

167 - MORPHOLOGIC AND NEUROMOTOR PROFILE AND ABOUT LIFE STYLE OF PRACTITIONERS OF CIRCUS ARTS

FABIANNE OLIVEIRA CAIADO; JOÃO A. MARTINS; CLARICE MAGALHÃES;
RENATO VEIGA; MARCIA ALBERGARIA.
LAFIEX - Laboratório de Fisiologia do Exercício & Medidas e Avaliação - Campus Akxe
Curso de Educação Física; Universidade Estácio de Sá, Rio de Janeiro, RJ/Brasil
fabicaado@gmail.com

INTRODUCTION

We can say that circus art began in China, where pictures with acrobats, contortionists and equilibrist of about 5.000 years were discovered. (BRASIL CULTURA, 2005)

It didn't have a concern of leaving writing registers and personal testimonies about the life history or work from the Brazilians circus people. (SILVA, 1996)

We are conscious of the modern circus emergency, but it seems like this art hasn't got yet a cultural status like in ballet or other sportive modalities. (BORTOLETO, 2003)

The practice of circus modalities demands from the practitioner an adequate development of some components of the physical aptitude that include morphological dimensions (corporeal composition), functional motor dimension (composed of cardio respiratory function and muscle-skeletal function, force capacity, muscular resistance and flexibility). (PRATI, 2006)

Considering the physical activity like any corporal movement produced by the muscle-skeletal system, proportioning a bigger energy consume, the practice of physical activities can bring many benefits for practitioner health when correctly carried through. (PRATI, 2006)

Beyond the specific technical work, the muscle development together with strength and flexibility exercise, will help in the final performance. Their movements will be prettier and softer. (CIGARRO, 2006)

The theory presupposes mentioned take us to some questioning; will the circus artist profile be like athletes morphological profile or will it be like healthy people morphological profile.

The practice of any circus modality demands a knowledge of corporeity and motricity. Knowledge developed by years of practicing a circus activity. This concepts are fundamental pillars in the formation of a Physical Education Professional, to know this development corporeity principles outside common forms in the Physical Education universe is an important information that will include values and knowledge for future bases of training prescription for atypical activities participants.

For this reason, this study has the objective to propitiate for Physical Education professionals and students, relevant and hard information, that will be definitive in the prescription process for participants of an atypical or non common activity.

MATERIAL AND METHOD

The present study about the quantitative part, had a field descriptive character (THOMAS AND NELSON, 2002), because it analyzed evaluation results. But in the qualitative perspective, it was inquiry, because it used 3 questionnaire instruments.

The selected people were 10 artists from a Circus School in Rio de Janeiro city, from both gender, participants of any circus modality for more than one year.

They was asked to answer three instruments questionnaire; IPAQ (International Physical Activity Questionnaire), with the objective to character the physical activity level from each one, the Quality of Life questionnaire, short version (WHO_Bref, 2000) and Life Style. (NAHAS, 2002)

In the second visit, the corporal composition evaluation was made.

The artists were measured all in the same day, before the beginning of their training, in arrived order, starting in anthropometry, flexibility tests, dynamometry and strength testes.

Each artist was measured beyond anthropometry variables: stature, corporal weight, had been measured the 7 coetaneous folds (triceps, sub scapular, thorax, axillaries average, supply-iliac, abdomen and thigh), the 12 anthropometric perimeters (thorax, waist, abdomen, hip, contracted arm, arm, average thigh, leg) and 2 bones diameters (right biepicondilian and bicondilian).

The 8 movement flexibility test was made (FATINATTI, 1992), followed by trunk flexibility test, made in Wells Bank. The abdominal and arm resistance tests were also made in the long cushion. The muscular resistance test patronization explains that must be made a bigger number of repetitions of the movements previously cited in one minute. And to evaluate the manual hold force, it was made a hand pressure test, using as device a manual dynamometer of the Jamar® mark.

For the gauging of the anthropometric measures had been used: for corporal mass, portable scale Tanita®; for total stature, metric ribbon with 150 cm; to measure the cutaneous folds, the scientific compass of Cescorf® mark; for the gauging of the perimeters, anthropometric metallic trend of Sanny® mark; for the bones diameters paquimeter of 30 cm of Sanny® mark was used.

As material necessary to measure the flexibility in dimensional way, was appealed to the Bank of Wells of Sanny® mark.

The citizens of the research had been evaluated in the Cultural Group Afro reggae, in the Complex of slum quarters of the Cantagalo/Pavão/Pavãozinho, located in Ipanema, south zone of the City of Rio De Janeiro.

