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Effects of Relaxation Technique on Adolescents' Locus of Control and Body Image

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Running Title: Relaxation Technique - Locus of Control & Body Image

Abstract: ***This study was carried out with a group of adolescents, from a private school in the city of Rio de Janeiro, aiming to establish the relationship between body image awareness and the theory of locus of control (LOC) (Rotter, 1966) in its aspect of internality (ILOC), to verify the relationship between internality and academic performance. The sample was divided into two groups (I and II). At the beginning of the school year, each group answered the Milgram & Milgram Internality Scale and their grades on the discipline "Portuguese Language and Communication" were collected. Group I was subjected to the House - Tree - Person Test (HTP), aiming to acquire a better knowledge of the sample. During the school year, Group I underwent 30 - minute relaxation sessions (Bergès - Bounes) per week. Group II worked as a control group and did not undergo the technique. At the end of the school year, the internality scale was applied, the grades of the last two months were checked, and the HTP Test was reapplied to Group I, aiming to correlate internality and body image awareness. The analysis of the data regarding these last two factors showed a positive result. This study has implications for the use of relaxation techniques in educational and therapeutic environments to improve control locus and body image of adolescents.***

Keywords: locus of control, body image, relaxation, Adolescent Development, Psychological Intervention

1. Introduction

This article aims to report on the transformation triggered by the Bergès - Bounes relaxation technique experienced by a group of teenagers from a private school, in the city of Rio de Janeiro, as well as the relationship between this transformation with the theoretical principle of Social Psychology of locus of control (LOC), by Julian Rotter (1966), and the graphic representation of the body analyzed through the HTP Test. Also, it intends to confirm the relationship between the locus of control and academic performance, as proposed in other studies (Brown and Strickland, 1972; Prociuk and Breen, 1975).

According to Rotter (1990), the concept of locusof controlrefers to a person's general belief about the origin of control over their actions and the events they experience in their daily environment. Castillo & Ramírez (2000) posit that the locus of control (LOC) refers to a person's belief about their ability to control the events in their life. Therefore, locus of control can be understood as a generalized expectation of control over a situation or an action, and their results.

Several studies found that this construct is a multidimensional one, that is, the locus of control dimension that an individual adopts is not static, but it tends to vary according to the situation. At times, the internal *locus* of control (ILOC) can be utilized, while in other situations the external locus of control (ELOC) would prevail.

In studies conducted by Levenson (1974, 1978, 1981, cited in Pasquali at al., 1998), the LOC construct consisted of only three dimensions: *personal*, wherein control is exerted by the individual; *social*, wherein control is exerted by other individuals; and *impersonal*–wherein the source of control is attributed to chance or fate.

A study by La Rosa (1986, cited in Campos & Lagunes, 2000) proposed five factors in relation to the structure of LOC: *fatalism - luck* (the belief that life events are linked to factors of chance or luck); *powerful people in the macrocosm* (control of behavior is attributed to individuals who hold socio - political power); *affectivity* (goals are achieved through affective relationships); *instrumental internality* (control of situations is due to one's own efforts); and *powerful people in the microcosm* (control is attributed to participants in the subject's social circle).

In Brazil, several studies were developed over locus of control. Pasquali, Alves, and Pereira (1998) validated an organizational scale of locus of control by applying it to employees of the Telebras System. They identified both internal and external factors and discovered that individuals with higher levels of education and professional experience had a lower internality index. These results were attributed to the poor situation of the company, which would have caused employees to lose confidence in their own competence, particularly those with higher intellectual competence and professional experience.

Another interesting study was conducted by Rodríguez - Rosero, Ferriani and Dela Coleta (2002), in which highly educated male individuals, with good socioeconomic and cultural levels, had higher rates of ILOC, which has been ratified in Brazilian studies using both the unidimensional and multidimensional scales of generalized locus of control.

Also, Seabra (2003) analyzed locus of control, self - concept, and orientation towards success on elderly

individuals, and concluded that those who tend to ILOC are more likely to satisfy their ego and have a positive self - concept.

The possibility of correlation between many different theories makes this study important and, to reach this correlation, the theoretical fields that served as the basis for this intersection will be elucidated.

