41 - ZOUK DANCE: CONTRIBUTION OF FLEXIBILITY IN THE PERFORMANCE

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1.Introduction

Dancing is one of the oldest forms of expression known by humanity. It is present in the culture of most people around the world. It refers to daily life, beliefs and myths of the people. Zouk dance was introduced in the ballroom dances to be danced by two persons. It has a basic structure, with beginner, intermediate and advanced moves. It is necessary to differentiate zouk music from zouk dance by defining its origin. The music originated in the French West Indies (Martinique and Guadeloupe) and sung in Creole (French dialect). The dance is totally Brazilian. Zouk music was played in a lower rhythm to save the lambada. Then, it was possible to add the lambada steps along with new steps and resulted in the Brazilian zouk (PORTINARI, 1989; LAGE 2007).

Zouk dance characterizes by some specific movements that require a particular technique and flexibility from the dancer, and they are not found in other ballroom dances very often. Some movement techniques present in the dance are the cambré step, pendulums, circular movements of the head, counterweights and spins. During the dance, there is much contact between the lady and gentleman's bodies, which is a differential in the ballroom dance mode. The bodies positioning are due to dancers' hips. They are properly embedded on each other, and there is certain spacing from the upper body, then, there is room for the lady to achieve circular movements with the head (when the couple is dancing together). Because of the wide range of techniques and steps related to the zouk dance, the spinal column is continuously used (suffering a high load of movements) (DELANO, 2009; FLORIÃO (2013) SANTOS, 2013).

"Flexibility directly relates to techniques of dance movements, and it is one of the most demanded physical valences, among others, in the execution of movements" (MONTEIRO, 2009 apud FERNANDEZ, 2012).

Movement frequency is particular in zouk dance with the use of lordotic curves that are present in the cervical and lumbar region of the spine. It allows a range of neck and waist movements that are characteristic of the zouk dance (GAVIOLLI, 2010).

"Unlike other ballroom dances, zouk is three-dimensional, i.e., it uses the combination of frontal, sagittal and transverse planes in the movements." In other words, "zouk requires great mobility of the dancer's column and with forces evenly distributed in all vertebral segments. It is a dance that curls, rotates and circulates the spine in various combinations of the movement plane" (DENOVARO, 2011 apud SOUTO, 2011).

Zouk dance provokes hip, torso and neck movements, the old lambada features. Then, it was possible to keep the timing of lambada rhythm. A widely used motion is the cambré step, in which the lady arches her torso back. According to Alter (2010, p. 248), "during the spinal hyperextension, discs become thinner in the posterior portion and thicker in the anterior part. That deformation allows the vertebrae to get closer in the posterior part and further apart in the anterior region, increasing the extension curve of the spine." The rotation of head and neck, promoting the hair effect while performing the movements, is also quite executed as well as pendulums or spirals (when the lady spins keeping the column in extension (FERNANDEZ, 2012).

It is up to the guiding professional to promote and encourage a proper conditioning and stretching to avoid injury risks since it requires a minimal joint mobility for a good performance, which increases the importance of flexibility in combination with good muscle tone to protect the column from larger movements. Zouk dance requires a mobile, strong and extremely flexible body to obtain a less damaging execution as claimed by Monteiro, 2013 and Souto, 2011.

To ensure the success of a dance performance, besides developing and training physical technical skills, it is necessary to exercise the emotions control, which can directly influence a successful execution since the dancer performs, above all, a representation of himself. It is necessary to highlight that dancers are judged by various criteria such as balance, presentation domain to deliver, posture, musicality and expression, time, body alignment, form and performance. The general objective was to analyze trunk flexibility between female students and teachers who practice zouk dance by comparing extension and flexion movements, and lateral bending.