For the determination of the fat percentage, the equation used was proposal for Jackson & Pollock (1993) of 7 folds. For evaluation do Index of Corporal Mass was used the corporal mass index (CMI). For its classification, the points of cut had been followed considered by the World-wide Health Organization (WHO), where: CMI inferior 18,5kg/m² represents "low weight"; CMI between 18,5 and 24,9kg/m², "entropy"; CMI between 24,9kg/m² and 29,9kg/m², "overweight"; e CMI superior 30,0kg/m², "obesity". (BRIDGES, 2006)

The treatment of the data was made in form to elucidate mathematically and to illustrate by means of graphs and tables elaborated from the information (resulted) gotten in the use of the instruments (measured and tests).

The collected data had been dealt with descriptive statistics (average, Shunting line Standard, fashion, etc) to identify the biggest incidence of the gotten answers.

In a second moment, for the analysis of the differences between the averages with intention to confirm or to reject the hypothesis, the inferential statistics was used.

RESULT ANALISIS AND DISCUSSION

Of ownership of the data collected referring to the variable of the study object, the results will analyzed to guide the quarrel of the results.

The citizens of the study were 5 (five) women and 5 (five) men.

	Age (years)		Stature (meters)		Weight (kg)	
	Women	Men	Women	Men	Women	Men
Average	20,33	21,00	1,59	1,76	55,14	71,18
Shunting line(SL)	5,01	4,15	0,07	0,05	8,55	5,88
Maximum	26	28	1,71	1,81	69,6	80,2
Minimum	15	17	1,54	1,71	48,8	66,4

Table A - Values referring to Average, SL, Maximum and Minimum of age, stature, weight.

When analyzing CMI (Corporal Mass Indict) and RWH (Relation Waist Hip), comparing both genders (Table B), it can be observed that women artists have both CMI and RWH inferiors when comparing to men.

	CMI (kg/m ²)		RWH	
	Women	Men	Women	Men
Average	21,63	23,08	0,78	0,86
Shuting Line	1,38	1,57	0,05	0,05
Maximum	23,8	24,48	0,83	0,96
Minimum	20,31	20,49	0,7	0,81

Table B - Values referring to Average, SL, Maximum and Minimum of CMI and RWH.

Yet referring to Table B, women artists have, in average, a CMI of 21,63 1,38, that is considered normal (MARINS, 1996), and men artists, 23,08 1,57 kg/m², also considered normal to the age. Talking about RWH, feminine was 0,78 0,05, witch means that they have, in average 30% chances to develop a cardiac risk. Their art partners have 0,86 0,05 witch means that they have, in average, 45% of chances to develop a cardiac risk.

	% Fat	
	Women	Men
Average	18,34	11,02
SL	5,62	3,98
Minimum	12,40	7,70
Maximum	25,40	17,70

Table C - Values referring to Average, SL, Maximum and Minimum of Women and Men %Fat.

With the % Fat table analysis, women artists have a fat percentage, in average, of 18,34 5,62 % that is considered good, and men have a percentage, in average, of 11,02 3,98% that is considered above peoples average. (POLLOCK, 1993).

According to table D, the highest number of arm flexion in one minute, was in average 29,75 13,6 repetitions, that is considered excellent to women. And the highest number of abdominals in one minute, was in average 32,4 6,77 repetitions, considered good for them. (POLLOCK, 1993).

	Arm Flexion (repetition)		Abdominals (repetition)	
	Women	Men	Women	Men
Average	29,75	35,6	32,4	45,4
SL	13,6	2,88	6,77	5,18
Maximum	41	39	42	51
Minimum	10	32	25	37

Table D - Values referring to Average, SL, Maximum and minimum of arm flexion and abdominals in 1 minute.

According to table D, the highest number of arm flexion in one minute to men was, in average, 35,6 2,88 repetitions, that is considered good for them. And the highest number of abdominals was, in average, 45,4 5,18 repetitions, that is considered excellent for them. (POLLOCK, 1993).

Dinamometry	Left arm (kgf)		Right arm (kgf)	
	Women	Men	Women	Men
Average	30,33	41	27,33	42,75
SL	8,5	4,76	6,11	5,74
Maximum	39	48	34	48
Minimum	22	38	22	36

Table E - Values referring to Average, SL, Maximum and Minimum of dynamometry.

