known as Broca's Aphasia and Wernicke's Aphasia. Aphasia is a disorder of communication that impairs a person's ability to use and comprehend language. Broca's Aphasia is recognizable when the person affected has a difficulty in speech production, writing and finding specific words. A patient of Wernicke's aphasia may produce normal speeches but they are nearly nonsensical and irrelevant. His/her difficulty is in comprehending others' messages. The present study has investigated the linguistic behavior of some patients of Broca's Aphasia and Wernicke's Aphasia in Bangladesh and shows proximity of the empirical findings with the theoretical claims.

Keywords: *neurolinguistics, brain, left hemisphere, broca's area, wernicke's area, aphasia, broca's aphasia, wernicke's aphasia, linguistic behavior etc.*

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Strictly as per the compliance and regulations of:



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Abstract- Language performance of human beings is inseparably related to their brain. There are some specific areas in the brain that are responsible for language understanding, organizing and producing. Broca's area and Wernicke's area are two such types of crucial areas of the brain which are, if affected or injured, responsible for linguistic problems, respectively known as Broca's Aphasia and Wernicke's Aphasia. Aphasia is a disorder of communication that impairs a person's ability to use and comprehend language. Broca's Aphasia is recognizable when the person affected has a difficulty in speech production, writing and finding specific words. A patient of Wernicke's aphasia may produce normal speeches but they are nearly nonsensical and irrelevant. His/her difficulty is in comprehending others' messages. The present study has investigated the linguistic behavior of some patients of Broca's Aphasia and Wernicke's Aphasia in Bangladesh and shows proximity of the empirical findings with the theoretical claims.

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I. INTRODUCTION

Language comprehension and production of human beings are subject to some conditions. They are mostly neurological, hence, the term 'Neurolinguistics' has emerged. The materials of language production are received from the outside source, re-organized and then produced. The whole process is performed in the brain by various component parts of it. Among them Broca's area and Wernicke's area are the most prominent parts. People suffer from various types of linguistic deficits, known as aphasia, if these two parts of the brain are injured. Lesion in these two distinct areas results in distinct linguistic deficits. That is, injury in Broca's area results in distinct linguistic deficiencies, which are different from the deficiencies resulting from the lesion in Wernicke's area. The former type of linguistic deficiency is known as Broca's aphasia, and the latter Wernicke's aphasia. The paper presents these theoretical claims about the linguistic behaviors of the patients of aphasia, their relevant evidences, and some more related points in the context of Bangladesh through carrying out field works.

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II. LITERATURE REVIEW

a) Neurolinguistics

Neurolinguistics is the study of the relationship between language and brain (Yule 2006, p. 137). It is the study of biological and neural foundation of language (Fromkin et al., 2004, p. 34). Neurolinguistics is the interdisciplinary study of language processing in the brain, with an emphasis on the processing of spoken language when certain areas of the brain are damaged. So, simply, neurolinguistics deals with the relationship between language and the brain.

b) The Human Brain

The brain is the most crucial component of the human body. The adult human brain weighs on average about 3 lb (1.5 kg). The brain consists of approximately 10 billion neurons and billions of interconnected fibers. The surface of the brain is the 'cortex' or 'grey matter' consisting of billions of neurons. Under the cortex is the white matter, lots of connecting fibers. The brain is composed of cerebral hemispheres: right hemisphere and left hemisphere. These hemispheres are joined by corpus callosum. It has contra lateral function. The right hemisphere controls the left side of the body and the left hemisphere controls the right side of the body. (Fromkin et. al., 2004, 34)

c) Broca's Area

Broca's area is named after a French surgeon Paul Broca. He discovered the Broca's area in 1861 after studying the brain of a deceased patient who had suffered from speech impairment. This finding was first used to argue that language ability is located in the left hemisphere (Yule 2006, p. 139). The Broca's area is located in the left frontal lobe and controls speech production and facial neurons. It works for language output. In the figure-1 the part-4 is shown as Broca's area.

d) Wernicke's Area

Carl Wernicke discovered the Wernicke's area of the brain around ten years later after the Broca's area had been discovered. It is the posterior portion of the left temporal lobe. Wernicke's area is involved in the understanding of speech. It works for language input. In the figure-1 the part-3 is shown as Wernicke's area.

e) *The Motor Cortex*

The motor cortex is close to Broca's area. It controls the articulatory muscles of the face, jaw, tongue and larynx (Yule 2006, p. 139). In the figure-1 part-5 is indicated as the motor cortex.

f) *The Arcuate Fasciculus*

The Arcuate Fasciculus is a bundle of nerve fibers. It was also one of the Wernicke's discoveries (Yule 2006, p. 139). The Broca's area is connected by the arcuate fasciculus to the Wernicke's area (Figure 2).

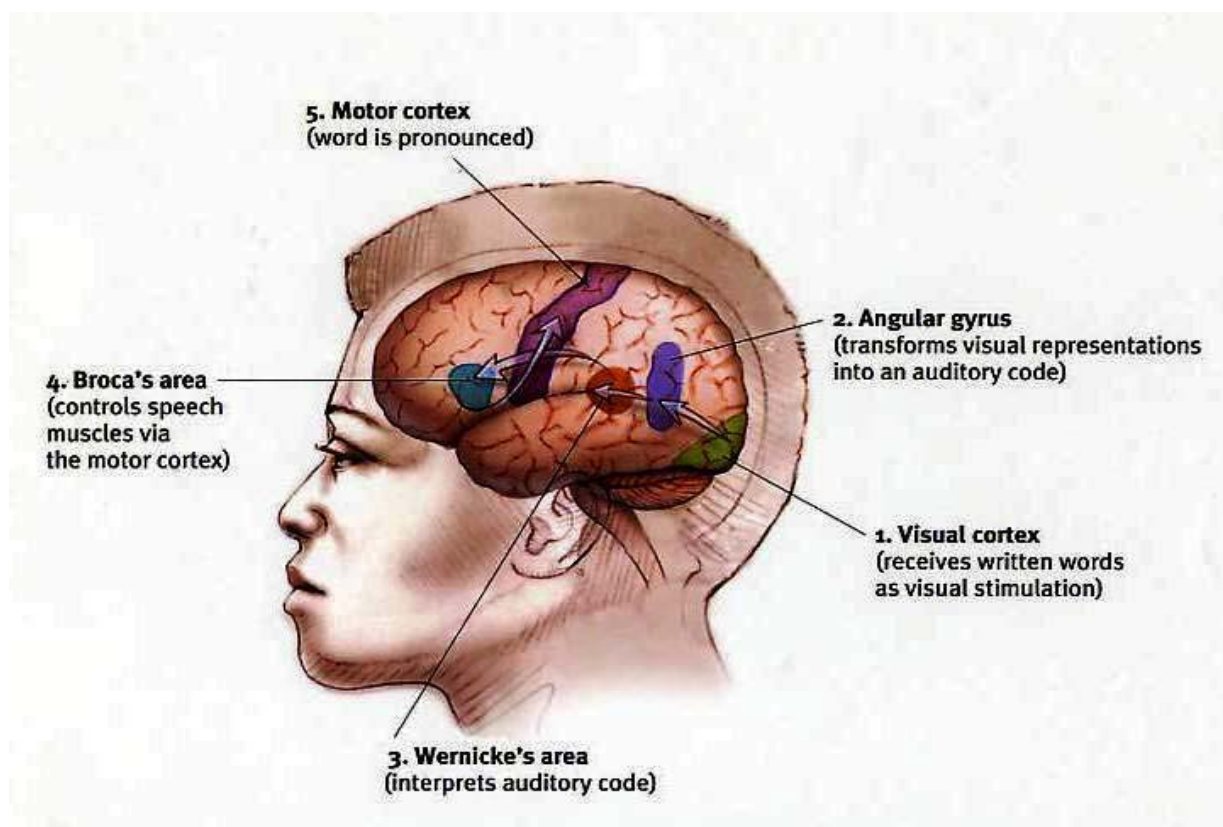


Figure 1

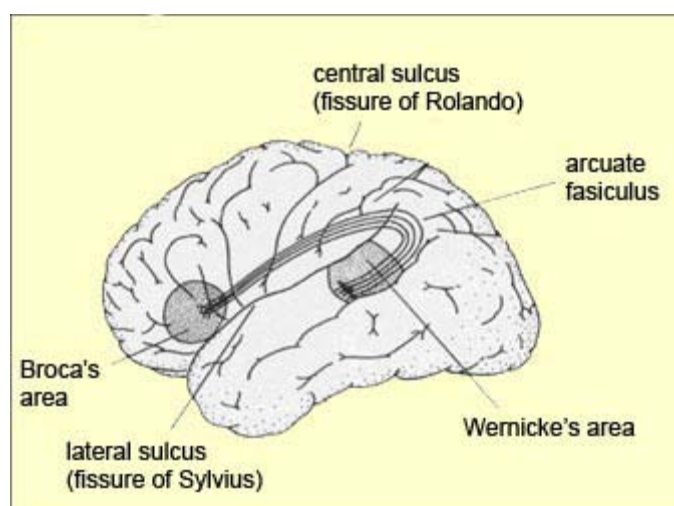


Figure 2

g) *The Localization View*

The identified four components of the brain above are related to the idea that specific aspects of language ability are crucially related to specific locations in the brain. It is called localization view. According to

this view, the brain activity involved in hearing a word, understanding it, then saying it, follow a definite pattern. The word is heard and comprehended via Wernicke's area. This signal is then transferred via the arcuate fasciculus to Broca's area where preparations are made

to produce it. A signal is then sent to part of the motor cortex to physically articulate the word (Yule 2006, p. 140).

h) Lateralization

The paired structures of the brain are not exactly symmetrical and often differ in their size, form, and function, this phenomenon is called lateralization. When a function is lateralized, it means that one side of the brain exerts more control over this function than the other does. "There is evidence in neurological research that as the human brain matures certain functions are assigned-or 'lateralized'-to the left hemisphere of the brain and certain other functions to the right hemisphere" (Brown 1993, p. 53).

