

COMPENSAÇÃO NAS NARRATIVAS DE UM JOVEM COM SÍNDROME DE DOWN: EFEITO SINGULARIDADE

LA COMPENSACIÓN EN LAS NARRATIVAS DE UN JOVEN CON SÍNDROME DE DOWN: EFECTO SINGULARIDAD

COMPENSATION IN NARRATIVES OF A YOUTH WITH DOWN SYNDROME: THE SINGULARITY EFFECT

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Resumo

A teoria da compensação, na perspectiva da Defectologia de Vygotsky introduz a ideia de que pessoas com Deficiência Intelectual poderiam alcançar os mesmos objetivos sociais que as de desenvolvimento típico. Objetivou-se identificar evidências deste processo, nas narrativas de um jovem com Síndrome de Down (SD), em posição valorizada socialmente. As narrativas foram organizadas em unidades de análise, a partir dos posicionamentos do participante, destacando-se experiências centrais, significadas pelo discurso e emoção. Os resultados são apresentados em uma linha do tempo de desenvolvimento compensatório, analisadas a partir das teorizações sobre compensação e do Fenótipo Comportamental da SD. Conclui-se que a compensação da DI é uma possibilidade, a depender das condições de socialização em grupos com e sem pessoas de Desenvolvimento Atípico (DA) e do acesso à educação formal, inclusiva. Como reação compensatória, destaca-se epifenômeno, nomeado de - efeito singularidade - onde traços da DI tidos como déficits em estudos transversais, na cultura, são vistos como qualidades, facilitando a inclusão e desenvolvimento pela mediação. Este estudo contribui com estudos sobre compensação e SD, no aprofundamento da teorização histórico cultural e pela descrição do desempenho de Funções Executivas na cultura. Chama-se atenção para a importância do fomento às políticas públicas de inclusão escolar

PALAVRAS CHAVE: Compensação. Inclusão. Deficiência intelectual. Síndrome de Down. Funções executivas.

Resumen

La teoría de la compensación, desde la perspectiva de la Defectología de Vygotsky, introduce la idea de que las personas con Discapacidad Intelectual podrían alcanzar los mismos objetivos sociales que aquellas con un desarrollo típico. El objetivo fue identificar evidencias de este proceso, en las narrativas de un joven con Síndrome de Down (SD), en una posición socialmente valorada. Las narrativas fueron organizadas en unidades de análisis, a partir de las posiciones de

los participantes, destacando experiencias centrales, significadas por el habla y la emoción. Los resultados se presentan en una línea de tiempo del desarrollo compensatorio, analizada desde las teorías sobre la compensación y el Fenotipo Conductual SD. Se concluye que la compensación de la DI es una posibilidad, dependiendo de las condiciones de socialización en grupos con y sin personas con desarrollo atípico y el acceso a la educación formal e inclusiva. Como reacción compensatoria, se destaca un epifenómeno, denominado efecto de singularidad, donde los rasgos de DI vistos como déficits en los estudios transversales, en la cultura, son vistos como cualidades, facilitando la inclusión y el desarrollo a través de la mediación. Este estudio contribuye con estudios sobre compensación y SD, en la profundización de la teorización histórica cultural y para la descripción del desempeño de las Funciones Ejecutivas en la cultura. Se llama la atención sobre la importancia de promover políticas públicas para la inclusión escolar

PALABRAS CLAVE: compensación. inclusión. Discapacidad Intelectual. Síndrome de Down. Funciones Ejecutivas

Abstract

The compensation theorization of Vygotsky's Defectology approach introduces the idea that people with Intellectual Disabilities (ID) could reach the same social goals as those with Typical Development (TD). This theory is referenced in several studies, but little empirical evidence is presented to corroborate its thesis. Thus, it was aimed to identify evidences of this process in the narratives of a young adult with Down Syndrome (DS), in a socially valued position. Narratives were organized into units of analysis, based on the participant's positions/, highlighting central experiences, signified by speech and emotion. The results are presented in a compensatory timeline, analysed from compensation's theorization and the Behavioural Phenotype on DS. It is concluded that the compensation is a possibility, depending on the socialization conditions. As a compensatory reaction, an epiphenomenon, named singularity effect, stands out, where ID traits seen as deficits in cross-sectional methods, in culture, are seen as qualities, facilitating inclusion and development through mediation. This study contributes with studies on compensation and DS, by means of more interpretative approaches and for the descriptions of Executive Functions in the culture. Attention is drawn to the importance of public policies for school inclusion

KEYWORDS: Compensation. Inclusion. Intellectual disability. Down Syndrome. Executive Functions.