According to table E, the dynamometry results of the left arm were, in average, 30,33 8,5 kgf and of the left arm were, in average, 27,33 6,11 kgf for women, and for men, the test results of left arm were, in average, 41 4,76 kgf and of the left arm, were in average, 42,75 5,74 kgf.

Practice time	Men (Years)		Women (Years)	
	Men	Women	Men	Women
Average	2,42	2,4	2,42	2,4
SL	2,38	1,95	2,38	1,95
Maximum	7	5	7	5
Minimum	1	1	1	1

Table F - Time of professional practice

According to table F, the practice time of the artists evaluates is 2,42 2,38 years for men and 2,4 1,95 years for women, in average.

Wells Bank	Women (cm)		Men (cm)	
	Women	Men	Women	Men
Average	41,42	36,3	41,42	36,3
SL	6,66	3,87	6,66	3,87
Maximum	52,5	41	52,5	41
Minimum	33	30,3	33	30,3

Table G - Wells Bank

According to table G, the Wells Bank results with feminine artists were in average, 41,42 6,66 cm, that is considered a medium result, and the Wells Bank results with masculine were in average, 36,3 3,87 cm, that is considered also a medium result. (MARINS, 1996)

Flexibility Index	Women		Men	
	Women	Men	Women	Men
Average	25,8	22	25,8	22
SL	6,2	5,3	6,2	5,3
Maximum	32	28	32	28
Minimum	17	17	17	17

According to table H, women had flexibility index of 25,8 6,2 in average, that is considered very big, and men had an average index of 22 5,3, that is considered big. (MARINS, 1996)

Now, in contrast to the results of table G, the shown results in table H were very, showing a high mobility degree of shoulder, hip, trunk.

Physical Activity Level



Figure A - Physical Activity Level

According to figure A, 28% of the evaluates are physically active, and 72% of the evaluates are very active. (IPAQ)

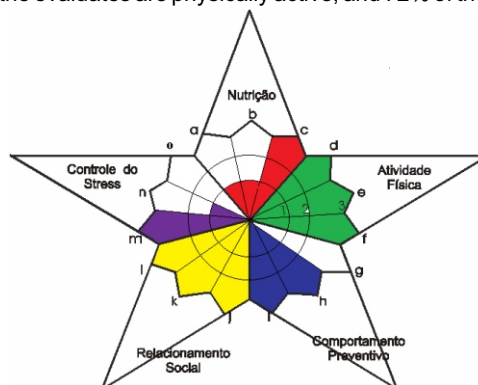


Figura B - **Pentáculo** of Nahas

Figure A represents the **Pentáculo** of Nahas, that analyses the Life Style.

We can observe that, according to it, their feeding, in average, is not balanced.

Talking about physical activity, almost everyone answered that walk as a transport way, do moderate activities for at least 5 days a week and do hard activities including flexibility and strength.

About the preventive behaviour, not many know their blood pressure and cholesterol levels.

Practically all of the evaluates have a social relationship very good.

Talking about stress control, some reserve time to relax in the end of the Day, but few balances relaxing with work time.

	Physical	Psychological	Social	Environment
Average	17,14	17,22	16,67	14,33
SL	1,45	2,21	2,76	3,57

Tabela I - Values referring to average and SL of WHOQOL.

In WHOQOL, the values above 14 are considered good, and the results behind 14, are considered bad. (FLECK, 2000)

Analysing table I, it can be observed that physical result is of 17,14, that is considered good.

In psychological component, the result was 17,22, also considered good.

In the social component, the result was 16,67, that is considered good.

But in the environment component, the result was 14,33 and although good, was the fewest result that was find.

According to the 3 questionnaires that was used, most of them are, in average, active, have a life style that includes many physical activity that corroborates with the results found in fat percentage, flexibility and strength tests.

CONCLUSIONS AND RECOMENDATIONS

According to the found results, circus artists have a low fat percentage, and normal CMI and RWH, high flexibility and strength indexes. They also have a very good life style and quality of life good in some aspects and bad in others, and a physically active live.