The locus of control theory (Rotter, 1966) classifies individuals along two opposite extremes, namely, the external ones, who attribute their failures and successes to external factors; and the internal ones, who take higher levels of responsibility for their own failures and successes. Therefore, individuals would be classified as more or less external, gauged within the variation between these opposite types. It seems important to highlight that no individual can be completely internal or completely external. An individual may be closer to either end of the scale.

The Bergès - Bounes (2008) relaxation technique is based upon theories of hypnosis physiology. The primary aim of this body technique is to enhance body awareness, which we hypothesize would result in an increased internality among individuals who tend towards externality.

Although it is not our intention to categorize the relaxation technique as a method for enhancing internality, our research aims to examine if its application can lead to a modification of the participants' scores and to test the following hypotheses:

1) Hypothesis 1: Group I, who will undergo the relaxation technique throughout the school year, will end the experiment with a higher internality score, which will not be observed in the control Group II.
2) Hypothesis 2: Group I will exhibit significant changes in its body representation (HTP).
3) Hypothesis 3: participants with higher internality scores will exhibit better academic performance.

The results showed a positive correlation regarding body graphic representation, which confirms the hypothesis 2, but they do not confirm the positive correlation suggested, by previous studies, between internality and academic performance. Also, the hypothesis 1 was not confirmed by this study because the anticipated increase in the degree of internality did not reach a level of significance to validate this hypothesis.

1) On the theoretical principle of locus of control:

The understanding of Rotter's locus of control requires an examination of Fritz Heider writings on causality attribution phenomenon. Heider (1958) deems significant to identify the origins of experiences.

"Man wants to know the sources of his experiences, whence they come, how they arise, not only because of intellectual curiosity, but also because such attribution allows him to understand his world, to predict and control events involving himself and others" (p.146).

It is a matter of considering that the knowledge of phenomena is synonymous with power since its mastery allows for control over facts.

Heider defined two primary factors which individuals interpret as causes of phenomena that they observe:

1) Environmental forces: external attribution other than the subject in action, or impersonal causes, such as environmental conveniences, chance, and environmental variable effects.
2) Features of the subject: internal attribution, or personal causes, stable features of the subject, such as skills, potentialities /motivation, effort, commitment, and intention. In doing so, Heider defines a fundamental distinction in the realm of the attribution theory, as shown in the schematics below.

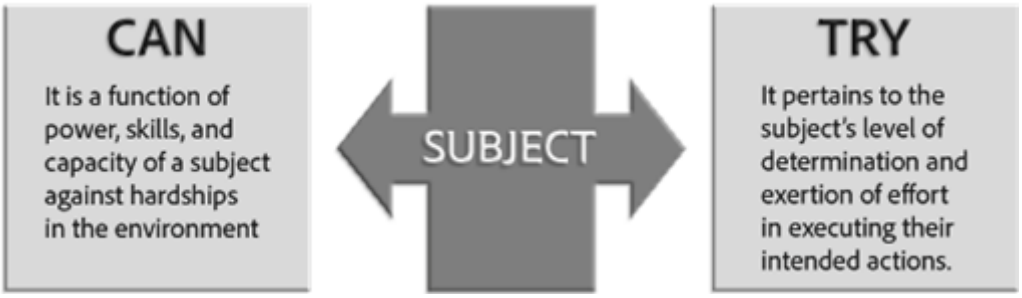


Figure 1: Can - Subject - Try Scheme, Author
Note: Elaborated by the author (2020)

Dela Coleta (1982) revised these first levels suggested by Heider and elaborated five attribution levels:

1) Level 1 - Association: "the person is held responsible for each effect that is in any way connected with him or that seems in any way to belong to him" (Heider, 1958, p.113.) An example of this would be holding a present - day German citizen accountable for the actions of German politicians during the period of World War II.
2) Level 2 - Causality and Engagement: the evaluation of an individual's actions is based solely on the outcomes of those actions, regardless of the individual's intentions, whereas causality is impersonal.
3) Level 3 - Predictability: An individual is held responsible for an event in which they are directly involved if the consequences of the event were predictable and if they neither had the ability nor made sufficient efforts to prevent it.
4) Level 4 - Intentionality: Fully characterized personal

causality. An individual is held responsible for a deliberate action taken with their own free will.

5) Level 5 - Justifiability: this concept holds that the motives driving an individual's action are not solely their own. The individual could have been forced to act as they did.