1. Introdução

The compensation theorization of Vygotsky's Defectology approach introduces the idea that people with Intellectual Disabilities (ID) could reach the same social goals as those with Typical Development (TD). This process is driven "by the search for social validity" (VYGOTSKY, 1997, p. 20), where the needs of collective life demand a psychic reorganization involving the whole personality for the creation of alternative routes for development (AKHUTINA; PYLAEVA, 2012; DAINEZ, 2013; DAINEZ; SMOLKA, 2014; KOZULIN; GINDIS, 2007; SOUZA; BARBATO, 2020; VYGOTSKY, 1929; 1997).

In other impairments, feelings of worthlessness would be the primary factor for compensation (ADLER, 1967; VYGOTSKY, 1997). People with ID, however, due to problems that affect psychological functions related to imagination, often display high self-esteem as a trait (BARBATO-BLOCH, 1997; LEWIN, 1945; VYGOTSKY, 1997), hampering an awareness of the negative associations of ID. According to VYGOTSKY (1997), despite this peculiarity, the compensatory process would be possible depending on the kind of cultural development that could correct or worsen the disability. The process would be channeled through mediations via participation in a social collectivity of Typical Development (TD) people, since it is driven by social demands of daily life. Also, access to pedagogical practices designed to mitigate ID, with efforts to develop cultural processes of abstract thinking, logical memory, voluntary attention and goal-directed behavior (AKHUTINA; PYLAEVA, 2012; KOZULIN; GINDIS, 2007, 2007; VYGOTSKY, 1997). Moreover, real life affective motivators are required to engage with the compensatory process, allowing the person to psychologically regroup in overcoming difficulties that he / she may experience whilst acquiring mediating cultural tools. The emotive factors are central as compensation is driven by the search for social esteem / value regulating emotion and will. Mediation is a self-regulating process introduced by communication/language resulting in the self and world transformation (BODROVA; LEONG, 2007; VYGOTSKY; LURIA, 1934, VYGOTSKY, 1934, 1978, 1997; WERTSCH, 2007). It normally takes place in explicit and implicit mode, where the former refers to interventions previously organized to change the behavior / conduct, such as teaching and remedial practice, while the latter refers to events with considerable developmental impact, which occur in human relations during communication, related to real life problems solutions. Due to its unpredictable nature and outcomes, implicit mediation, being highly affective / emotive, demands constant processes of adaptation, and has a significant influence on development (WERTSCH, 2007). Both processes transpire in a dynamic way and take on a different meaning in the course of human interaction (WERTSCH, 2007), understood here as co-action (OVERTON, 2015). Compensation would depend on exchanges between psychological functions, understood as Elementary (EPF) biologically embedded, and the superior culturally acquired set (SPF) (BODROVA; LEONG, 2007; LURIA, 1990, 1991; VYGOTSKY, 1997; TOSTA, 2012). When organizing compensatory strategies it would be imperative to observe development-driven forces rather than deficits. Human intellect is viewed as an entire system that establishes exchanges between their different functions where not all are affected equally by ID (AKHUTINA; PYLAEVA, 2012; KOZULIN; GINDIS, 2007; LURIA, 1930; VYGOTSKY, 1997). These exchanges could result in alternative and creative psychological tools to achieve a goal. While the development of organic functions would be hampered the cultural correction would be unlimited (KOZULIN; GINDIS, 2007; VYGOTSKY, 1997).

These concepts provided the basis for current studies in neuropsychology that recognize the human intellect as a whole (AKHUTINA; PYLAEVA, 2012). Present studies refer to Executive Functions (EF) instead of PF. Also, the effective motivators are understood as components of the emotion process.