Is recommended that more studys are made using almost experimental method, observing the real profits of the practice, assisting who will work or practise this evaluated modality, and futurerelly, they can be analyzed in ampler studies

REFERENCES

- BORTOLETO, Marco Antonio Coelho. **A perna de pau circense: o mundo sob outra perspectiva**. Instituto Nacional de Educação Física - *Universitat de Lleida Espanha*. Motriz, Rio Claro, v.9, n.3, p.125-133, set./dez. 2003.
- CIGARRO, Natalia Martins dos Santos; FERREIRA, Rogério Emygdio; MELLO, Danielli Braga de. **Avaliação Da Flexibilidade Da Articulação Do Quadril Em Bailarinas Clássicas Antes E Após Um Programa Específico De Treinamento**. Revista De Educação Física - Nº 133 - Março De 2006 - Pág. 25-35
- FARINATTI, P. T. V.; MONTEIRO, W. D. **Fisiologia e Avaliação Funcional**. Rio de Janeiro: Ed. Sprint, 1992.
- FLECK, Marcelo PA, et al. Aplicação da versão em português do instrumento abreviado de avaliação da qualidade de vida "WHOQOL-bref". Revista de Saúde Pública. São Paulo, vol 34, n 2, p. 178-83, abril 2000.
- HISTÓRIA do Circo, disponível em: <<http://www.brasilcultura.com.br/conteudo.php?id=355&menu=91&sub=394>>. Acesso em 29/11/2006.
- MARINS, João C. Bouzas; GIANNICHI, Ronaldo S. **Avaliação e Prescrição de Atividade Física: guia prático**. Ed. Shape. Rio de Janeiro, 1996.
- NAHAS, Markus Vinícius. **Atividade Física, Saúde e Qualidade de Vida; Conceitos e Sugestões Para um Estilo de Vida Ativo**. Quarta edição revisada e atualizada. Londrina. Midiograf, 2006.
- POLLOCK et al. **Exercícios na Saúde e na Doença**. Ed Medsi. Rio de Janeiro, 1993.
- PONTES, Luciano Meireles de; SOUZA, Maria do Socorro Cirilo de; LIMA, Roberto Teixeira de. Perfil dietético, estado nutricional e prevalência de obesidade centralizada em praticantes de futebol recreativo. **Revista Brasileira de Medicina do Esporte**. Vol. 12, Nº 4 - Jul/Ago, 2006
- PRATI, Sérgio Roberto Adriano; PRATI, Alessandra Regina Carnelozzi. **Níveis de aptidão física e análise de**

tendências posturais em bailarinas clássicas. Revista Brasileira de Cineantropometria & Desempenho Humano, 2006

SILVA Erminia. **O Circo: Sua Arte E Seus Saberes; O circo no Brasil do final do Século XIX a meados do XX.** 164 f. Dissertação - Universidade Estadual de Campinas, Campinas, 1996.

THOMAS, J. R.; NELSON, J. K. **Métodos de pesquisa em atividade física.** Porto Alegre: ARTMED, 2006.

Avenida Prefeito Dulcídio Cardoso 2900, Barra da Tijuca

CEP:22631-021, Rio de Janeiro, RJ, Brasil

Tel: 55 21 30895000 R.6040

MORPHOLOGIC AND NEUROMOTOR PROFILE AND ABOUT LIFE STYLE OF PRACTITIONERS OF CIRCUS ARTS

ABSTRACT:

The practice of any circus modality demands knowledge of its corporeity and motor ability. Knowledge this developed along of the years of practicing circus activities. The objective of this descriptive work was to propitiate to the Physical Education professionals and students, better information of difficult access that will be important in the process of training prescription for people who practice an atypical or not common physical activity. The sample was composed for ten artists with more than one year of professional practical in Afro Circo of the City of Rio de Janeiro, of both the genders, with age between 15 and 28 years. To analyze the life style, quality of life and physical activity level, was used validated questionnaires. For verification of the physical aptitude levels it was used analysis of corporal composition for anthropometry (ICM, fat percentage and RWH), force tests (dinamometry), push up, abdominal resistance, flexibility (Well's Bank and Flexiteste). The results was ICM and normal RWH, low fat percentage, good and/or excellent abdominal resistance and push up, of manual hold force normal, high flexibility of shoulders, hips and trunk and in accordance with the three used questionnaires, they are, in majority, asset, possess a life style that includes much activity physical and the physical domain is satisfactory.