Finchan & Jaspars (cited in Dela Coleta, 1982) propose the concept of super - intentionality as a sixth level of agency, in which an individual proceeds with their actions despite requests to abstain, implying personal super - causality. "

As previously explained, Julian Rotter (1966) was the pioneering author who applied the concept of locus of control to assess an individual's perception of control over events.

Perception forms the basis for an individual's attribution of causality for an event, assigning responsibility either to internal (i. e., the individual themselves) or to external forces. Paul Schilder (1981), who conducted extensive research on sensory perception, argued that perception is essentially motor in nature. But do social perception also operate in a similar manner? Yes. Our perception of the social construct is achieved through the interpretation of sensory experiences and prior experiences in the world.

Julian Rotter (1966) made a major contribution for systematizing the influence of control perception in the realm of social learning. He argued that locus of control stands for "a construct intended to explain the individual's perception of the source of control over events, either within the self — internal — or an element outside the self — external —" (Dela Coleta, 1982, p.90.)

Despite the widespread availability of scales (Bastos, 1991; Dela Coleta, 1987; La Rosa, 1991; Pasquali et al., 1998; Tamayo, 1989 / 2012), the size and format of locus of control scales can render them insufficient for training assessments, which require the use of multiple scales at various stages of training, such as prior to, during, immediately following, and long after the completion of training. Furthermore, a few components of these instruments present low levels of internal consistency.

There are several scales for assessing locus of control, namely: Bialer locus of control questionnaire (Bialer 1969); The Rotter internal - external locus of control scale (Rotter 1966 – translated by Dela Coleta in 1979); Levenson (1974) (Internal scale; Powerful others scale and Chance scale - IPC); and the Milgram & Milgram locus of control scale (1975 – Brazilian adaptation by Lima Feres in 1981) among others. Below is a comparative table between some of the scales studied.

Table 1

ROTTER	LEVELS ON	MILGRAM & MILGRAM
Dichotomous Question, which increases the dependency among responses.	Likert Scale, which offers a wider range of response options for greater independence among responses.	Likert Scale, which offers a wider range of response options for greater independence among responses.
There is no personal distinction. Subject occupies a position external to the situations presented to them.	Personal Distinction, wherein the respondent is the subject of the sentence.	Personal Distinction, wherein the respondent is the agent of the sentence.

The Tel Aviv *Locus* of Control Scale (Milgram & Milgram, 1975), also referred to as Milgram & Milgram scale, was utilized in this research as it is a multidimensional scale designed for students in grades 4 to 8. This scale has three dimensions: positive / negative, regarding either success or failure; content; and time. The dimension of content contemplates school, home, and neighborhood settings. The dimension of time aims to assess attribution of responsibility over ongoing events, past events — also called "Past Scale" (Milgram & Milgram, 1975, p.525) —, and the intention of acting in certain way to reach desired outcomes — also called "Future Scale" (ibidem).

Each scale consists of 24 items, with 12 items grading success and 12 items grading failure. In all situations, two proposed items (A and B) are considered, one internal and the other external. To respond, the subject uses a Likert scale with 5 alternatives.

Figure 2: Example of Likert Scale

The correlation between the theoretical principle of locus of control and relaxation is clear when we consider that the former aims to evaluate how the subject perceives the attribution of causality, and the latter seeks to increase self - awareness and autonomy through body awareness development exercise.

2) On The Draw - a - Person (Dap Test)

At first, the Draw - A - PersonTest came as a psychometric proposal to assess intellectual characteristics. Around 1905, Binet and Simon analyzed the possibility of using the Draw - a - Person as a test of mental development and specific aptitudes, as well as for special diagnoses (KOLCK, 1984). Wechsler (2003) indicates that systematized studies with the Draw - a – Person Test were first registered around 1906, with Lamprecht's research comparing the drawings of children from different countries, aiming to spot common points in their strokes and concepts. In 1907, Édouard Claparède manifested interest in the developmental aspects of children's drawings. Claparède attempted to verify whether the drawing aptitude and the intellectual capacity of a child, gauged by their school performance, were somehow

related.