2. Materials and methods

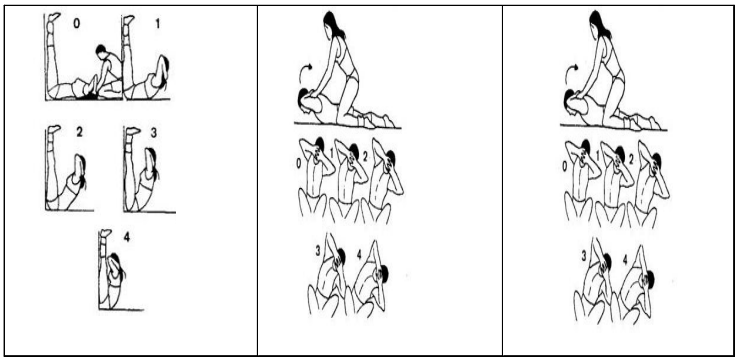
The present research can be classified as a qualitative and quantitative study in relation to the problem's approach since there was a comparison of two groups of different levels and, in addition, statistical data was used to compare them. Regarding the proposed objectives, the paper characterizes as descriptive and cross-sectional, due to the short period of data collection as stated by Santos (2002). The study's subjects were selected intentionally. There were eight dancers of zouk dance from beginner levels (students) and advanced levels (teachers). It was possible to use as a measuring instrument the FLEXITEST develop by Araújo, in an adapted way, analyzing only three of the twenty items present in the original test. They were trunk flexion, trunk extension and trunk lateral flexion. There was a person along with the evaluator to help in the execution of movements within the joint limit of the evaluated person. It was also necessary the use of mats for the comfort of the assessed person. Data collection was performed between August and September, in the year 2014.

Parallel to the Flexitest, it was conducted a questionnaire with the participants to get more information, already mentioned in this research, as influencing factors, but not decisive.

To carry out data collection, the dancers went to the collection place on a different day of dancing activity. Each group was evaluated separately, on the same day, with the help of a person to assist in the three positions selected to carry out the movements, while the evaluator made the comparison with levels proposed by Araújo. All participants signed a consent form agreeing to their voluntary participation in the research, and aware they could abandon the test at any time.

Volunteers performed the test in three positions chosen to measure the level of flexibility before and after warming-up, according to Table 1.1:

Table 1.1 List of Used Positions in the Flexitest Adapted, 2014



The participants were submitted to the test in the three positions chosen for measuring flexibility level before and after warming-up, on the mat. Data analysis was carried out through Microsoft Office Excel® 2013. Quantitative and qualitative data such as age, weight, height; BMI, dancing practice time, number of dance styles, practice time in zouk mode, number of week days and quantity of hours/day dedicated to zouk dance. Flexibility analysis through markers very small, small, medium, large and very large, respectively, was obtained from the applied questionnaire. Tables were created from scores obtained in the Flexitest. After that, it was possible to develop averages between teachers and students and establish the results of this study.

3. Results and discussion

When analyzing table 2.1 (before warming-up), it is possible to see that teachers' flexibility level, in a general way, was classified as LARGE and with relatively higher scores than the students, who also performed well, but not all of them reached the flexibility level LARGE. A plausible explanation for what happened can be found in Weineck (2003). He mentions that flexibility is a trainable physical valence, and therefore, it may be developed faster with daily training. However, it is necessary to consider that by using the term, it is possible to point out muscles' properties, joints, fasciae, tendons and ligaments since flexibility is considerably influenced by their resistance. Alter (2010) states that flexibility has a direct relation to human movement, and it is subjected to physiological and mechanical adaptations through training.

Table 2.1 Evaluation of the Flexibility Level before warming-up, 2014.

PROFESSORS ASSESSED	TRUNK FELXION	TRUNK EXTENSION	TRUNK LATERAL FLEXION	TOTAL	LEVEL OF FLEXIBILITY
PROFESSOR 1	4	2	4	10	LARGE
PROFESSOR 2	3	3	4	10	LARGE
PROFESSOR 3	4	2	3	9	LARGE
PROFESSOR 4	4	3	3	10	LARGE
STUDENTS ASSESSED	**TRUNK FLEXION**	**TRUNK EXTENSION**	**TRUNK LATERAL FLEXION**	**TOTAL**	**LEVEL OF FLEXIBILITY**
STUDENT 1	3	3	3	9	LARGE
STUDENT 2	3	4	3	10	LARGE
STUDENT 3	3	1	2	6	MÉDIUM
STUDENT 4	3	3	4	10	LARGE

Table 2.2, which presents the flexibility level of the participants after warming-up, shows a visible improvement in their performances after 15 minutes of light trot on the treadmill. Thus, Silva (2007), Silva and Bonorino (2008) observed that 20 minutes of general warming-up was the most useful alternative to gain flexibility.