In this study, it was investigated a young adult, with Down Syndrome (DS), that is the most studied and frequent genetic occurrence of ID (BENNETT; HOLMES; BUCKLEY, 2013; ROBERTS; RICHMOND, 2015). To discuss compensation, it is fair to understand this syndrome and how its ID can affect an individual. Nowadays, cross-sectional traditions are making efforts to understand and describe the Behavioural Phenotype on DS (BPDS). Although the DS cohort may present deficits in all EF when compared with Typical Development (TD) peers of the same chronological age (BENNETT; HOLMES; BUCKLEY, 2013; DAUNHAUER *et al.*, 2014; LEE *et al.*, 2011), the behavioural phenotype is characterized by patterns of relative "strengths and weaknesses" (MARTIN *et al.*, 2009, p. 14; SOUZA; BARBATO, 2020) regarding EF (BENNETT; HOLMES; BUCKLEY, 2013; DAUNHAUER *et al.*, 2014; LEE *et al.*, 2011). EF are processes of continuous development that involve the necessary skills to control and regulate thoughts, emotions and actions, comprised within the competences of 1) Working Memory (WM), closely related to functional intelligence; 2) Inhibition (I), or the inhibitory response related to self-control and; 3) Cognitive Flexibility (CF), which is related to creative thinking, the

possibility of understanding by different perspectives and rapid adaptation to changes (DIAMOND, 2013). EF development interferes with human performance in learning, health care, and social interaction (KNAP; MORTON, 2013; ROBERTS; RICHMOND, 2015, 2015).

Weaknesses are related to poor performance in some aspects of Work Memory (WM) that includes two subcomponents: Short Term Memory (STM) and Long-Term Memory (LTM). People with DS show greater deficits in tasks that require Short-Term Verbal Memory (MVCP), affecting planning and organizing everyday activities (LEE *et al.*, 2011; DAUNHAUER *et al.*, 2014). In addition, show impairment in Long-Term Memory (LTM), which can be divided into Explicit (ELTM) and Implicit (ILTM). ILTM refers to non-conscious learning / knowledge that can be observed, such “as riding a bicycle” (JARROLD; NADEL; VICARI, 2008, p. 68), while ELTM refers to “memories of conscious facts and events” (JARROLD; NADEL; VICARI, 2008, p. 68; ROBERTS; RICHMOND, 2015). The LTM difficulties may be related to dysfunctions in the hippocampus, where neuro-imaging shows a reduced volume of this region (JARROLD; NADEL; VICARI, 2008, p. 68; ROBERTS; RICHMOND, 2015). Studies suggest that learning delay may be due to these difficulties, which makes it one of the most researched topics (ABEN; STAPERT; BLOKLAND, 2012; BENNET; HOLMES; BUCKLEY, 2013; COWEN, 2008; JARROLD; NADEL; VICARI, 2008). Morphological dysfunctions may contribute to an atypical development regarding communication, language, and speech. These may be related to speech aphasia, dysarthria, and voice quality (BUCKLEY *et al.*, 2006; MARTIN *et al.*, 2009). There is some consensus about difficulties in expressive vocabulary, which together with the previous literature, contributes to difficulties in problem-solving that involve other areas of EF (DAUNHAUER *et al.*, 2014; LEE *et al.*, 2011; MARTIN *et al.*, 2009). On the pragmatic level, studies point to complications in initiating a conversation, topic elaboration, and some linguistic aspects of narratives, with difficulties in orally reproducing stories. However, in this respect, there are differing views, where researchers attest to forces and other deficits (FIDLER; MOST; PHILOFSKY, 2008; MARTIN *et al.*, 2009; ROBERTS; RICHMOND, 2015).

Along with difficulties, people with DS can also present strengths in some aspects of EF (MA), with better performance in Visio Space Short Term Memory (VSSTM) and/or Spatial Visio Processing (SVP) (BENNETT; HOLMES; BUCKLEY, 2013; LEE *et al.*, 2011; MARTIN *et al.*, 2009; VIANELLO; LANFRANCHI, 2009; 2011). Also, Long Term Memory for Spatial Visual Memory learning for Spatial position and Motion (JARROLD; NADEL; VICARI, 2008; MARTIN *et al.*, 2009; ROBERTS; RICHMOND, 2015). In preverbal language, children with DS present pre-linguistic ability, with the same frequency of pointing gestures in order to pick up or show objects as those with TD, imitative representation skills, through gestures and symbols (MARTIN *et al.*, 2009; WRIGHT; LEWIS; COLLINS, 2006). Also, present better performance in receptive language, related to understanding (FIDLER; MOST; PHILOFSKY, 2008; LEE *et al.*, 2011). Pragmatically, understood as the social use of language, some studies suggest strengths by the use of a variety of communicative functions, such as the ability to keep up with a subject, responses to qualification requests, and the ability to retell stories when visual media are used (MARTIN *et al.*, 2009). Another aspect is related to schooling. Comparative studies among people enrolled in special and inclusive schools show that the mainstream group presents greater development gains in relation to speech, language, academic benefits in reading, writing, numeracy and social development, related to coping potential and age-appropriate social behavior. Inclusion in mainstream schools makes it possible to align communicative skills with practical and social skills (BUCKLEY *et al.*, 2006; VIANELLO; LANFRANCHI, 2009, 2011). Researchers claim, “it is not possible to provide a maximally effective learning environment in a special education. (BUCKLEY *et al.*, 2006, p. 61). On the other hand, social inclusion, by daily contact with typically developing students, did not improve socially independent skills. The opposite happened with those who had access to other groups of disabled people, with a more independent, fuller and social life of their own, due to deeper relationships. Studies indicate a better performance in core social relatedness skills (DAUNHAUER; FIDLER, 2012; FIDLER; MOST; PHILOFSKY, 2008; MARTIN *et al.*, 2009), which