Nonetheless, it was only in 1926 that a method using the Draw - a - PersonTest to evaluate intellectual development of children became available as a contribution by Florence Good enough. Since that time, the Draw - a - PersonTest has been one of the most frequently employed techniques to assess cognitive development, due to its low cost and non - verbal nature, which makes it easily applied to most children. Some researchers argue that this test goes beyond gauging level of cognition, but it also allows to analyze a person's personality. They assert that graphic elements convey more information about the individual than the drawing itself. While working with children from 5 to 12 years, Elizabeth Kopptiz (1988) elaborated a list of emotional indicators, based on studies by Good enough and Machover. It was a proprietary scale of graphic indices that allowed for both the evaluation of the level of mental maturity and the detection and assessment of emotional disorders (Van Kolck, 1984). Di Leo (1991) and Hammer (1991) emphasized, with the support of psychoanalysis, that the unconscious "speaks" through symbolic images.

These authors found that, in an initial phase of drawings, not only intellectual abilities but also the personality of the individuals are involved. According to these authors, the drawing allows for investigating the child's subjective aspects by analyzing the drawing size, location, and content. The pressure of the pencil on the paper also deserves attention when evaluating the drawing. Cormann (2003) highlights that the drawing not only comprises formal elements, but that content is alongside form, which expresses the characteristics of personality. Campos (1994) emphasizes that the subject not only draws what they see, but also what they feel in addition to what they see. Wechsler (2003) adds that the child does not always draw what they see but what they know about themselves, often from what others tell them. Hutz and Bandeira (2000) argued that drawing can also represent other aspects of the individual, such as aspirations, preferences, people connected to them, ideal image, patterns of habits, attitudes towards the examiner, and the testing situation. The cultural context of the subject who produces the drawing is another issue to be analyzed, as there is a possibility of variations in the frequency of some correction items according to the culture. Pasian, Okino, and Saur (2004) affirmed that the individual's life experience influences the projective elaborations.

Faced with these various studies on the human figure as a projective technique, we can observe that researchers are concerned with the scientific validity of the instruments and focused on reflection and questions about the legitimacy of projective techniques as effectively reliable instruments.

Machover (1967) had already conducted some studies on drawing - a - person, but it was in 1949 that John Buck created the HTP that was authorized for use in Brazil, through Resolution N. ° 002/2003, issued by the Federal Board of Psychology (CFP, in the Brazilian acronym for *Conselho Federal de Psicologia*). The objective of such research was to identify aspects of the personality of the subject who performs the drawing. In the HTP (house - tree - person) drawing technique, the subject is asked to draw on separate pages, the drawing of a house, a tree, and a person. In this study, we will only request the drawing of a person to verify the modifications caused by the Bergès - Bounes relaxation technique in the aspects of mental representation of the body and its relationship with the locus of control. In the observation of the Human Figure Drawing, which is related to different aspects of the self, the closest perception of the individual's self - awareness and their relationship with the environment are revealed. In the correction proposal formulated by Buck (2003), elements such as the proportion of the drawing relative to the page, perspective, and details that may inform how an individual is functioning in the context are evaluated. The appropriate use of details provides an index of the individual's ability to recognize elements of daily life. The proportion reflects the ability to solve basic and concrete problems. Meanwhile, the perspective indicates how the individual acts in the face of more abstract relationships. Freitas and Noronha (2005) emphasize that the HTP is one of the most widely used diagnostic instruments in a clinic - school and is used in different age groups. In this way, its use on the complementary assessment in this study is put in evidence.

The selection of this test for the current research is also due to the favorable aspects of its application:

The graphic language is the one that is closest to the unconscious and the body ego since, unlike verbal language, even if the individual has some speech limitation, they can perform the drawing test, whose content is less influenced by consciousness, allowing for better expression of the unconscious, as the drawings, in most cases, deal with a symbolic language.

It is a low - cost technique (only pencil and paper) whose simple administration is easily executed and well accepted by children.

Therefore, the subject expresses through drawings the idea that they have of themselves and what their perception is regarding other people who live with them. Cunha (2000) argued that, when someone draws a human figure, they project onto the paper how they perceive themselves.

2. Methodology

Our sample was initially composed of 58 subjects, 34 males and 24 females, whose average age was 12 years and 2 months, attending the 6th grade at a private school in Rio de Janeiro, 31 attending the afternoon shift and 27 the morning shift. There were two dropouts and the final sample consisted of 56 subjects, belonging to middle / upper class families. The 56 subjects were divided into 2 groups and separated into morning and afternoon shifts by the institution. We started with 29 subjects who integrated Group I (afternoon shift) and 27 who formed Group II (morning shift). Both groups, in the first meeting, filled out the Milgram & Milgram scale, and we annotated their grades on the Portuguese Language and Communication discipline for the first semester, and Group I underwent the Human FigureTest (cut out of the HTP).