Aphasia

The relationship between the brain and language has been recognized for a very long time. The ancient Egyptians recorded reports of head injuries that resulted in the loss of speech, the phenomenon we now know as aphasia. (Foss and Hakes 1978, p. 350) Aphasia is a disorder that results from damage to the portions of the brain that are responsible for language comprehension and production. Aphasia is defined as an impairment of language function due to localized brain damage that leads to difficulty in understanding and/or producing linguistic forms (Yule 2006, p. 142). Broca's Aphasia and Wernicke's aphasia are two most significant types of aphasia.

Broca's Aphasia

The linguistic deficit caused by the damage in Broca's area is called Broca's aphasia. People with Broca's aphasia have damage to the frontal lobe of the brain. There are some significant symptoms of Broca's aphasia. Patients of Broca's aphasia typically understand the speech of others well. The amount of speech is reduced and articulation is distorted, speech is often slow and labored. They show frequent omission of functional morpheme (articulation, preposition) and inflection (plurals, past tense- 'ed') (Yule 2006, p. 142 and Foss and Hakes 1978, p. 355) and omission of small words such as: 'and', 'the' etc. Their speech is often linked to telegraphic speech-consists of only noun and verb. They have inability to put together sentences that are grammatically complex and difficulty in writing and reading. Because of their awareness of problems, individuals with Broca's aphasia suffer from depression.

i) Wernicke's Aphasia

The linguistic deficit caused by the damage to Wernick's area is called Wernick's aphasia. Wernick's aphasia shows no disfluency in speech, but rather super fluency (Foss and Hakes 1978, p. 355). This aphasia results in difficulties in auditory comprehension. The patient suffers from difficulty in finding correct words. Speech is very fluent but difficult to make sense (Yule 2006, p. 143) Words are mingled up like the vegetables in a salad. Individuals with Wernicke's aphasia exhibit

fluent, effortless speech. Their sentences are syntactically correct with normal intonation and stress. Individuals with Wernicke's aphasia often produce jargon and nonsense words (Fromkin 2004, p. 37). Verbal output is often lacking in content (Geschwind 1972, cited in Foss and Hakes 1978, p. 355) filled with circumlocutions (talking around a word) (Foss and Hakes 1978, p. 355) and indefinite words. Individuals rarely notice their errors and talk at length. Those with Wernicke's aphasia also write effortlessly. Similar to their speech, although syntax is accurate, written language is devoid of content. Because of their inability to understand their deficits individuals with Wernicke's aphasia do not struggle with depression. Individuals with Wernicke's aphasia often display short-time memory, that is, they often forget what they have done few hours ago.

III. OBJECTIVES

The present study intends to investigate the ways of speaking and other cognitive behaviors of the patients of Broca's aphasia and Wernicke's aphasia. The paper exhibits the patients' dealing with language, based on the theoretical underpinning of language and human brain. This study consists of the following objectives:

- How do the patients of Broca's aphasia speak and manage other linguistic behaviors? And,
- How do the patients of Wernicke's aphasia speak and deal with other cognitive behaviors?

IV. METHODOLOGY

This paper is an attempt of empirical studies accomplished by a group of eight members. Qualitative case-study and semi-structured research approach was maintained. A questionnaire was followed. We went to the people concerned, talked directly to them and observed their behaviors. Patients were selected from Dhaka, My men singh, Trishal and Sherpur. Some patients were selected on the basis of familiarity. The rest were contacted on the basis of the information provided by two medical college hospitals (one in My men singh, and the other in Dhaka) and a physiotherapy center in My men singh. Some patients were rural inhabitants and the others were urban. We met twelve patients from them we selected seven (five of Broca's aphasia and two Wernicke's aphasia) for this paper.

We contacted two expert doctors in neurology at Shahid Suhra wardi Hospital, and a physiotherapist in My men singh. Sometimes, all the group-members went on a fixed field work, and sometimes, we were divided into individuals and groups to do so. The interview-language was Bengali. Then it was translated into English keeping the best proximity. Audio recorders and video cameras were used as research materials. After the end of each case-study audio version was

converted into the nearest meaningful word version. Necessary notes were taken while consulting the patients and the doctors. In this paper the abbreviations PBA and PWA respectively stand for Patient of Broca's Aphasia and Patient of Wernicke's Aphasia.

V. DATA ANALYSIS

a) Broca's Aphasia

i. Normalcy in language comprehension

All the patients suffering from Broca's aphasia showed the ability to comprehend language. They could understand the linguistic world around them and comprehend the meaning of others' speech. The interviewers talked to them and asked several questions. Their answers were not nonsense rather relevant and meaningful. For example:

The Interviewer : Assalamualaikum (Have peace upon you)

PBA1 : Uaalaikum.... (To you also)

The interviewee indicated above was a seventy years old Broca's aphasia patient. He was a well-educated retired naval officer. Three years ago a massive stroke had damaged his brain's Broca's area and made the right side disabled. He was physically very critical and could produce very few words. But the above example shows that his language comprehension ability was normal. When at the end of the meeting one of the interviewers said "We are going, Dadu" he said something like this "Don't say 'going' rather say 'coming'."

The PBA5 was a sixty years old patient. A stroke had damaged his Broca's area and made the right side disabled. When he saw a mobile phone placed before him he asked: "Are you recording my speech?" Some patients showed eagerness to join them when the interviewers were talking to their relatives. It indicates that they could comprehend the message of others' speaking well.

ii. Slow and Labored Speech

Some of the patients, who could somehow express, though very few, some linguistic items, showed much labor in producing words and phrases. Four-five seconds required to produce a single word or phrase. Speech thus becomes slow due to labor in articulation.

The interviewer was talking to the daughter-in-law of the PBA2 about the problems of the paralyzed people. The PBA2 joined them and said about his disabled hands: "Du...du...dunuda" (Both of my hands...). [Actually, one hand]. He wanted to express only a single word 'dunuda', but it required much labor. The PBA5 showed labored speech though his problem was less than the PBA2's.

The Interviewer : Which side is disabled?

The PBA5 : Da.. da..da...daan pash. (Right side).

The Interviewer : Do you require pause in speaking?

The PBA5 : A..a...a.atkiee. (Yes, I do).

iii. Distorted and Unclear Speech

All the patients who could produce some words and phrases produced many unrecognizable expressions. The PBA4 was a six years old boy who had been suffering from Broca's aphasia just after the second day of his birth, as a result of the damage in Broca's area due to excessive pressure on the head and the lack of oxygen during delivery. But his physical state was normal. The interviewers requested him to draw a picture. He asked his mother for a pencil but she took times to bring it. With little anger the boy said something that was unrecognizable to them. The mother later explained that he had said, "Why so late?" The interviewer asked the EDN1 about the child's problem and he said that the child would never be completely normal since a permanent damage had occurred in Broca's area during delivery.

The PBA5 could speak more little more than the others. But he expressed many vague, unrecognizable and unclear words and phrases.

The Interviewer : Do you have problem in your hands and legs?

The PBA5 : Eda ei je tumar..... [Unrecognizable] aage hat te partam... (This... you know.....I could walk earlier).

The vagueness of expression was mainly due to distorted words, and displacement and omission of sounds. The patients felt difficult to produce some sounds. The PBA3 was a forty-five years old patient who had been suffering from terrible speech problem for three years. He showed clear symptoms of distorted, displaced and omitted sounds in his speech.

iv. The Interviewer: Can you eat?

The PBA3 : A...a... kai [khai-eat]. (Yes, I can eat).

The actual word was khai (I eat). Here /kh/ was replaced by /k/. His wife asked him pointing to a man named Yeasin, "Do you know him?" He answered, "Yeacin". Here /s/ was replaced by /ch/. The PBA2 could not produce difficult sound, especially, those of joint letters (in Bengali). He indicated his right hand and said: "Ede haat nos...[to] hose." (*This hand is disabled*). Actually, he wanted to utter *nosto* [disabled] but he could not produce the joint sound /sh+ð/, so it was omitted from the word.

v. Telegraphic Speech Based on Noun and Verb

All the patients produced reduced amount of words and phrases consisting of mostly nouns and verbs. There were frequent omission of small words, articles, inflections and functional morphemes. Their speeches were much like telegraphic speeches. The PBA2 showed clear evidence of telegraphic speech.

vi. *The Interviewer : Can you talk?*

The PBA2 : Pai...pai....paiee. (Yes I can.) [Pai= I can=verb].

His answer consisted of only verb pai.

The Interviewer: Do you feel problem in speaking?

The PBA2 : Na... na ...na..(No... no... no....)

vii. *The Interviewer: Can you eat?*

The PBA2 : Vaat khaee vaat khaee. [Vaat=rice-noun, khaee= eat-verb]. (Yes, I can eat rice)

The PBA1 could produce only three or four recognizable words and phrases, most of them consisted of nouns and verbs. The Interviewer asked him, "Do you know my father?" His answer was "Chinbo" [Verb] (Yes, I do). The PBA3 produced more limited words. The interviewer asked him several questions, but most of his answers were too short.

viii. *The Interviewer: Do you feel trouble in speaking?*

The PBA3 : Hm... hm (Yes.. yes).

: Can you eat?

: Hm... hm (Yes...yes).

: Any problem in walking?

: Na... na (No...no).

ix. *Repetition of Words and Phrases*

Due to labor in speech repetition of words and phrases occurred in the patients of Broca's aphasia. In the analysis of the sub-topics above the repetition of sounds, words and phrases in the speeches of the patients has already been shown. Some more evidences are presented below:

The PBA1 could produce very few selected words. Such as 'O Allah go..!'(O my God!), O baba go..! (O my father!). He was uttering these repeatedly. The PBA5 was an interesting fellow though suffering from speech trouble. When the interviewer asked him about his habit of smoking, he made fun of death:

The PBA5 : Mu...mu...mursi, kha..kha..khaye thayei murmu. (I must die, so, why shall I miss smoking?)

He repeated many sounds and words like *mu*, *kha* etc. The PBA2's repetition of words was more frequent. Such as:

The Interviewer : Try to eat more.