require interpersonal relations and subjective exchanges (DAUNHAUER; FIDLER, 2012; FIDLER; MOST; PHILOFSKY, 2008; MARTIN *et al.*, 2009). Studies describe people with DS as "engaging, affectionate, communicative, enthusiastic, happy and sociable, more pronounced than TD" (FIDLER; MOST; PHILOFSKY, 2008, p. 38). On social development, children with DS establish friendships and pro-social behaviors, such as patience, group participation activities, and flexibility. Adolescents and older students demonstrate social competence, considering the quality and frequency of their participation, forming friendships and gaining awareness of how to work and have fun alone and with others. Self-concept studies suggest that people with DS present high self-esteem, describing themselves as happy with their own lives, with positive opinions of their appearance and DS. They also show that people with DS are aware of their ability to make friendships and have feelings of love for friends and family, except in cases where individuals live in isolation (SKOTKO; LEVINE; GOLDSTEIN, 2011).

EFs relate to each other, but the processes can distinguish between those most associated with affective issues, named as EF hot, and processes primarily cognitively mediated, such as EF cool. People with DS have higher deficits in the domain of cool executive functions than in hot ones (DAUNHAUER *et al.*, 2014; LEE *et al.*, 2011). The behavioral phenotype has been proven by studies in neuropsychology, which argue that patterns of strengths and weaknesses can be associated with dysfunctions or preservation of the brain's parts structure (JARROLD; NADEL; VICARI, 2008). The marked performance of people with DS in hot EF may be associated with a normal amygdala anatomy, which is a brain structure hypothetically related to emotion regulation (LEE *et al.*, 2011). However, there are innumerable variables that make it difficult to neuro-imaging determine if the differences in brain activity patterns are related to participants' age or to different ways of performing the proposed test activity (KNAP; MORTON, 2013).

The study's findings have contributed to several interventions, such as pedagogical planning, memory training programs, and family orientation (BENNETT; HOLMES; BUCKLEY, 2013; FIDLER; MOST; PHILOFSKY, 2008; MARTIN *et al.*, 2009). However, scholars draw attention that much of the knowledge about DS is based on static human functioning perspectives. There is a need for studies that focus on processes of change that link aspects of social and cognitive development (FIDLER; MOST; PHILOFSKY, 2008; ROBERTS; RICHMOND, 2015). Advances from laboratory reports into descriptions of EF in daily skills are necessary (LEE *et al.*, 2011). Furthermore, most studies are carried out upon children (BENNETT; HOLMES; BUCKLEY, 2013; DAUNHAUER; FIDLER, 2012; JARROLD; NADEL; LEE *et al.*, 2011; VICARI, 2008; VIANELLO; LANFRANCHI, 2009, 2011).