Weekly meetings were established, lasting 30 minutes each throughout the school year. Group I was accompanied by a psychomotrician and a speech therapist who subjected the group to a Bergès - Bounes relaxation session, which was the independent variable of this research. Group II, the control group of this research, also had a 30 - minute meeting with the same professionals, but without manipulation of any independent variable.

Thus, we proceeded with each group.

Table 1

Group I	Group II
First quarter Portuguese Language discipline grade annotation	First quarter Portuguese Language discipline grade annotation
Application of the Milgram & Milgram scale and human figure drawing (1 session)	Application of the Milgram & Milgram scale (1 session)
Thirty sessions of Bergès - Bounes relaxation (once a week)	Thirty meetings for varied conversations (once a week)
Application of the Milgram & Milgram scale and human figure drawing (1 session)	Application of the Milgram & Milgram scale
Last quarter Portuguese Language discipline grade annotation	Last quarter Portuguese Language discipline grade annotation
Grade annotation was carried out outside of session / meeting times	

The list below describes a relaxation session using the Bergès - Bounes approach, which was applied to GroupI:

1) The young people are invited to lie down on floor mats. The environment is low light and calm.
2) The therapist's first verbal suggestion is to keep calm and find a calm and safe image in your mind.
3) After a few minutes, the second suggestion is given.
4) Try to feel your right arm (or the part of the body in question); it becomes the most important part of your body; the time provided for body part perception is approximately 7 minutes long.
5) After this moment of introspection, the therapist intervenes with the suggestion of touching and naming the highlighted parts, namely, shoulder, arm, elbow, forearm, wrist, and hand.
6) Joint manipulation is carried out, which in this session are wrist, elbow, and shoulder.
7) The last part of the manipulation is performed by touching over the segments, connecting the parts into a whole.
8) After a few minutes of introspection, it is suggested to regain the wakefulness tonus by stretching, hence closing the session.

There is no moment to talk about experiences, and the subjects are invited to reproduce the same process at home daily, but of course without touch and joint manipulation.

3. Instruments

1) Scale of Locus of Control

The children's locus of control scale by Milgram & Milgram was constructed to assess Israeli children's locus of control and is called the Tel Aviv Locus of Control. It was translated and validated with Brazilian children by Dr. Nelma de Abreu Lima Ferés (1981) in children from the states of Rio de Janeiro and Minas Gerais, in Brazil.

In terms of content, the scale evaluates situations related to school (focusing on the relationships between teacher/ student, teaching, and assessment), family (analyzing the subject's relationships with their parents and siblings) and neighborhood (focusing on relationships with friends and strangers).

In its time dimension, current and past events (past scale) versus desired events and consequences (future scale) are evaluated. Both scales have the dimensions of success and failure.

The scale consists of 24 items, 12 of which are related to success outcomes and 12 to failure outcomes. All items are composed of phrases to be completed with two options (A and B), one internal and the other external. The subject is instructed to choose one out of five alternatives, demonstrated in

Figure **2** above.

This range of responses is one of the advantages of the Milgram & Milgram's scale, as it allows greater freedom of choice, avoiding the type of forced choice that provides the subject with only two options.

The Milgram& Milgram's scale is oriented to externality, so the higher the score achieved, the greater the subject's externality.

2) Assessment of Drawings

Due to its timesaving, ease administration, and fruitful results, the drawing test (DAP) as a projective technique was considered the ideal instrument for the current study, and it can easily be applied in a collective manner.

In her book, Dinah Campos (2012) presents the interpretation of drawings as a projective technique, upon several fundamental bases. This study does not classify all of them, since its focus is on the bases that we consider fundamental to our arguments and are in dialogue with them, namely: a) the correlation between the projections of drawings made in different stages of the process in which they were produced; b) the internal consistency among the drawing test responses, together with consistency between these data and the applied scale.