The PBA2: Na...ar khamna, ar khamna...khamna...khamna... (No no, I shall eat no more.) He repeatedly uttered khamna [no eating- verb].

x. *Difficulty in Writing and Reading*

Since the patients of Broca's aphasia, except the PBA4, could not move the right side, they could not write anything (All were right-handed). But the PBA1 showed interest in what the interviewer was writing about him. He tried to approach the interviewer and wanted to read what was being written. His wife said

that he could read both Bengali and English though without speech production.

The PBA4 could write his name and address. The interviewers asked him to draw a picture. He drew a picture of the national flag of Bangladesh under the direction of his mother, though he took about 45 minutes to do it.

b) *Wernicke's Aphasia*i. *Difficulty in Language Comprehension*

Both of the Wernicke's aphasia patients exhibited the loss of language comprehension ability. They could not recognize their language deficit. So, it produced significant effects on their linguistic behavior.

The PWA 1 showed considerable evidence of the lack of language comprehension. She was sixty years old and living with her son's family. A stroke had made Wernicke's area of her brain injured three years ago. The interviewer talked to her on various topics but many of her responses deviated from the topic due to the lack of language comprehension.

The interviewer: When will you have your lunch?

The PWA 1 : Daal die ekmuth vaat khaise ma... (I ate only a handful of rice with daal).

She could catch the topic of eating but was unable to comprehend the main point of the question. She ended the sentence with more words and was gradually deviating from her original points of speech. She started her speaking with the items of meal she had had, and ended with abusing her daughter-in-law for various reasons. Once she started her speech and she continued without pause about three minutes, and gave no room for the interviewer's intervention.

Fluent Speaking with Normal Intonation and Stress, but often with Nonsense Meaning

All the patients manifested their normal ability to speak fluently. They could speak at a stretch without labor and maintain normal intonation and stress. But shockingly, sometimes, their speech contained no contents. Very often their produced utterance carried no message. The PWA2 once made such type of deficiency while speaking with the interviewer. She was a sixty-five years old poor patient who had suffered from a massive brain stroke. Her medical report showed that the stroke had left a lesion in the left occipital lobe of her brain. She was staying in a hospital in Dhaka. Sufficient interview was not possible due to her mental and physical condition. The interviewer, along with a doctor, met her. The doctor tried to talk to her.

The Doctor : Ma, look at me, how are you?

The PWA2 : No, no, that's (indicating something outside)..... (Some dialects).

She spoke in the southern dialect of Bangladesh. Neither the doctor nor the interviewer could trace out the implication of her speech. But some

key words of her speech indicated that her speech produced no specific point. But her speaking was fluent according to her age. She had no so labor in speech.

The PWA1 also exhibited fluency in speaking. She started to abuse her daughter-in-law at the end of the interview for various reasons. She was throwing abusive words to her daughter-in-law. Her words, though abusive, were fluent and without labor.

ii. *Short-time memory*

The patients of Wernicke's aphasia sometimes manifest short-time memory. Sometimes, they cannot remember what they have talked about few minutes ago. The PWA1 showed clear evidence of this problem. The interviewer asked her, "Have you taken your breakfast?" She answered, "No". But her daughter-in-law told that she had taken her breakfast about half an hour ago. She just forgot that she had taken her breakfast.

c) *Doctors' Interview*

To make the study more substantial two doctors who were experts in neurology, and a physiotherapist were consulted. They shared some significant issues related to Broca's aphasia and Wernicke's aphasia. The EDN1 said: "Brain is the most complicated and mysterious part of the human body." According to him, most of the aphasia occurred due to brain stroke, not only in Bangladesh but also all over the world. He also shared that he could not remember any patient of Wernicke's aphasia. The EDN2 also shared the same opinion. When the interviewer asked him about the reason of the very few number of the Wernicke's aphasia patients, he expressed a realistic view: "You know, a Wernicke's aphasia patient loses language comprehension power and speaks nonsense, common people consider him/her as a patient of mental disorder."

The physiotherapist gave some new ideas. He said: "The possibility of healing from aphasia depends upon the rate of injury in the brain. If the injury is not so serious, complete healing is possible." Responding to the question, "How do you treat your patients?" he answered, "We use speech therapy and facial exercise." He also expressed the view that the rate of healing varies from age to age.

d) *Final Approach and Some Extra Findings*

The present study reveals the data findings' proximity with the theoretical claims'. True, belonging to psycholinguistics, the topic of the study is more related to medical science. That is why the basic points of the theoretical claims remained stable in the data findings. The empirical findings had no irrelevance to the theoretical bases of Broca's aphasia and Wernicke's aphasia. For instance, language comprehension ability in Broca's aphasia is not affected was a theoretical claim, and it showed its manifestation in all the five

patients of Broca's aphasia who were interviewed. Likewise, language comprehension ability in Wernicke's aphasia is affected was a theoretical claim, and the patients of Wernicke's aphasia proved it.

In addition the fact of proximity there were some more findings, especially, through the opinions of the doctors about the patients of Wernicke's aphasia, in the perspective of Bangladesh. The doctors opined that the number of the patients of Wernicke's aphasia in treatment was very poor in Bangladesh. It was because, they claimed, for ignorance and lack of awareness common people categorized the patients of Wernicke's aphasia with those of mental disorder. It was a very realistic and relevant claim in the perspective of Bangladesh.

Other socio-psychological factors of the patients were also found. Many patients who were cured and their relatives did not want to meet the interviewers. They technically avoided them. Many of them refused directly, and some of them after knowing the intention switched off their phones. Perhaps, they suffered from inferiority complex and anxiety in their society for their deficiencies. So, they did not want to bring their problems to light. This problem was more visible in the patients of Broca's aphasia. As they were psychologically normal, they were suffering from depression, frustration and excessive anger. Unlike those of Wernicke's aphasia, they were not ignorant of their deficits. So, depression, frustration and anger overwhelmed their life.

Lastly, happy to mention that, among the seven patients six were receiving good family care. The rest's condition was bad (PWA1). She was rebuking her daughter-in-law because the latter did not take care of her properly.

VI. LIMITATIONS OF THE STUDY

The present study contains some limitations. Such as:

1. The major limitation of this study is that compared with the number of the patients of Broca's aphasia (5), the number of the patients of Wernicke's aphasia (2) was much less. But why this limitation occurred has been indicated earlier in this paper.
2. Except the PBA-1 and the PBA-4 all the patients were nearly illiterate. So, unlike speaking ability, study on reading and writing abilities of the patients of aphasia was not completely satisfactory.
3. All the patients mentioned in the paper were victims of stroke. The patients whose aphasia had resulted from other accidents were not possible to approach. One patient whose aphasia had resulted from trauma was met, but, it was impossible to mention that case in the present paper.
4. Lastly, most of the topics of speaking with the patients were about eating. This technique was

followed because speaking about eating proved more comfortable for both the interviewers and the patients.

The study could have been more representative if all these issues were resolved.

VII. CONCLUSION

Human brain is really a mysterious organ. It controls, along with other crucial functions, linguistic attitudes of human beings. If the specific parts of the brain are injured, the linguistic attitudes are also affected. The present paper, which is an outcome of field study, has shown the evidences in favor of this claim. The patients, as shown in this paper suffered from the deficits related to one of the basic aspects of human life. Of course, language is one of the basic elements of human beings. So, when this basic element becomes dysfunctional, people fall into jeopardy, consequently, they lose their confidence of living. Most of the patients, especially those of Broca's aphasia, studied for this paper, exhibited low sense of self worth. They had severe difficulty in communicating with others. The situation in Bangladesh, as the study revealed, is far more critical since the lack of awareness, sufficient knowledge, and other facilities has been a severe drawback.

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Theoretical and Methodical Considerations Regarding the Spine Imbalances in Different Sports Disciplines

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Abstract- Introduction: The practice of different sports disciplines generates, in certain cases, imbalances in the spine dynamics.

Purpose: This paper aims to approach, both theoretically and methodically, the modalities through which the practice of different sports branches may induce pathologies susceptible to hinder the training progress.

Content: The study presents a classification of sports disciplines from the perspective of their influence on the spinal column. The analysis relies on the discussion of some possible imbalances, but also on some methodical recommendations for the postural education of athletes.

Conclusions: Athletes can practice their favorite sport without restrictions and with successful results, inclusively when they are confronted to spinal imbalances and back pains, if they are provided appropriate training, efficient prevention modalities and correct treatments. It is important for the athletes to be informed and become aware of the possible imbalances at their spine level, but also of some asymmetries of their body structure.

Keywords: *sports; spine; sports injuries.*

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I. INTRODUCTION

The positive effects of physical exercise on the locomotor apparatus development are known since the ancient times, but the practice of certain sports disciplines under the intensive effort conditions, therefore under competitive conditions, presents an increased health-related risk, one of the most vulnerable zones being the spine (Pfeiffer and Magnus, 2007; Uwe, 1999).

The most frequent situations are encountered in those sports disciplines which, through their specific technique, impose: very ample flexions and extensions; rotations; position holding; work under vibration conditions; exercises that develop asymmetrically the muscles. All these generate imbalances in the spinal column dynamics (Liebenson, 2002). Some sports disciplines produce aggressions at the spine level, reason for which they are not indicated to those with spinal problems. If training incorporates compensatory exercises for the muscular development equilibration, the opposite effects can be rectified.

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A particular role comes to the program constructed by the physical therapist, who has to include exercises for the spine rehabilitation, as well as vertebral manipulations meant to release the tension accumulated in case of vertebral compression (Balius et al., 1987).

II. CURRENT LEVEL REFLECTED IN LITERATURE

This paper aims to approach, both theoretically and methodically, the modalities through which the practice of different sports branches may induce pathologies susceptible to hinder the training progress. Such an issue is very topical, because the evolution of sports performances requires more and more intense efforts which, implicitly, have an effect on the spinal column functionality.

Specialty literature related to the fields of physical education, sports and physical therapy draws attention to the impact of different sports disciplines on the spine imbalances (Liebenson, 2002; Liemohn, 2005; Prentice, 2001).