Table 2.2 Evaluation of the Flexibility Level after warming-up, 2014.

PROFESSORS ASSESSED	TRUNK FLEXION	TRUNK EXTENSION	TRUNK LATERAL FLEXION	TOTAL	LEVEL OF FLEXIBILITY
PROFESSOR 1	4	3	4	11	LARGE
PROFESSOR 2	4	3	4	11	LARGE
PROFESSOR 3	4	3	3	10	LARGE
PROFESSOR 4	4	4	4	12	VERY LARGE
STUDENTS ASSESSED	**TRUNK FELXION**	**TRUNK EXTENSION**	**TRUNK LATERAL FLEXION**	**TOTAL**	**LEVEL OF FLEXIBILITY**
STUDENT 1	3	4	4	11	LARGE
STUDENT 2	4	4	4	12	VERY LARGE
STUDENT 3	3	2	3	8	MÉDIUM
STUDENT 4	3	3	4	10	LARGE

Nevertheless, when analyzing averages of teachers and students before and after warming-up, there is only the result of 1 and 0.75 points of difference between their flexibilities, with a higher level of flexibility in the teachers group.

Therefore, because teachers trained more specifically zouk modality in hours/day, that trend is present in the test. Then, it is possible to confirm that previous warming-up enables the maximum execution of flexibility level already acquired by a person, because, according to Dantas (2014), it is a trainable physical quality.

When establishing quantitative variables, it is possible to realize that the average age of students is greater than the teachers, a fact that may have influenced the research since the pupils' flexibility average proved to be always under the teachers. According to Hollmann & Hettinger 2005, cited by Dantas (2014), the older the person, the smaller her flexibility is

because tendons and muscles fasciae are particularly susceptible due to age and lack of exercise. It is worth assuming that weight, height and BMI do not directly affect the research because flexibility is a trainable physical valence, and it is susceptible to factors such as time of day, ambient temperature, sex and condition of the participants (with or without warming-up). Thereby, not only the body composition components (fat, muscles, bones, skin, viscera among others) can be taken into consideration and analyzed, separately, since they are part of a set of factors that need further studies.

When analyzing results before and after warming-up, in the students group, it is possible to realize that in the initial evaluation stage (before warming-up) the value presented was not significant (P(T<=t) one-tailed test 0,03708995) because it was smaller than alpha value (minimum reference default to validating the test values = 0.05). However, correlating both situations (before and after warming-up), it is possible to see a considerable progress through the line that shows Pearson correlation (0.05), and the line that specifies limits of (P(T<=t) bi-tailed test 0,0741799), validating the thesis that there is a significant value in flexibility increase after warming-up.

In the analysis of results before and after warming-up, in the group of teachers, it is clear that in the initial evaluation stage (before warming-up) the value already presented significance (P(T<=t) one-tailed test 0,06480586) because it was greater than alpha value (minimum reference default to validating this test values = 0.05). Correlating both situations before and after warming-up, there is a considerable development through the line showing Pearson's correlation (0,989743319) and the line specifying limited values (P(T<=t) bi-tailed test 0,12961172), validating the thesis that there is a significant value in flexibility increase after warming-up.

4.Conclusions

The study's results indicated that flexibility level of the teachers' group was higher than the students; however, taking into account the range of variables and differences between flexibility levels, they were not so discrepant between the groups.