Kotlov and Goodman, cited by Schilder (1981), investigated the basic premises of the projection of one's own body image in the drawing. These authors compared human figure drawings, made by obese women, with those of a control group consisting of non - obese women and observed that 98% of the drawings made by obese women were larger than

those made by the control group. L. Bender's research involving children with a severe disability found that these children often projected their disability on their drawing of the human figure. Thus, the statement that the subject draws what they feel, and not only what they see, summarizes the observations of the cited authors. Besides communicating what they see, the subject communicates their feelings, and the objective aspects (such as size, positioning, tracing pressure on the paper, content, etc.) of their drawing reveal their subjective aspects.

These were the aspects addressed in this research regarding the interpretation of the human figure draw: a) the disposition of the draw on the paper symbolizes the spatial notion and the relationship the subject establishes with the environment, shows a tendency for a more introverted or extroverted posture, and a more passionate or more rational attitude; b) the size of the figure — a drawing that occupied 2/3 of the available space was considered medium - size — contains indications about self - esteem, self - expression, and gives clues about how the subject is reacting to external pressure; c) an incomplete figure symbolizes immaturity and the desire to remain ignorant of the problems of the world; d) the positioning of the figure itself; e) and specific norms for interpreting each part of the body. This last item was justset as a goal for expanding our knowledge about the sample, not being included in the final data analysis. Other aspects of the test were not addressed in this research since they were deemed to be more important for clinical psychology.

An A4 white sheet of paper, a black pencil, and an eraser were employed to apply the test. The easy collective application and the fact that the drawing reflects an individual impression of the “whole” and is sensitive to the flows and reflows of therapeutic modifications endorse the choice of this test. The evaluation of the aspects relevant to this study follows the standard of the application of the drawing test organized by John Buck, known as the HTP, and its norms for respective interpretation.

3) Academic Performance Evaluation

The grade annotation of the Portuguese Language and Communication discipline, regarding the first semester, was performed for the two groupsin the sample. At the end of the school year, the grades obtained by the students on the fourth quarter were analyzed. The comparison of academic performance between Group I and Group II, in the first and fourth quarter, is shown in

Table **2** and

Table **3**.

Table 2

Academic Performance		
Group I	First Quarter	Fourth Quarter
Average Grade	8, 8	6, 4

Table 3

Control Group Academic Performance		
Group II	First Quarter	Fourth Quarter
Average Grade	6, 9	5, 8

4. Results and Discussion

The scores of internality assessed through the first application of the Milgram & Milgram scale (E/I), which took place at the beginning of the school year, are shown in Table , which reports that subjects in Group I had an average internality score of 54.4, and those in Group II had an average internality score of 55.8.

Regarding the grades for academic performance (AP) on the discipline of Portuguese Language and Communication, from the first quarter, Group I had an average grade of 8.8 and the control group (Group II) had an average grade of 6.9, as also displayed in Table 1.

Table 1: Comparison between academic performance and internality score

		First Quarter		Fourth Quarter	
		E/I	AP	E/I	AP
Average	Group I	54.4	8.8	54	6.4
	Group II	55.8	6.9	55.1	5.8
	t	< 1			
	P	N. S.			

It is important to remember that the instrument that was used, the Milgram & Milgram scale, was oriented towards externality, which means that the higher the score, the more external the subject. Thus, Group I appears to be more internal and shows higher academic performance than Group II, in the first semester.

The data in
Table characterize the non - confirmation of our first hypothesis since, although it shows a slightly higher internal average, this modification does not reach statistical significance and the difference between the averages for Group I and Group II, at the beginning of the academic year, remained in the evaluation for the fourth quarter. Data were analyzed using specific statistical test methods, with significance established at $p < 0.05$.

Therefore, there was no considerable modification in either group. The same occurs in the analysis of academic performance. Since the averages for the fourth quarter follow the difference between the groups already existing at the beginning of the academic year, we conclude that there was no change between the two, although both groups performed lower in the last assessment. When seeking the relationship between internality and academic performance in this study, the results in
Table do not confirm our second hypothesis.

The Human FigureTest (HTP) allowed for a collection of very interesting data and, although this instrument was applied only to Group I, some characteristics appear frequently in the drawings, and we argue that these may be characteristic traits of adolescence because their incidence in our data was significant. These characteristics are as follows.

The waist cut, marked by a belt, or reinforced by a trace. According to Campos (1982), this can be interpreted as

referring to curiosity and body aspiration, to the difficulty in understanding and controlling them. In our group of young people, this trace was found in 90% of the drawings.