III. ISSUE ADDRESSED

a) *Classification of sports disciplines according to their impact on the spine*

Balius Juli et al. (1987) and Martin Recio (2009) made a classification of the different sports disciplines relating them to the impact of effort on the spinal column. The authors nominate five categories of disciplines:

Sports with a negative impact on the spine: men's and women's artistic and aerobic gymnastics, rhythmic gymnastics, judo, wrestling, shot put and javelin throw, athletic jumps, swimming (butterfly style). In these sports branches, because of the technique required, the spinal column cannot be protected. The risk factor is represented by the multiple movements of flexion, extension, rotation, etc.

Sports with a possible negative impact on the spine: weightlifting, athletics (hurdles, hammer throw and discus throw), canoe & kayak, motorcycling, horse riding, cycling, water and alpine skiing, water polo, rugby. In such sports, the spinal column can be protected, particularly during the workouts, by using an appropriate

technique and a suitable physical training. Movements at the spine level are not as demanding as the previously mentioned ones and the correct execution of technique does not affect the spinal column.

Sports with an indifferent impact on the spine: athletic running events, football, fencing, hockey, tennis, table tennis, golf, archery, etc. In these sports disciplines, movements at the spine level are not forced, however occasional injuries are possible.

Sports with a positive impact on the spine: basketball, handball, volleyball, swimming (except for the butterfly style), gymnastics for fitness, etc. These sports branches are included in this category because they do not use unnatural movements, but stretching movements, and they do not involve continuous loads.

Sports with a high degree of risk for the spine: mountain climbing, speleology, parachuting, acrobatic skiing, trampoline jumps, sports gymnastics. In these sports disciplines, the prevention modalities are essential to avoid risks, that is why athletes should be protected by the most suitable safety measures and they also should be able to master a perfect technique.

b) Recommendations concerning the spine postures to be avoided in sports activity

Authors such as López Miñarro (2000), Pfeiffer and Magnus (2007) recommend the avoidance, at the spinal column level, of some postures susceptible to induce pains and harmful effects over time. They underline, for each corporal attitude, the factors that may generate imbalances or dysfunctions.

Sustained kyphotic posture – it produces an overload at the dorsal column level, with an increased incidence of disc protrusion, muscular and ligament elongation, as well as ventilatory mechanical alterations.

Cervical hyperextension – it produces the nerve root clipping, compression of the posterior vertebral part of the body, arterial clippings and an overload of the cervical muscular-ligamentous complex.

Cervical hyperflexion – it produces ligamentous injuries in the posterior vertebral region, compression at the cervical intervertebral disc level, compression of the vertebral artery, as well as the vertebral nerve root clipping.

Cervical circumduction – it produces imbalances as a result of the torsion and tension at the cervical structure level.

Trunk hyperflexion – it produces an overload in the zone corresponding to both L5 vertebra and sacrum base.

Lumbar hyperextension or hyperlordosis – it produces a dimensional reduction of the conjugation holes, with clippings at the nerve root level, an excessive compression of the intervertebral discs and the nerve root injury because of the contact between the spinous apophyses.

Maximum lateral flexion – it produces a high pressure on the vertebral discs, with a possible nerve root compression, a reduction of the intervertebral space, as well as a maximal elongation of the longitudinal ligaments, with a possibility of rupture.

Combined exercises for the spine – they represent associations of the previously mentioned effects. These exercises combine one or more contraindicated articular postures such as:

- ✓ Trunk rotation + lumbar hyperextension
- ✓ Trunk rotation + hyperflexion
- ✓ Hip flexion + trunk flexion
- ✓ Coxofemoral and lumbar hyperextension

The risk of such combined exercises is given by the fact that they may produce even more severe injuries.

c) Back pain and its negative consequences

Back pain may have negative consequences on sports activity, up to the point that it may hinder the practice of some sports or condition some professionals to put an end to their sports career (M. Gonzales et al., 2000). These negative consequences might be the following:

Pain chronicity. If the treatment is not appropriate and the athlete continues physical activity despite the pain felt, he/she is exposed to the same risk factors, with the possibility of pain chronicity. From a neurological perspective, the longer the pain persists, the more the recovery will be difficult.

Administration of some unsuitable treatments. There are athletes who have a tendency to make abuse of some symptomatic treatments which, although efficient and indicated over a short period of time, on a long term they may generate undesirable effects. It is the case of the administration of corticoids or other drugs.

Interruption of sports practice. In most sports, the back muscles must be strong, work correctly and be well coordinated in order to hold different postures, provide the body balance and allow some quick corporal movements. But the pain may lead the athlete to abandon the sports activity performed. Certain neurological mechanisms determine the muscles to contract or work improperly, which renders extremely difficult the correct practice of the respective sports.

d) Modalities for the back pain prevention and the postural education of athletes

For an appropriate prevention of the back pain and a successful postural education, one can use different measures that have proved their effectiveness and are based on a series of principles (Crețu, 2003; Canto and Jimenez, 1998):

- Awareness of the corporal attitude
- Strength development in the back and abdominal muscles

- Joint mobility and muscle flexibility (suppleness)

These three principles can be developed through some work modalities with different characteristics, for instance: respiratory reeducation, exercises in the water environment or balance exercises.

e) *Awareness of the body attitude*

One should know the imbalances, the adopted position asymmetries, as well as the correct position, under the static and dynamic conditions.

Learning the correct position must encompass, from the chronological point of view, different stages:

- *Awareness of the body attitude.* By using different methods of subjective assessment, the therapist searches for the asymmetries caused by the spinal column curves that exceed the physiological normality of the child's or the adolescent's body structure.
- *Modeling and awareness of the correct body attitude or posture.* When the child or the adolescent knows the asymmetries of his/her body structure, the therapist tries to correct them through a series of exercises included in the group of the conscious gymnastic technics. Among them, there can be mentioned: exercises of identification in front of the mirror; stretching exercises; retroversion and anteversion movements of pelvis in different positions: orthostatism, sit position, dorsal decubitus, ventral decubitus; breathing exercises; postural exercises in the water environment.
- *Automation of the correct posture.* To complete this stage, a laborious work is required; it consists of the neuromuscular reprogramming of the current posture to a correct posture, from the physiological point of view.

f) *Strength development in the back and abdominal muscles*

The tone diminishing in spinal muscles causes some postural abnormalities. The muscle groups that lack strength and, consequently, may hinder the creation of normal postural reflexes and their conservation are the following:

- *The spinal extensors:* deep muscles –erector spinae: spinalis, longissimus, iliocostalis, which inserts between the spinous and the transverse processes, its main role being to hold up the spine and ensure its stability; intermediate muscles: serratus posterior superior, serratus posterior inferior; superficial muscles: rhomboideus minor; these muscles are responsible for the movement.
- *The spinal flexors,* located in front of the spinal column, are the following: rectus abdominis, abdominal internal and external oblique muscles, iliopsoas.

Toning these muscle groups determines the trunk stability and protects the spine against some

processes that generate osteoarticular deformations. The following indications must be considered:

- ✓ Exercises should not stress the concavity of the column.
- ✓ Isometric exercises are recommended (the position is maintained for 7 to 10 seconds, but the interval may be increased up to 20 seconds).
- ✓ A special emphasis should be placed on the controlled therapeutic exercises (slow movements, maintaining the control maintaining while the exercise is performed).
- ✓ The head is considered an extension of the spine (it should not fall).

One of the very efficient methods to strengthen the trunk muscles is Pilates method.

g) *Joint mobility and muscle flexibility (suppleness)*

Joint mobility in children and adolescents is determined by the bone elongation, in disproportion with the increase in muscular mass at the level of lower limbs and trunk. Thus, mobility decreases, particularly in the time interval between 10 and 14 years old.

The poor amplitude of different joints does not allow the achievement of a satisfactory balance. The normal balance regaining may be hindered by the amplitude limitation in the following joints: coxofemoral joint, spinal column joints (at the lumbar, dorsal and cervical levels) and glenohumeral joint, as a result of the pectoralis major retraction.

When conceiving a work program for the mobility, the following aspects should be taken into account:

- ✓ The program must have a progressive intensity and must be preceded by an appropriate warm-up.
- ✓ Mobility exercises can be combined with relaxation exercises, because these ones reduce tension at the muscle tone level.
- ✓ Static and dynamic exercises will be associated to slow and controlled movements, which lead the muscle to a tension position, then the stretching is maintained for a period of time.

Among the recommended motor activities that contribute to the development of the basic principles-mentioned above, there are: exercises for the respiratory reeducation, balance exercises and exercises in the water environment.

IV. RESPIRATORY REEDUCATION

While the exercises are performed, inspiration accompanies the stretching movements and the rest phase, and expiration accompanies the effort phase of the exercises, because it forces the abdominal muscles to contract. The following indications are proposed:

- ✓ Exercises for the diaphragm mobility
- ✓ Practice of different breathing types (abdominal, thoracic and clavicular ones)

- ✓ Work on some breathing rhythms that are necessary in different activities or sports: swimming, cycling, expression of some feelings (fury, interior peace), etc.
- ✓ Diverse breathing techniques: yoga (pranayama), tai chi, qi gong, etc.

V. BODY BALANCE

Balance exercises are destined to the correct postural integration of the body schema. The following indications are proposed:

- ✓ Reduction of the support base. For instance: while sitting on a balloon, the subject tries to keep the trunk upright.
- ✓ Elevation of the gravity center and reduction of the support base. For instance: on the balance board, different positions are experienced, modifying the support point or bending the trunk.
- ✓ Increase of the body's perceptive level reached in the previous exercises, by suppressing the sight.

To benefit from all that the biological element gives to the individual in different growth and development stages, the special training of balance capacity is particularly recommended in the age period from 6 to 10 years (Macovei, 2006).

VI. ACTIVITIES IN THE WATER ENVIRONMENT

In the water environment, human body is submitted to a series of particular laws (**Archimedes force**, hydrostatic pressure, water resistance, etc.) that make it the ideal ambience for working on the postural education and reeducation.