KEY-WORDS: circus, corporal composition, neural motor evaluation

MORPHOLOGIQUE ET NEUROMOTEUR PROFIL ET SUR LE STYLE DE VIE DE PRATICIENS DES ARTS DU

CIRQUE

RESUME:

La pratique de toute modalité de cirque exige la connaissance de ses capacités et moteur corporeité. Connaissances développées le long de ces années de la pratique d'activités de cirque. L'objectif de ce travail était de descriptif propice aux professionnels de l'éducation physique et les élèves, une meilleure information des difficultés d'accès qui seront importantes dans le processus de formation de prescription pour les personnes qui pratique un commun atypiques ou non de l'activité physique. L'échantillon était composé de dix artistes avec plus d'un an de pratique professionnelle en Afro Circo de la ville de Rio de Janeiro, à la fois des sexes, avec l'âge entre 15 et 28 ans. Pour analyser le style de vie, la qualité de vie et niveau d'activité physique, était utilisé des questionnaires validés. Pour la vérification de l'aptitude physique des niveaux il a été utilisé l'analyse de la composition corporelle de l'anthropométrie (ICM, et le pourcentage de matière grasse RWH), à la force des essais (dinamometry), les faire monter, abdominales résistance, la flexibilité (Well's Bank et Flexiteste). Les résultats et l'ICM a été RWH normale, le faible pourcentage de matière grasse, de bonnes et / ou abdominales excellente résistance et de faire monter, de tenir manuel vigueur normale, une grande flexibilité des épaules, les hanches et le tronc et en conformité avec les trois utilisé des questionnaires, ils sont, en Majorité des actifs, de posséder un style de vie qui comprend beaucoup d'activité physique et la vie physique est satisfaisante.

MOTS-CLES: cirque, corporels composition, le moteur d'évaluation de neurones

PERFIL MORFOLÓGICO Y NEUROMOTOR Y SOBRE EL ESTILO DE VIDA DE LOS PRACTICANTES DE ARTES

CIRCENSES

RESUMEN:

La práctica de cualquier modalidad del circo exige conocimiento de su capacidad del corporeity y del motor. Conocimiento que esto desarrolló adelante de los años de las actividades practicantes del circo. El objetivo de este trabajo descriptivo estaba al propitiate a los profesionales y a los estudiantes, una información mejor de la educación física del acceso difícil que será importante en el proceso de entrenar la prescripción para la gente que practica una actividad física anormal o no común. La muestra fue compuesta para diez artistas con más de un año de práctico profesional en Circo afro de la ciudad de Rio de Janeiro, ambos los géneros, con edad entre 15 y 28 años. Para analizar el estilo de vida, la calidad de la vida y el nivel de actividad físico, fueron utilizados validaron los cuestionarios. Para la verificación de la aptitud física los niveles que era análisis usado de la composición corporal para la antropometría (ICM, porcentaje gordo y RWH), fuerzan las pruebas (dinamometry), empujan hacia arriba, resistencia abdominal, flexibilidad (banco bien y Flexiteste). Los resultados eran ICM y RWH normales, resistencia abdominal gorda baja del porcentaje, buena y/o excelente y empujan hacia arriba, de la flexibilidad normal, alta manual de la fuerza del asimiento de hombros, de caderas y de tronco y de acuerdo con los tres cuestionarios usados, están, en activo de la mayoría, poseen un estilo de vida que incluya mucha actividad física y el dominio físico es satisfactorio.

PALABRAS CLAVES: circo, composición corporal, evaluación de los nervios del motor

PERFIL MORFOLÓGICO E NEUROMOTOR E QUANTO AO ESTILO DE VIDA DE PRATICANTES DE ARTES

CIRCENSES

RESUMO:

A prática de qualquer modalidade circense exige um conhecimento da sua corporeidade e motricidade. Conhecimento este desenvolvido ao longo dos anos de prática na atividade circense. O objetivo deste trabalho descritivo foi propiciar aos profissionais e estudantes do curso de educação física, informações relevantes e de difícil acesso que serão norteadoras no processo de prescrição de treinamento de indivíduos praticantes de atividade física atípica ou não comum. A amostra foi composta por dez artistas com mais de um ano de prática profissional no Afro Circo do Município do Rio de Janeiro, de ambos os gêneros, com idade entre 15 e 28 anos. Para análise do estilo de vida, qualidade de vida e nível de atividade física foram utilizados questionários validados. Para verificação dos níveis de aptidão física utilizou-se da análise de composição corporal por antropometria (IMC, %Gordura e RCQ), testes de força (dinamometria), flexão de braços, resistência abdominal, flexibilidade (Banco Well's e Flexiteste). Os resultados encontrados foram IMC e RCQ normais, % de gordura baixo, resistência abdominal e flexão bons e/ou excelentes, força de preensão manual normais, flexibilidade de ombros, quadris e tronco altas e de acordo com os três questionários utilizados, eles são, em sua maioria, ativos, possuem um estilo de vida que inclui muita atividade física e o domínio físico é satisfatórios.

PALAVRAS-CHAVE: circo, composição corporal, avaliação neuromotora.