The positioning of arms in the drawings made by young women is another characteristic worth noting. In most cases (85%), the arms are behind the body, which Campos (1982) interprets as indicating a difficulty in social relationships and as keeping something stored, in secret. In the boys' group, this trace appears in just 25% of the drawings.
Based on the previously exposed criteria adopted in this study, regarding the positioning of the figure on the paper, it was observed that both occasions in which the drawings were made, 100% were placed in the center of the paper. Regarding the size of the figure (2/3 of the paper), it was observed that in the first application of the test 58% were much smaller than 2/3 of the paper, 10% were much larger than 2/3 of the page, and 32% maintained the proportion considered average in the HTP. Both smaller and larger figures are related with self - esteem. The small ones indicate low self - esteem, and the larger ones may refer to compensation for low self - esteem or demonstration of egocentric personality.

However, the interesting fact is that in the second evaluation, after 30 encounters in which the Bergès - Bounes relaxation technique was experienced, 80% of the drawings produced occupied 2/3 of the sheet. This leads to the conclusion that an improvement in the self - esteem of this group of young people was achieved, and they reached a better perception of their bodies and the space they occupy.

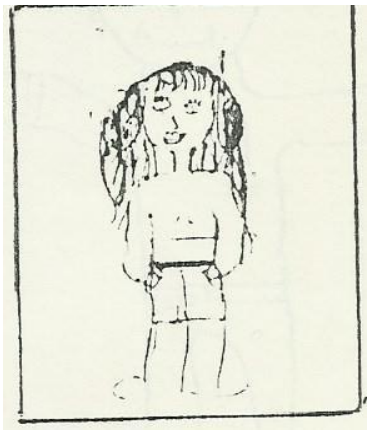
Regarding the aspect of the whole figure, in our first evaluation, 17% of the figures were cut at waist height, i. e., only the torso was drawn. According to the interpretation of the test in question, this demonstrates the subject's difficulty in accepting their bodily impulses, a certain tendency to rationalize, and some denial of sexuality. However, in the second collection of drawings, there was just 1 drawing (3%) representing the bust, which was attributed to the circumstance in which this drawing was made. Its author, a boy whose mother had passed away as result of a serious accident in the previous month, depicted tears in his drawing (Figures **Error! Reference source not found.**, and **Error! Reference source not found.**).

These findings lead us to the assumption that this group of adolescents who experienced the Bergès - Bounes relaxation technique have achieved an improvement in self - esteem and improved its ability to face the environment in a more positive way.

However, it is not possible to confirm the above assumption since, in this study, we did not apply the Human Figure Test to both groups. Therefore, we cannot affirm that the relaxation technique was the key factor in the process. But we can illustrate through the comparison between the drawings at the beginning of the year and those in the last two months (after 30 relaxation sessions) the transformation in the body representation by these young people, as shown in

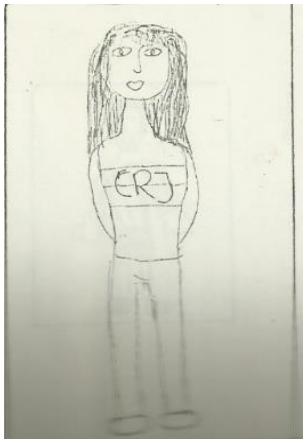
Table **4** below.

Table 4

Figure 3	**Figure 4**
	
Note: Draw 1a - First Quarter	*Note*: Draw 1a - Fourth Quarter
Figure 5	**Figure 6**