Program for the postural education and reeducation in the water environment:

- a. Learning the correct position of trunk in the water. This is achieved under the guidance of a teacher, who permanently corrects the body position by using his/her hands or some accurate verbal clues.
- b. Adopting the ventral and dorsal decubitus positions (by means of the floats), the vertical floating position or the immersion position. The degree of difficulty is increased by additional movements at the level of upper and lower limbs.
- c. Dynamic muscular work. Hydrodynamic resistances or the water turbulences can be used. The effort intensity is variable and follows the covered surface while the body or the limbs are moving, but also the movement execution rapidity. As swimming aids, one can use the fins, the floats and the lead belt, which offer a great resistance to the movements of upper and lower limbs, by performing thus, through these exercises, a progressive muscular work.
- d. Static muscular work. It stimulates the trunk muscles (abdominal and spinal muscles, retroversor and anteversor pelvic muscles, shoulder blade fixator muscles) which work in isometry, in order to keep

the trunk balance in the correct position that has been previously learned in the gym. The density diminution in different body segments by means of the floating aids, which can be used to facilitate the movement or to oppose a bigger resistance, favors the muscle strengthening.

The muscle toning in the water is globally approached, because it is not possible to work analytically with a specific muscular group without the intervention of other muscular groups. When the body or one of its segments travels in the water environment, there is a dynamic work of the muscles that perform the movement, or an isometric one, of the muscles that maintain the body position.

VII. CONCLUSIONS

- All over the day, the spinal column regions are usually submitted to an excessive tension, reason for which it must be avoided to overload them due to sports activities, wrong postures or an excessive development of muscular strength.
- Back pain appears more and more frequently in sports activity, being one of the main causes of muscular imbalances induced by an improper training method and by the adoption of an incorrect posture when performing different sports gestures.
- Athletes can practice their favorite sport without restrictions and with successful results, inclusively when they are confronted to spinal imbalances and back pains, if they are provided appropriate training, efficient prevention modalities and correct treatments.
- It is important for the athletes to be informed and become aware of the possible imbalances at their spine level, but also of some asymmetries of their body structure.

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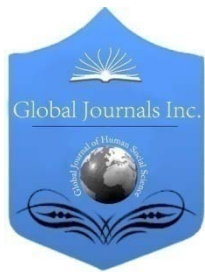
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Relations of Anthropometric and Conative (Normal and Pathological) Dimensions of Volleyball Junior Players

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Abstract- The main objective of this transversal study was to examine the relation of morphological and conative characteristics (normal and pathologic) factors in volleyball junior players. The data were collected on the sample of examinees ($N = 126$), aged 16 to 17 years from five volleyball clubs. The applied measuring instruments consisted of 23 anthropometric measures, 16 normal and 12 pathological conative variables. Descriptive statistics, Pearson's correlation coefficient and canonical correlation analysis were applied for data processing. The results showed that among the set of anthropometric characteristics and set of normal conative dimensions, with 51% of explained variance, there is a statistically significant canonical correlation of high level ($R_c = .77$, $p < .05$), whereas among the set of normal and pathological conative dimensions, with the interpreted variability of 59%, two significant correlations of average intensity ($R_c = .73$, $p < .01$, and $R_c = .70$, $p < .05$) were defined.

Keywords: *anthropometric characteristics, conative variables, volleyball players.*

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Relations of Anthropometric and Conative (Normal and Pathological) Dimensions of Volleyball Junior Players

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Abstract- The main objective of this transversal study was to examine the relation of morphological and conative characteristics (normal and pathologic) factors in volleyball junior players. The data were collected on the sample of examinees (N = 126), aged 16 to 17 years from five volleyball clubs. The applied measuring instruments consisted of 23 anthropometric measures, 16 normal and 12 pathological conative variables. Descriptive statistics, Pearson's correlation coefficient and canonical correlation analysis were applied for data processing. The results showed that among the set of anthropometric characteristics and set of normal conative dimensions, with 51% of explained variance, there is a statistically significant canonical correlation of high level ($R_c = .77$, $p < .05$), whereas among the set of normal and pathological conative dimensions, with the interpreted variability of 59%, two significant correlations of average intensity ($R_c = .73$, $p < .01$, and $R_c = .70$, $p < .05$) were defined. Following relevant canonical factors were isolated: I) morphological ectomesomorphic factors (longitudinal dimensionality of the skeleton and transversal dimensionality of the skeleton), II) normal conative factors (extraversion-introversion and anxiety, intelligence, self-awareness, courage, a sharp temper and protension; introspection and insight-honesty) and III) pathological conative factors (performance of systems for regulating and monitoring the biological functions and automatic functions and editing of responses of defense and attack). The structure of the relations between anthropometric characteristics and conative (normal and pathological) latent dimensions was presented for a probability level of 0.05.

Keywords: anthropometric characteristics, conative variables, volleyball players.

1. INTRODUCTION

In the last decade of the XXI century, relations between morphological characteristics and conative (normal and pathologic) factors of athletes arouse more and more attention in anthropological studies, as it is reflected in surveys conducted by: (Blaževik, 2006; Djurković, 2009; Djurkovic, 2009; Sing & Rathore, 2013; Sheppard *et al.*, 2008; Toskić, Okičić & Stankovic, 2012). Morphological anthropometry - somatometry - provides information about the processes of growth and

ontogenetic development in volleyball population, and specialization, i.e. defining characteristic team positions with specific tasks, which is proven by the research conducted by Malacko & Stankovic (2009).

Significant number of authors investigated anthropometric characteristics of volleyball players Dopsaj *et al.*, 2010; Djurkovic, Marelic & Rešetar 2011; Ivanovic, Ivanovic, 2007; Ivanovic & Ivanovic, 2012; Small *et al.*, 2010; Marelić, Matkovic & Antekolović, 2010; Martin Matillas *et al.*, 2014; Rodríguez-Ruiz *et al.*, 2012; Popovic *et al.*, 2010; Cabral *et al.*, 2011). Applying methods of multivariate analysis, the researchers isolated latent dimensions in the field of anthropometry and determined their interdependence with other anthropological skills and characteristics of volleyball players. It has been determined that in this sports game, tall athletes, the ones with a greater arm and leg length have a certain advantage when compared to short athletes, or those with short extremities. Furthermore, athletes with greater amounts of fatty tissue are inferior in comparison to the ones with the same weight but unburdened by the unwanted fatty tissue.

Taking into account the influence of genetic and exogenous factors on anthropometric measures of volleyball players, a significant number of authors emphasizes their importance: Bandyopadhyay, 2007; Vrbik, Čizmek & Gruić, 2011; Marelic, Djurković & Rešetar, 2007; Popovic-Ilic *et al.*, 2010; Trajkovic *et al.*, 2011; Pori & Sibiu, 2009. Considering their latent morphological dimension, the authors emphasize that the anthropometric characteristics are responsible for the longitudinal dimensionality of the skeleton (the growth of bones in terms of length), transversal dimensionality of the skeleton (the growth of bones in terms of width), the circular dimensionality and body weight (in terms of volume and total body mass) and subcutaneous fatty tissue.

The influence of psychological factors on sports results represents the a precondition for efficient accomplishment of the motor task, according to the survey done by (Duncan, Woodfield, & Nakeeb, 2006; Jurko, Nesic & Stojanovic, 2013; Ivanovic, Ivanovic, 2011; Ivanovic Ivanovic, 2012a; Ivanovic & Ivanovic, 2012b, Ivanovic, Ivanovic, 2012v; Ivanovic & Ivanovic, 2013; Ivanovic, Ivanovic & Samardzic, 2012; Stojanović, Milenkoski & Stojanovic, 2011; Tubić, 2010). Conative

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(motivational) component of attitudes refers to an individual's activities directed towards a specific object. Its effect can be positive or negative and harmonized with the knowledge and emotions related to that object. If the knowledge and emotions are favorable, people will try to bring positive actions in relation to the object, for example conative component can be directed from a tendency to help, support and protect the object to the tendency to destroy the object, as it is shown by research done by Blaževik, (2009), Kalach & Gontarev (2013), Muric et al., (2012), Sindik i Nazor (2011), Sindik et al., (2011), Stankovic & Popovic (2011), and Toskic et al., (2012). Conative (normal and pathologic) factors are structured by personality traits and responsible for its modes of behavior. Normal conative factor is characterized by moderate intensity acting neutral on person's adjustment disorders. On the other hand, pathological conative factor reduces the level of adjustment of the individual and causes personality disorder, states Stankovic et al., (2011) in his research.

A large number of studies have been based on identifying relations between morphological and conative characteristics of athletes, as it is shown by research conducted by: Karalejić et al., (2010), Joško i Joško (2011), Stankovic et al., (2011), Stankovic et al., (2013) and Stojanovic et al., (2011). In these studies it is emphasized that the action and achievement of effective results during the match demand specific needs integrity of afore mentioned anthropological qualities. In his study, Pajević (2003) suggests that normal conative factors cause different forms of human behavior, and integrate ego and improve effective communication with the environment. Popovic & Simonovic (2008) find that normal conative characteristics are mutually related in the processes of excitation and prevention of potential of adjustment. On the other hand, inherited pathological conative characteristics cause disorders in unifying the personality, or disturb the balance between reducing and increasing of adaptive powers, according to a survey conducted by Horga, Momirović & Jankovic (1983).

The results of previous studies that have observed the relationship of cognitive and anthropometric variables in adolescence are not consistent, many aspects still do not have final explanation, and this transversal study investigates their linear relations. Further empirical research on the interaction of these anthropological characteristics in junior volleyball players population are needed to fully shed light on the mechanism of their correlates.

The aim of this research was to evaluate whether there were any statistically significant relations between the system of morphological characteristics, normal conative characteristics and pathological conative characteristics in the population of junior volleyball players. In order to achieve this goal, the authors of this paper assumed that the systems of

anthropometric characteristics and normal and pathological conative dimensions are statistically significantly correlated.