Regarding the warming-up, it was possible to observe it caused scores differences presented by the eight participants evaluated by the Adapted Flexitest and increased the level of flexibility in 25% of them. Nonetheless, it is not possible to generalize and claim that warming-up increases the level of flexibility without considering it is a trainable physical quality and may suffer or not the influence of other conditions besides those already mentioned. For example, body composition and even a physical predisposition of individuals show they are important factors to be deepened in further research as well as teachers and students preparation before they enter into a particular activity such as flexibility training or even a dance class. It turns out that in addition to preparing the body for a particular activity, it helps to prevent further body wear by raising body temperature for optimal performance.

Flexibility constant training ensures improvements in the levels of joint amplitude, a fact that helps to explain the higher level of flexibility showed by the teachers throughout the test.

The evaluated participants' age may also have interfered with obtaining results because the students' group had an average age higher than the teachers. Other information such as BMI (body composition), weight and height are variables that need further study along with the flexibility to determine how far they can really affect it.

Flexibility proved to be a crucial physical quality for ballerinas and dancers not only for zouk dance but also all sports as shown in the studied literature because besides preventing injuries and maintaining human beings' health, it enables the execution of movements in the freest and lightest way a body can assimilate. Thus, it gives all the necessary beauty for dancing to delight the eyes of those who see and fill their hearts in competitive areas such as social dances and classes.

REFERENCES

ALTER, M. J. Ciência da Flexibilidade. 3. Ed. Porto Alegre: Artmed, 2010.

DANTAS, E. H. M. A Prática da Preparação Física. 6ª Ed. Rio de Janeiro: Roca, 2014.DELANO, R. A História do Zouk. Disponível em: <http://www.gentequedanca.com/conteudo/dance-online/ano-2009/artigos-edicao-164/a-historia-do-zouk-93.mstp>. Acesso em: 21 de jun. 2013.

FERNANDEZ, F. Débora. Importância da Flexibilidade na Coluna Vertebral para a Dança Zouk: Estudo Bibliométrico. Disponível em: <http://aplicacoes.unisul.br/pergamum/pdf/108706_Debora.pdf> Acesso em: 20 mai.2013.

FLORIÃO, L. Danças Brasileiras: lambada (zouk). Disponível em: < http://dancecom.com.br/brdancas4/dancas_lambada.php> Acesso em: 20 jun. 2013.

GAVIOLLI, I. Lucchese. Cuidados com a coluna na dança de salão. Disponível em: <http://dancaempauta.com.br/site/artigo/cuidados-com-a-coluna-na-danca-de-salao/>. Acesso em: 24 de ago. 2013.

LAGE, H. "História" do zouk Disponível em: <http://dancabh.blogspot.com.br/2007/05/histria-do-zouk-por-haroldo-lage.html> Acesso em: 04 de ago. 2013.

MONTEIRO, G. Flexibilidade na dança. Disponível em: <http://gizelemonteiro.com.br/2009/09/08/flexibilidade-na-danca/> Acesso em: 27 de set. 2013.

PORTINARI, M. História da Dança. Rio de Janeiro: Nova Fronteira, 1989.

SANTOS, M. História da Lambada-Zouk. Disponível em: <http://www.maracongress.com.br/historia.html>. Acesso em: 10 set. 2013.

SANTOS, A. R. Metodologia Científica: A construção do conhecimento. Rio de Janeiro: DP&A, 2002.

SILVA, A. Huber. da. Influência do Alongamento por facilitação neuromuscular proprioceptiva na flexibilidade em bailarinas. Fisioterapia em Movimento, Curitiba, v. 20, n, 4 p. 109-116, out/dez 2007. Disponível em: <http://www2.pucpr.br/reol/index.php/RFM?dd1=1782&dd99=view>. Acesso em 10 de jul. 2013.

SILVA, A. Huber da; BONORINO, Kelly Cattalan. IMC e flexibilidade de dança contemporânea e ballet clássico. Fitness & Performance Journal, Rio de Janeiro, v 7 n. 1, p 48-51, jan./fev. 2008. Disponível em: <http://www2pucpr.br/reol/public/7/archive/0007-00001782-ARTIGO_11.PDF>. Acesso em: 13 de jul. 2013.