Note: Draw 2 - Fourth Quarter

Figure 7



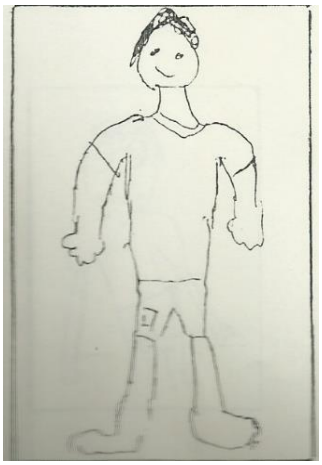
Note: Draw 2a - Fourth Quarter

Figure 8

Note: Draw 3 - First Quarter

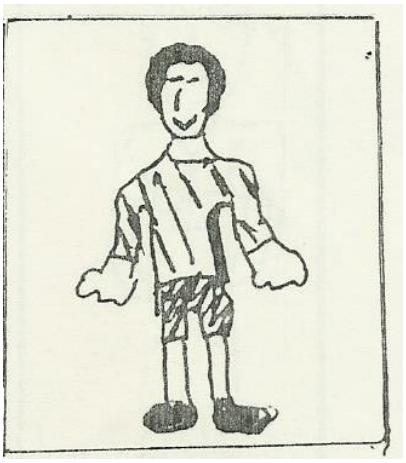
Note: Draw 3a - Fourth Quarter

Figure 9



Note: Draw 4 - First Quarter

Figure 10

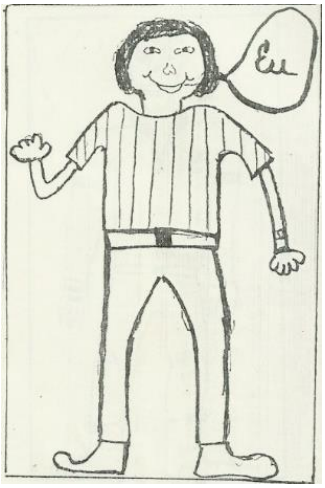


Note: Draw 4a - Fourth Quarter

Figure 11

Note: Draw 5 - First Quarter

Figure 12



Note: Draw 5a - Fourth Quarter

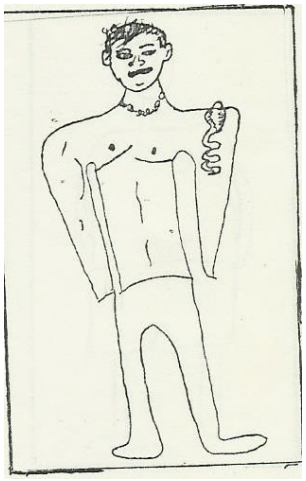
Figure 13

Note: Draw 6 - First Quarter

Figure 14

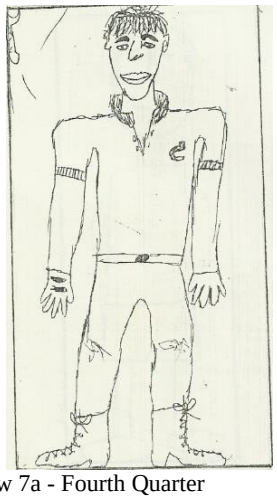
Note: Draw 6a - Fourth Quarter

Figure 15



Note: Draw 7 - First Quarter

Figure 16



Note: Draw 7a - Fourth Quarter

Figure 17

Note: Draw 8 - First Quarter

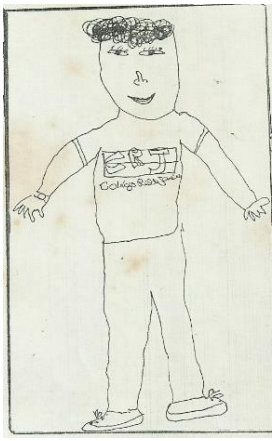
Figure 18

Note: Draw 8a - Fourth Quarter

Figure 19

Note: Draw 9 - First Quarter

Figure 20



Note: Draw 9a - Fourth Quarter

Figure 21

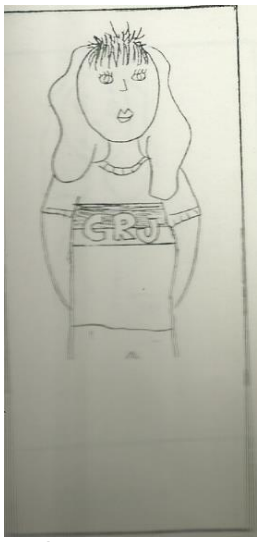
Note: Draw 10 - First Quarter

Figure 22

Note: Draw 10a - Fourth Quarter

Figure 23

Figure 24



Note: Draw 11 - First Quarter

Note: Draw 11a - Fourth Quarter

It is evident the transformation of the graphical representation of their own body, which suggests the acquisition of certain maturity and higher self - awareness. All of this, we believe, happened through the experience of 30 sessions of Bergès - Bounes relaxation technique.

These findings suggest that relaxation techniques can be incorporated into educational and therapeutic interventions to improve the control locus and body image of adolescents. Future research could explore the long - term effects of these techniques and their applicability to different age groups or populations.

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