II. RESEARCH METHOD AND PROCEDURES

a) Examinees

The research involved 126 junior volleyball players, aged 16 to 17 years from five volleyball teams: *super league* "Spartak" (Ljig); *I League* "Železničar" (Lajkovac); *II League* "Loznica" (Loznica), "Bravo" (Valjevo) and "Ub" (UB). The average age of a suitable sample of examinees was 16.68 years (SD = 7.24). All volleyball players had at least two years of systematic and organized training and competition.

b) The sample of morphological variables

In order to evaluate latent morphological characteristics, the following variables were used: Body height (VIS), Leg length (DNO), Hand length (DSA), Foot length (DST), Arm length (DRU), Biacromial range (BIA), - *longitudinal dimensionality of the skeleton*; Bicristal range (BIK), Hand width (SSA), Wrist diameter (DIR), Elbow diameter (DIL), Knee diameter (DIK), Foot width (SST) - *transversal dimensionality of the skeleton*; Body mass (MAS), Upper arm volume (ONA), Lower arm volume (OPO), Upper leg volume (ONT), Lower leg volume (OPT), Average thorax volume (OGK) - *circular dimensionality and body mass*; Upper arm skinfold (KNA), Back skinfold (KLE), Armpit skinfold (KPA), Abdominal skinfold (KTR), Lower leg skinfold (KPT) - *subcutaneous fatty tissue*.

Anthropometric measurements were performed according to the instructions and regulations of the International Biological Program, which was formed by (Norton & Olds, 2004). Applied standard measuring instruments (anthropometer according to Martin's scale for measuring height, medical decimal scale with sliding weights to measure body weight, Holtain flexible measuring tape for body volume, Holtain Bicondylar Vernier caliper to measure the diameters of the bones and caliper by John Bull for measuring skin folds), are calibrated before measuring. All morphological characteristics were measured again, with the exception of skin folds, which were presented as the mean value after the three consecutive measurements. The study was conducted in groups during regular trainings in May 2014.

Prior to the implementation of anthropometric measurements, the examinees were explained the aim of the research, they were asked to participate and explained that they could give up whenever they want. On average, anthropometric measurements lasted for 45 min. Examinees were first informed about the research and protection of the anonymity of the data, after which they signed an agreement on participation in the study.

c) *The sample of conative (normal and pathological variables)*

In order to evaluate the normal conative characteristics, the 16PF battery was used (Cattell, Eber, & Tatsuoka, 1970) with first-order factors: Outgoing – reserved (A), High intelligence – low intelligence (B), Higher ego strength – lower ego strength (C), Dominance – submissiveness (E), Surgency – desurgency (F), Stronger superego – weaker superego (G), Bold (parmia) – shy (threctia) (H), Tender-minded (premsia) – tough-minded (I), Protension (L), Autia (imaginative) – practical (M), Shrewdness – artlessness (N), Apprehensive (O), Radicalism – conservatism (Q1), Self-sufficiency – group dependence (Q2), High self-concept – low self-concept (Q3), Tense – relaxed (Q4).

Pathological conative characteristics were operationalized through the score for selected scales on a test of pathological conative characteristics (Momirović, 1971), C.I.-N4 - *the efficiency of the regulatory system and control of organic functions* (H1); Cardiovascular conversion (K10), Gastrointestinal conversion (G11), Inhibitory conversion (I7),

Hypochondria (H13), *the effectiveness of the regulatory system and the control of defensive reactions* (ALPHA), Anxiety (A1), Obsession (O3), Hypersensitivity (S5), Phobias (F2), *the efficiency of the regulatory system and the control of attack reactions* (SIGMA), Impulsiveness (N14), Aggression (T15) and *the effectiveness of the system for the coordination of regulatory functions* (DELTA), Paranoia (P18), Depression (D6).

III. RESULTS

a) *Descriptive data and correlations between examined variables*

Results of morphological variables examined through descriptive statistical parameters are shown in Table 1a, 1b. Obtained values skewness and kurtosis indicate that there is no significant dispersion of the distribution from normal Gaussian distribution (Tenjović, 2002). This indicates that the measuring instruments were well suited for the measurement of anthropometric variables in volleyball junior players population, so that further statistical analysis can be performed.

Table 1 : Basic descriptive-statistical parametrees of anthropometric variables

Variables	M	SD	Min	Max	Sk	Ku
Body height (cm)	1820.08	61.785	1631	1963	-.257	.295
Leg length (cm)	1033.06	47.929	942	1182	.263	.301
Habd length (cm)	196.34	11.231	171	239	.572	1.287
Foot length (cm)	280,35	13,005	261	319	.799	.558
Arm length (cm)	783.06	50.040	689	879	-.207	-.219
Biacromial range (cm)	409.86	29.871	311	539	.390	4.661
Foot width (cm)	92.19	7.916	68	111	-.395	.592
Knee diameter (cm)	92.56	5.878	75	106	.182	-.401
Elbow diameter (cm)	75.06	6.606	61	89	.230	-.492
Wrist diameter (cm)	59.04	2.927	52	69	.193	.149
Body mass (kg)	78.543	111.065	549	1079	.393	-.312
Bicristal range (cm)	300.03	26.008	244	389	.728	2.212
Nad width (cm)	86.00	5.437	74	99	.088	-.353

Upper arm volume (cm)	284.06	24.975	229	371	.714	.967
Lower arm volume (cm)	270.04	20.98	219	321	.306	-.071
Upper leg volume (cm)	562.03	44.923	479	681	.648	-.015
Lower leg volume (cm)	391.87	49.016	319	599	1.918	7.012
Average thorax volume (cm)	957.01	70.012	839	1111	.252	-.694
Upper arm skinfold (mm)	93.98	35.894	35	199	1.017	.735
Back skinfold (mm)	105.01	34.018	65	215	1.753	3.023
Armpit skinfold (mm)	75.39	45	163	24.004	1.565	2.891
Abdominal skinfold (mm)	117.03	63.013	49	431	2.356	9.437
Lower leg skinfold (mm)	103.05	48.692	34	257	.797	.492

Legend: *AS* – arithmetic mean; *SD* – standard deviation; *Min* – minimum; *Max* – maximum; *Sk* – skewness, *Ku* – Kurtosis

Table 2 shows descriptive statistical indicators (arithmetic means and standard deviations) for individual pathological conative characteristics of junior volleyball players. Calculated average and variable values are consistent with those obtained in the earlier study, as shown by the study done by Stankovic et al (Stankovic *et al.*, 2013).

Table 2: Basic descriptive statistical parameters of cognitive (pathological) variables

Variables	M	SD
Cardiovascular conversion	13.01	8.613
Gastrointestinal conversion	.85	1.330
Inhibitory conversion	1.29	1.302
Hypochondria	.23	.796
Anxiety	.19	.682
Obsession	.30	.896
Hypersensitivity	.39	.899
Phobias	1.24	1.495
Impulsiveness	.60	.890
Aggression	.49	.839
Paranoia	1.51	1.493
Depression	1.17	.702

Table 3 shows basic descriptive statistical parameters of a set of variables for assessing normal conative characteristics of volleyball players aged from

16 to 17, where the calculated values represent measures of central tendency.

Table 3: Basic descriptive statistical parameters of normal conative variables (raw results)

Variables	M	SD
Affectia – sizia (A)	13.05	9.114
High intelligence – low intelligence (B)	6.96	1.985
Stronger ego – weaker ego (C)	15.92	3.786
Dominance – submissiveness (E)	14.784	3.992
Surgency – desurgency (F)	14.888	3.651
Stronger superego – weaker superego (G)	10.03	2.063
Boldness – timidity (H)	16.06	4.115
Tender-minded – premeditation (I)	9.876	3.006
Protension (L)	9.993	2.787
Autia – imaginative	11.04	2.443
Shrewdness – artlessness (M)	9.982	2.899
Shrewdness – artlessness (N)	8.98	3.007
Apprehensive (O)	9.99	2.826
Traditionalism – liberalism (Q ₁)	13.01	2.900
Self-sufficiency – group adherence (Q ₂)	10.12	4.05
High self-control – self conflict (Q ₃)		
Tense – relaxed (Q ₄)		

b) *Canonical correlation analysis of examined variables*

Based on the results Bartlett Chi-square test ($\chi^2 = 439.05$ a statistically significant function, with a canonical correlation of high intensity ($R_c = .77$, $p < .05$), 59% and the proportion of the mutual variance that explains maximum possible level of linear combinations of single isolated pair of canonical factors is presented in Table 4. The calculated values, with the error probability of 5% suggest that analyzed multivariate system of conative (normal) variables depends on the system of original anthropometric characteristics.

Table 4 : Statistical significance of calculated pair of canonical factors

Canonical function	R_c	Rc^2	χ^2	p
1	.77	.59	439.05	.05

Legend: canonical correlation coefficient (R_c), canonical coefficient of determination (R), the value of Bartlett's χ^2 -test, level of significance, i.e. the proportion of error in reasoning (p)

To test the nature of the relations between original *normal and pathological variables* we applied model of canonical correlation analysis. In Table 5, the left set of variables represents variables in normal conative domain, and the right set of variables in pathological conative domain. Statistically significant coefficients of correlation between the tested variables

had values of -0.19 (negative correlation between normal conative factor affectia-sizia and pathological conative characteristics of depression) to 0.42 (positive correlation of normal conative factor tense-relaxed and pathological conative characteristics of inhibitory conversion).

Based on the analysis of the cross-correlation matrix (Table 6) we can note statistically significant correlations between normal and pathological conative characteristics for the following variables: *affectia - sizia* and *depression* ($p = -.19$), *dominance - submissiveness* and *cardiovascular conversion* ($r = .28$), *dominance - submissiveness* and *gastrointestinal conversion* ($r = .30$), *dominance - submissiveness* and *aggression* ($r = -.33$), *surgency - desurgency* and *depression* ($r = .40$),); *stronger superego - weaker superego* and *depression* ($r = .29$),); *stronger superego - weaker superego* and *hypersensitivity* ($r = .30$), *boldness-shy* and *obsession* ($r = .28$), *protension* and *cardiovascular conversion* ($r = .31$), *shrewdness - artlessness* and *inhibitory conversion* ($r = .32$), *apprehensive* and *aggression* ($r = -.33$), *traditionalism-limeralism* and *hypochondria* ($r = -.31$), *self-sufficiency - group-adherence* and *obsession* ($r = -.39$) *high self-control-self-conflict* and *gastrointestinal conversion* ($r = -.36$) and *tense - relaxed* and *gastrointestinal conversion* ($r = -.42$). Therefore, obtained results (with the probability level of $p < .05$) show low correlations between normal and pathological characteristics in conative space.