SOUTO, E. Axial zouk ou quero ser grande ou ainda adeus dorflex: parte II. Disponível em: <http://eviesoutodanca.blogspot.com.br/2011/12/axial-zouk-ou-quero-ser-grande-ou-ainda_22html>. Acesso em 21 ago. 2012.

WEINECK, J. Treinamento Ideal, 9ª Ed. São Paulo: Manole, 2003.

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ZOUK DANCE: CONTRIBUTION OF FLEXIBILITY IN THE PERFORMANCE

ABSTRACT

The paper's purpose was to relate the influence of body flexibility in the "zouk" dance. It was possible to use as a

source of research, sites and researchers publications of this dance modality, in Brazil, and scientific books and articles to look for knowledge about flexibility. Proficiency maintenance or performance increase is given by training continuity to raise the aesthetic level of dancing through precision and timing of each body part. The flexitest is a measuring instrument that verifies more succinctly and efficiently the flexibility difference between teachers and students. The research was carried out with four teachers and four students, all of them practitioners of "zouk" style. They were submitted to three flexitest positions about the spine: trunk flexion, trunk extension and trunk lateral flexion. The test was performed with and without warming-up, and the study data showed the greatest level of flexibility in the teachers group before and after warming-up. However, most of the participants got positive results in the score increase after warming-up. Indicators such as weight, height and BMI showed no direct interference in the paper, unlike the participants' age that according to the literature may have influenced throughout the test. It was possible to use the student t-test to validate the results. The values were significant in all analyzes collected, taking as a reference the standard value (alpha = 0.05), keeping a proof of relation to averages in the performance of students and teachers. Thus, it is possible to conclude that flexibility is vital in the "zouk" dance, and also, it is a trainable valence.

KEYWORDS: Dance. Zouk. Flexibility. Performance.

DANSE ZOUK: CONTRIBUTION DE LA FLEXIBILITÉ DANS LA PERFORMANCE.

RÉSUMÉ

L'objectif de cette étude a été de mettre em corrélation l'influence de la flexibilité corporelle dans la danse “zouk”. Ont été utilisés comme source de recherche, des sites et publications de chercheurs de cette modalité de danse au Brésil et pour la recherche de connaissances sur La flexibilité, ont été consultés des sources commes des livres et articles scientifiques. L'entretien de la compétence ou l'augmentationde l'éxécution vient de la continuité des entraînements avec l'objectif d'élever le degré esthétique de la danse au travers de la précision et de la différence de flexibilité entre les professeures et les élèves, le “Flexitest” est l'instrument de mesure dans lequel on se rend compte de manière plus succincte et efficace du traitement des questions abordées.L'étude a été réalisée avec quatre professeures et quatre élèves, tous pratiquants du style “zouk” qui ont été soumis à l'analyse de trois positions du Flexitest em relation à la colonne vertébrale, soit ceuxci: flexion du tronc, extension du tronc et flexion latérale du tronc. Le test a été realize avec ou sans échauffement préalableet les données de l'étude ont indiqué un meilleur niveau de flexibilité dans le groupe des professeures, avant et après avoir échauffer le corps, néanmoins la grande majorité des évaluées a obtenu des résultats positifs em relation à l'augmentation de score après l'échauffement. Des marqueurs avec du poids, la stature et l'IMC, n'ont pas montré d'interférence directe dans l'étude, différemment de l'âge des évaluées qui selon la littérature peut être influencée pendant le test. pour la validation des résultats il a été utilisé le Test T student, dont les valeurs présentent des signifiquences dans toutes les analyses collectées, ayant comme référence une valeur standard (Alfa=0,05), maintenant la comprovation de la relation avec les moyennes tant à la performance des élèves que des professeures amemant alors à conclure de l'importance de la flexibilité dans la danse “zouk”, celleci étant une valeur ajoutée.

MOTS-CLÉS: Danse, Zouk, Flexibilité, Performance.

DANZA ZOUK: CONTRIBUCIÓN DE LA FLEXIBILIDAD EN EL DESEMPEÑO.