Table 5 : Crosscorrelations between normal and pathological variables

	KK ₁₀	GG	I7	HH	AA ₁	OQ ₃	SS ₅	FF ₂	NN	TT ₁₅	PP ₁₈	DD ₆
		11		13					14			
A	.10	-.12	-.20	.03	-.01	-.07	-.08	-.11	.06	-.09	-.04	-.19
BB	.05	.02	.09	.05	-.10	.15	-.06	-.04	-.07	.09	.21	.01
CC	.09	.05	.02	.08	.04	.06	-.08	.05	.03	.02	.06	.05
EE	.28	.30	.32	.09	.40	-.06	.12	.15	.01	-.01	.05	.03
FF	-.09	.07	.16	-.05	-.12	.15	.06	-.09	.08	.14	-.02	.29
GG	.05	-.09	.07	.03	.08	.06	.30	.03	.06	.09	.07	.10
HH	.09	.13	.16	.03	.16	.28	-.08	-.04	-.02	.09	.00	.06
II	.11	-.05	-.10	-.16	-.14	.01	.00	-.08	.12	-.16	-.06	.13
LL	.31	.08	.15	.14	.16	.16	.05	.14	-.10	-.06	-.08	-.06
MM	.06	.03	-.06	-.07	.04	.16	-.00	.06	.07	.05	.03	.10
NN	.10	.16	.32	.14	.15	.06	.11	.14	.12	-.05	.01	.12
OO	-.03	.10	-.06	-.03	.02	-.08	.05	-.06	-.12	-.33	.04	.06
QQ ₁	-.08	-.12	-.05	-.31	.12	.16	.03	-.09	.16	-.14	.12	-.06
QQ ₂	-.08	-.05	-.07	-.00	.12	-.39	.07	.04	.15	-.06	.15	-.03
QQ1	-.03	.36	.16	.14	.03	-.02	.15	.07	.14	.13	.09	.05
3												
QQ ₄	.05	.10	.42	.13	.09	-.03	.15	.15	.14	.03	.05	-.04

Note: statistically significant correlations with p -value $< .05$ are presented in bold

Linear correlations obtained in this research are similar to those obtained in the research done by Stankovic et al., (2013).

By solving the characteristic equations of the cross-correlation matrix (Table 6), as the roots of this equation, two canonical factors were isolated. While studying the relations between the systems of normal conative variables and systems of pathological conative variables relatively high canonical correlations were determined for both isolated canonical factors ($R_c = .74$ and $R_c = .68$), and are statistically significant at the $p < .05$ level. The squares of the canonical correlation (R_c^2), which explain the common variance of the variables of the two groups of the overall variability of the analyzed systems of variables have a value of $R_c^2 = .51$, и $R_c^2 = .45$. Having considered significant intensity of canonical correlation and percent of mutual variance, it can be concluded, with the probability level

higher than 5%, that pathological conative characteristics of examinees were manifested more than normal conative characteristics.

Table 6 : Statistical significance of calculated pairs of canonical factors

Canonical function	R_c	R_c^2	χ^2	p
1	.74	.51	256.12	.05
2	.68	.45	201.26	.05

Legend: canonical correlation coefficient (R_c), canonical coefficient of determination (R_c^2), the value of Bartlett's χ^2 -test, level of significance, i.e. the proportion of error in reasoning (p)

The results presented in (Table 7) show mutual relations between individual morphological and normal conative variables and the first isolated canonical function.

Table 7 : Structure of canonical function of anthropometric and normal conative variables

Morphological variables	Canocvical function 1	Normal conative factors	Canocical function 2
Body height	-.10	Affectia—cizia	-.38
Leg length	-.15	High intelligence—low intelligence	-.39
Hand length	.11	Higher ego—weaker ego	.09
Foot length	-.61	Dominance—submissiveness	-.18
Arm length	-.40	Surgency—desurgency	.05
Biacromial range	-.12	Higher super ego—weaker super ego	-.04
Bicristal range	.10	Bold (parmia)—shy	-.46
Hand width	.37	Tender -minded (premsia)—tough-minded	-.35
Wrist diameter	.33	Protension	-.48
Elbow diameter	.09	Autia (imaginative) —practical	.03
Knee diameter	.32	Shrewdness (phitmia) —artlessness	-.21
Foot width	.03	Apprehensive	-.01
Body mass	-.01	Traditionalism —liberalism	.11
Upper arm volume	.07	Self-sufficiency—group dependance	-.30
Lower arm volume	.13	High self-control—self conflict	-.04
Upper leg volume	.11	Tense—relaxed	-.37
Lower leg volume	.30		
Average thorax volume	.02		
Morphological variables	Canocvical function 1	Normal conative factors	Canocical function 2
Upper arm skinfold	-.06		
Back skinfold	-.00		
Armpit skinfold	.08		
Abdominal skinfold	-.09		
Lower leg skinfold	-.04		

Coefficients within the set of anthropometric variables that show correlation between manifested variable with a canonical function, range from 0.30 to -0.61. *Foot length* (-.61) and *arm length* (-.40), show dominant negative correlations of low and moderate intensity with the first canonical factor, whereas *hand width* (.37), *wrist diameter* (.33) and *knee diameter* (.32), have positive correlation, whereas *lower leg volume* (.30)

is placed at the sixth position. Other anthropometric variables are not statistically significant for this canonical dimension. Having considered significant results, as well as the classification of morphological types in the research done by Misigoj-Durakovic (2008), this latent dimension can be hypothetically defined as a bipolar ectomesomorphic morphological factor (longitudinal

dimensionality of the skeleton and transverse dimensionality of the skeleton).

The second canonical function is presented in the same matrix of canonical structure. It involves seven normal conative variables. They range from 0,30 to 0,46 and show negative mutual linear correlation between original variable and isolated canonical function. "Most responsible" variables with negative and low correlation with this canonical function are: *protensia* (–.48) and *boldness (parmia)–shy* (–.46), *higher intelligence–lower intelligence* (–.39), *affectia–sizia* (–.38), *tense–relaxed* (–.37), whereas the results *tender-minded (premsia)–tough-minded* (–.35) and *self-sufficiency–group dependence* (–.30), are at the last position. The set of the second pair of normal conative factors cannot be precisely explained because of the combinations of complex and latent 'psychological nature'. However, obtained results show that it can be theoretically interpreted as a **factor of extrovert–introvert and anxiety**.

Obtained results presented in Table 8 show statistically significant and low linear correlation between analyzed normal and pathological variables of the first and second canonical function.

Coefficients that show mutual linear relations between normal conative variables and the first

canonical function range from 0,32 до –0,46. On the basis of the obtained results contained within the matrix of the canonical structure of normal and pathological conative variables, we can note statistically significant correlations between the applied variables of the first and second canonical factor. The first canonical factor in the space of normal conative variables was defined with the variables of *high intelligence – low intelligence* (–.46), *higher ego – lower ego* (–.43), *bold (parmia) – shy* (.41), *tender-minded (premsia) – tough-minded* (.37), whereas, *protension* is at the final position (.30), so that it could be defined as the canonical factor which characterizes volleyball players in relation to **intelligence, ego, boldness, tough-mindedness and protension**.

The second canonical function is defined by four normal conative variables with positive correlation coefficients ranging from 0,32 до 0,46. Most dominant variables are: *tense–relaxed* (.61), *self-sufficiency – group adherence* (.47), *high self-control – self-conflict* (–.46), whereas the result *shrewdness – artlessness* (.32) has the minimum influence on this function. Therefore, latent structure of junior volleyball players can be theoretically explained as a **factor of introspection and shrewdness – artlessness**.

Table 8 : The canonical structure of normal and pathological conative variables

Normal conative factors			Pathological conative factor		
	Fc_1	Fc_2		Fc_1	Fc_2
Affectia–sizia	-.011	.06	Cardiovascular conversion	.43	-.05
High Intelligence–low intelligence	.32	-.23	Gastrointestinal conversion	.39	.23
Higher ego–weaker ego	.43	-.12	Inhibitory conversion	.35	.15
Dominance–submissiveness	.19	.10	Hypochondria	.38	.60
Surgency–desurgency	.03	-.07	Anxiety	.21	.18
Higher super ego–weaker super ego	-.06	-.03	Obsession	.14	.12
Bold (parmia)–shy	.41	-.20	Hypersensitivity	-.01	.14
Tender-minded (premsia)–tough-minded	.37	-.16	Phobias	.35	.59
Protension	.35	.18	Impulsiveness	-.28	.53
Autia (imaginative)–practical	.06	.17	Aggression	.24	.12
Shrewdness (phitmia)–artlessness	-.05	.32	Paranoia	.33	-.01
Apprehensive	.30	-.15	Depression	-.05	.48
Traditionalism–liberalism	-.16	.06			
Self-sufficiency–group dependence	-.46	.47			
High self-control–self conflict	.20	.36			
Tense–relaxed	.20	.61			

The structure of the second canonical function is presented in the same matrix. It involves positive signs of four pathological conative variables. Their

coefficients range from 0,36 to 0,62. Most significant variables for this canonical function are: *obsession* (.62), *phobia* (.59), and *impulsiveness* (.53), whereas

depression has the lowest contribution (.48). Therefore, latent structure of junior volleyball players can be theoretically labeled as a **factor of the regulation of reactions such as defense and attack**.

The results of this transversal study are similar to those obtained by the research done by Stankoci et al. (2013).

IV. DISCUSSIONS

Investigation and identification of potential mechanisms for the realization of morphological, normal and pathological conative dimensions in volleyball population is of great theoretical and practical importance. Success in performing sports activities depends on the personality dimensions governed by the modalities of its behavior. Researches done by the authors: Blažević, (2009), Kalach & Gontarev (2013), Murić *et al.* (2012), Popović & Simonović (2008), Sindik *et al.*, (2011), Sindi i Nazor (2011), Stanković *et al.*, (2011), Stanković *et al.*, (2013), Stanković, Malacko & Doder (2011), Stankovića & Popovića (2011), Toskić *et al.*, (2012), have shown that conative characteristics directly and indirectly limit the effectiveness of different sports activities because of their impact on other anthropological characteristics. Also, the same researchers believe that in some sports activities identical conative characteristics represent limiting factor, while in others they have stimulating effect, and that there are no two persons with identical conative structures (Jurko *et al.*, 2013; Ivanovic & Ivanovic, 2011; Ivanovic & Ivanovic, 2012a; Ivanovic & Ivanovic, 2012b; Ivanovic & Ivanovic, 2012v; Ivanović & Ivanović, 2013, Ivanovic, Samardjic & Ivanovic, 2012, Stojanovic *et al.*, 2011). Therefore, the identification of conative factors represents an important assumption for efficient implementation of activities in volleyball.

For an explanation of canonically statistically significant relations between morphological and conative factors standard rule that a linear increase in the value of the resulting vector of variables of the first canonical factor from the first analyzed area corresponds to a proportional linear increase of the value of the resultant vector of the variables of canonical factors from another analyzed area and vice versa (Fajgelj, 2003) should be taken into account.

Based on the results contained in the matrix of the canonical structure of anthropometric and normal conative variables we can note a statistically significant correlation between the anthropometric variables and the first canonical factor. The relations between the first canonical factor from the system of anthropometric variables, interpreted as the bipolar canonical factor of the ectomesomorphic morphological type and the first canonical factor from the system of normal conative factors, interpreted as the canonical factor of extraversion – introversion and anxiety indicates that

volleyball players of the ectomezomorphic type are characterized at one end by longitudinal measures and on the other by transversal dimensionality of the volume of the femoral region with an increase in the value of the conative variables of extraversion and decreased anxiety.

On the basis of the results obtained and contained within the matrix of the canonical structure of normal and pathological conative variables, we can note statistically significant correlations between the measured variables in the case of the first and second canonical factor. The first canonical factor in the space of normal conative variables can be defined as the canonical factor which characterizes volleyball players in relation to intelligence, ego, boldness, tough mindedness and protension. The second one can be interpreted as a factor of introspection and tender-mindedness – tough-mindedness.

The first canonical factor in the space of pathological conative variables can be defined as a canonical factor of effectiveness of the system for the regulation and control of organ function and regulatory function, while the second canonical factor can be interpreted as a canonical factor of the regulator of the reactions of defense and attack. The structure of the correlations indicate that among the volleyball players with more pronounced warm types of behavior, who are more polite, considerate of others, there was an increase in the scores for depression, as with those who indicated more pronounced liveliness and impulsiveness and expressiveness. Volleyball players who usually manifest dominant, competitive, assertive or even aggressive behavior face a greater danger of developing one of the conversions (cardiovascular, gastrointestinal or inhibitory) and are more prone to anxiety. Those who are more moral individuals and who have more respect for the rules are more prone to hypersensitivity, and those who are shyless and adventurous score higher for obsession. Those who are suspicious and skeptical indicate a higher inclination towards cardiovascular conversion. The more agile, inquisitive, and discrete participants indicated a greater tendency for inhibitory conversion, anxiety, phobia and impulsive reactions. Those who were more worried, more insecure, often blaming themselves for everything were less prone to aggression. Those who were more open to change, more liberal, more analytical and critical volleyball players scored lower values for hypochondria, obsession and paranoia. The participants who were more self-satisfied and more self-confident were more prone to obsession, and those with a tendency for perfection, compulsion and self-discipline, who showed a tendency towards more dominant behavior with a lot of self-pity were at a higher risk of gastrointestinal and inhibitory conversion and were more impulsive. Tense, energetic, impatient volleyball players more frequently

develop gastrointestinal conversion, hypochondria and phobias.

Although the canonical results of this study section are expected and correspond with previous research studies, it is important to note several methodological shortcomings of this study. The biggest limitation is the relatively small size of the sample of examinees limited by age (16 and 17 year old), composed exclusively of male volleyball players. This structure of the sample greatly reduces the generalization of the results so that the obtained results are to be taken with some reserve. Realistic data could be obtained by experimental research in laboratory and real life conditions.

Finally, we should add that future longitudinal research should include other morphological and conative variables, an equal number of males and females in the population of volleyball players, without age limitation, which would apply the same or similar methodology, in order to get a greater probability of more reliable statistical conclusions about the complex relations of the examined phenomena.

V. CONCLUSIONS AND RECOMMENDATIONS

The results of an empirical research emphasize some important aspects of linear correlations between morphological, normal and pathological conative characteristics. Several conclusions are made according to these findings and their interpretation.

According to the results of applied canonical correlation analysis, this transversal study isolated following statistically significant factors: a) *ectomesomorfic morphological factor* (longitudinal dimensionality of the skeleton and transversal dimensionality of the skeleton), b) *normal conative factors* (extraversion-introversion and anxiety, intelligence, self-awareness, boldness, sharp temper and protensia; introspection and insight-honesty) and c) *pathological conative factors* (performance of the system for regulation and supervision of physical functions and automatic functions and editing of responses of defense and attack).

The results obtained in this study speak of the fact that volleyball players of the ectomesomorphic type are characterized at the one end, by longitudinal measures and at the other the dimensionality and volume of the femoral region if they are extrovert and non-anxious. In the case of volleyball players of this rank of competition, who show pronounced signs of warm behavior, who are more polite, considerate of others, there is an increase in the scores for depression, as in the case of those who indicate pronounced liveliness and impulsiveness and expressiveness. Volleyball players who frequently manifest dominant, competitive, assertive or even aggressive behavior are more prone to anxiety. Those who have higher morals

and more respect for the rules are more prone to hypersensitivity, and those who are shyless and adventurous score higher values on the score for obsession. Tense, energetic, impatient volleyball players more frequently develop gastrointestinal conversion, hypochondria and phobia.

Thus, the initial hypothesis of this transversal study on significantly linked set of anthropometric characteristics and a set of normal and pathological conative dimensions, is absolutely proven. The findings are partially consistent with previous studies of relations between morphological and conative (normal and pathologic) factors in our country and abroad.

Based on the results of relations, it is concluded that despite certain methodological limitations (section study design, relatively small and suitable sample, age limitation, mostly male examinees), our research can contribute to the development of predictive model of morphological, normal and pathological conative dimensions in volleyball junior population. Finally, additional longitudinal studies may provide more accurate results, which might significant at the theoretical level - in terms of further development of theoretical and methodological approach to these issues, and in the empirical sense, since statistically significant linear correlations between examined constructs could be noticed if greater population of both genders would be included.

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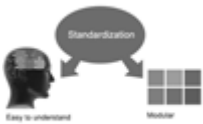
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32. Never oversimplify everything: To add material in your research paper, never go for oversimplification. This will definitely irritate the evaluator. Be more or less specific. Also too, by no means, ever use rhythmic redundancies. Contractions aren't essential and shouldn't be there used. Comparisons are as terrible as clichés. Give up ampersands and abbreviations, and so on. Remove commas, that are, not necessary. Parenthetical words however should be together with this in commas. Understatement is all the time the complete best way to put onward earth-shaking thoughts. Give a detailed literary review.

33. Report concluded results: Use concluded results. From raw data, filter the results and then conclude your studies based on measurements and observations taken. Significant figures and appropriate number of decimal places should be used. Parenthetical remarks are prohibitive. Proofread carefully at final stage. In the end give outline to your arguments. Spot out perspectives of further study of this subject. Justify your conclusion by at the bottom of them with sufficient justifications and examples.

34. After conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium through which your research is going to be in print to the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects in your research.

INFORMAL GUIDELINES OF RESEARCH PAPER WRITING

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form, which is presented in the guidelines using the template.
- Please note the criterion for grading the final paper by peer-reviewers.

Final Points:

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of prior workings.



Writing a research paper is not an easy job no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record keeping are the only means to make straightforward the progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear

- Adhere to recommended page limits

Mistakes to evade

- Insertion a title at the foot of a page with the subsequent text on the next page
- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

In every sections of your document

- Use standard writing style including articles ("a", "the," etc.)
- Keep on paying attention on the research topic of the paper
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- Align the primary line of each section
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- Use present tense to report well accepted
- Use past tense to describe specific results
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Abstract:

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript-- must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing references at this point.

An abstract is a brief distinct paragraph summary of finished work or work in development. In a minute or less a reviewer can be taught the foundation behind the study, common approach to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study, with the subsequent elements in any summary. Try to maintain the initial two items to no more than one ruling each.

- Reason of the study - theory, overall issue, purpose
- Fundamental goal
- To the point depiction of the research
- Consequences, including definite statistics - if the consequences are quantitative in nature, account quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

Approach:

- Single section, and succinct
- As a outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
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- Explain the value (significance) of the study
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- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled the declared objectives.

Approach:

- Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done.
- Sort out your thoughts; manufacture one key point with every section. If you make the four points listed above, you will need a least of four paragraphs.



- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
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This part is supposed to be the easiest to carve if you have good skills. A sound written Procedures segment allows a capable scientist to replacement your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt for the least amount of information that would permit another capable scientist to spare your outcome but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section. When a technique is used that has been well described in another object, mention the specific item describing a way but draw the basic principle while stating the situation. The purpose is to text all particular resources and broad procedures, so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step by step report of the whole thing you did, nor is a methods section a set of orders.

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- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

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- Report the method (not particulars of each process that engaged the same methodology)
- Describe the method entirely
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures
- Simplify - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

Approach:

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in every other part of the paper - avoid familiar lists, and use full sentences.

What to keep away from

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings - save it for the argument.
- Leave out information that is immaterial to a third party.

Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part a entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently. You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.



Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- Put figures and tables, appropriately numbered, in order at the end of the report
- If you desire, you may place your figures and tables properly within the text of your results part.

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- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
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- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
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- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One research will not counter an overall question, so maintain the large picture in mind, where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

- When you refer to information, differentiate data generated by your own studies from available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.



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