RESUMEN

El propósito de este estudio fue correlacionar la influencia de la flexibilidad corporal en la danza “zouk”. Se utilizaron, como fuentes de investigación, sitios y publicaciones de investigadores de esta modalidad de danza, en Brasil, y para la búsqueda del conocimiento sobre la flexibilidad se buscaron fuentes como libros y artículos científicos. El mantenimiento de la capacidad o aumento del desempeño se da por la continuidad de entrenamientos con el objetivo de elevar el nivel estético de la danza a través de la precisión y sincronía de cada parte del cuerpo. Con el objetivo de verificar y validar la diferencia de flexibilidad entre profesoras y alumnas, el flexitest es el instrumento de contraste con el que se percibe de manera más sucinta y eficaz el tratamiento de los asuntos tratados. El estudio fue realizado con cuatro profesoras y cuatro alumnas, todas practicantes del estilo “zouk”, las que fueron sometidas al análisis de tres posiciones del flexitest en relación a la columna vertebral. Las mismas fueron: flexión del tronco, extensión del tronco y flexión lateral del tronco. La prueba fue realizada con y sin precalentamiento previo, y los datos del estudio indicaron un mayor nivel de flexibilidad en el grupo de las profesoras, antes y después de calentar el cuerpo. Sin embargo, la mayoría de las evaluadas obtuvo resultados positivos en relación al aumento del resultado después del calentamiento. Los marcadores como peso, estatura e IMC no mostraron una interferencia directa en el estudio, independiente de la edad de las evaluadas que según la literatura podría haber influenciado durante toda la prueba. Para validar los resultados se utilizó la prueba t-Student, cuyos valores presentaron significancia en todos los análisis recogidos, teniendo como referencia un valor estandarizado (Alfa = 0,05) y manteniendo la comprobación de relación con los promedios tanto en el desempeño de las alumnas como en las profesoras. Así, se concluye que la flexibilidad es muy importante en la danza “zouk”, y se puede considerar como un aspecto para ser entrenado.

PALABRAS CLAVE: Danza. Zouk. Flexibilidad. Desempeño.

DANÇA ZOUK: CONTRIBUIÇÃO DA FLEXIBILIDADE NA PERFORMANCE.

RESUMO

O propósito deste estudo foi correlacionar a influência da flexibilidade corporal na dança “zouk”. Foram utilizados como fonte de pesquisa, sites e publicações de pesquisadores desta modalidade de dança no Brasil, e para a busca de conhecimento sobre flexibilidade, foram acessados fontes como livros e artigos científicos. A manutenção de proficiência ou aumento do desempenho se dá pela continuidade de treinos com o objetivo de elevar o patamar estético da dança através da precisão e sincronia de cada parte do corpo. No intuito de verificar e validar a diferença de flexibilidade entre professoras e alunas, o Flexiteste é o instrumento de aferição em que se percebe de maneira mais sucinta e eficaz o tratamento das questões abordadas. O estudo foi realizado com quatro professoras e quatro alunas, todas praticantes do estilo “zouk”, que foram submetidas à análise de três posições do Flexiteste em relação à coluna vertebral, sendo eles: flexão de tronco, extensão de tronco e flexão lateral de tronco. O teste foi realizado com e sem aquecimento prévio, e os dados do estudo indicaram maior nível de flexibilidade no grupo de professoras, antes e depois de aquecer o corpo, contudo a grande maioria das avaliadas obteve resultados positivos em relação ao aumento de escore depois do aquecimento. Marcadores como peso, estatura e IMC, não mostraram interferência direta no estudo, diferentemente da idade das avaliadas que segundo a literatura pode ter influenciado durante todo o teste. Para validação dos resultados foi utilizado o Teste T Student, cujos valores apresentaram significância em todas as analises coletadas, tendo como referencia um valor padronizado (Alfa = 0,05), mantendo comprovação de relação com as médias tanto no desempenho das alunas quanto professoras levando a concluir-se então, a importância da flexibilidade na dança “zouk”, bem como sendo esta, uma valência treinável.

PALAVRAS-CHAVE: Dança. Zouk. Flexibilidade. Performance.