The performance of people with DS in hot EF, related to emotion regulation, encompasses the affective motivators (SCHERER, 2005), essential for compensation (VYGOTSKY, 1997). Emotion is understood as a complex process of the organism, which involves synchronized and simultaneous changes between organic and psychic components triggered by appraisals, which is the constant attribution of meanings to events (LAZARUS, 2006a; 2006b; MOORS *et al.*, 2013; SCHERER, 2019; SMITH; KIRBY, 2009), especially the extrinsic, which relate to personal goals (SCHERER, 2005). Depending on the appraisals emotions trigger flows of action, with intensity that depends on the relevance of the event. The indivisibility of emotion to action is evinced when human acts can be understood as varying in, but never without emotion (MOORS; BODDEZ; DE HOUWER, 2017). Lazarus (2006a; 2006b) drew attention to the centrality of interpersonal relationships in emotional processes, in which emotions triggered in joint experiences were able to reorient human conduct. Thus, agreeing with Scherer (2005) that emotions energize actions, however, on the understanding that human action is joint (MASCOLO; FISHER, 2015; OVERTON, 2015) and aims not only to adapt, but, in especially, to transform the world, the other and oneself when there are inadequacies with current realities (VIANNA; STETSENKO, 2011). In attempting to adapt or transform, humans develop goal-oriented actions (MOORS; BODDEZ; DE HOUWER, 2017), together with strategies for self-regulation, regulation and coping. Self-regulation is related to the control, direction and correction of actions in the process of moving towards future goals, proving essential for adaptive development at all stages of life. In self-regulatory processes, the

hierarchy between competing objectives is considered in order to achieve central goals for the sense of self (DIAMOND; ASPINWALL, 2003; MC CLELLAND *et al.*, 2017). Despite belonging to both regulatory processes, coping, refers to regulatory strategies, involving conscious and objective-oriented efforts in handling negatively stressful situations, when the resources available for adaptation are understood to be insufficient (COMPAS *et al.*, 2014; LAZARUS, 2006a; 2006b). Regulatory processes function as linguistic cognitive strategies, in the attribution of meanings to situations, in order to formulate and modify their meaning, being commonly associated with the modulation of emotional reactions and essential to problem-solving (COMPAS *et al.*, 2014; GROSS, 2013; GROSS; THOMPSON, 2007). The interconnection between regulation / coping and self-regulation underlines the difficulty of investigating processes in isolation (DIAMOND; ASPINWALL, 2003; MC CLELLAND *et al.*, 2017).

The narratives (MARQUES; SATRIANO, 2014; MC ADAMS; GUO, 2015; MIETO; BARBATO; ROSA, 2016) are understood as methodological alternatives able to indicate the process of change in life time stories. When narrating people attribute positions to oneself / another / world (GOIS; BARBATO, 2018; MIETO; BARBATO; ROSA, 2016) embedded in joint actions/experiences that are energized by emotions in their process of self-regulation to achieve objectives (SOUZA, 2019). It is important to understand the main experiences along with corresponding affective motivations, that direct the self to development. In face-to-face narratives, meanings of the experiences can be understood on the joint action between the discourse and appreciation of emotion motor components (BAKHTIN; VOLOCHÍNOV, 2012; SOUZA, 2019). The former is the discourse and the second the expressive actions, (MASCOLO; FISHER, 2015) in this case intonation and facial expression (SCHERER, 2005). Emotions are the main ingredient in understanding the pragmatic meaning of the utterances in the discourse and also the motivations for action (SOUZA, 2019). Also, when narrating people need to make use of all EF in a dynamic way, since it requires a constant self-regulatory process. Thus, it is possible to suggest some abilities on EF by observing someone narrating and analysing the content of what was said.

Hence, this work aimed to identify evidence of the ID compensation process, in the narratives of a young adult with DS, that achieved a valued social position that requires abilities in EF normally affected by ID. This theory is referenced in several studies, (DAINEZ, 2013; DAINÉZ; SMOLKA, 2014; DIAS; OLIVEIRA, 2013). However, sparse empirical evidence is presented to corroborate the thesis that a person with ID can reach the same goals as those of TD, since valued positions requires intellectual skills normally affected by the ID. It is hoped to contribute with both traditions that study Intellectual disability and Down Syndrome, through a more dynamic perspective.

2. Method

The interviewee was a 27-year-old male with DS, to be known as Arcanjo, or A, who had completed Basic Education in a regular school, and who then entered a federal university via written exams. It was verified that he does not fit within a case of DS mosaicism. At the time of the research, he was working as a contracted and volunteer teacher. The participant was contacted through social media and by phone. The sessions for narrative production were mediated by father, mother, and participant, who also selected the interview locations. To identify items of interest, an open narrative was produced, followed by two episodic types with filmed and recorded input strengthening the data. The Dialogical Analysis of Emotions in the Narratives was performed, which consists of the following procedures: 1) readings of the field diary, writing the context and summary of the narratives; 2) transcription, data readings 3) Identification, description and naming of the main experiences in each interview; 4) construction of tables, with aggregation of interviews, naming and coding based on the positions assumed by the participant in his experiences; 5) Description of the main units of analysis, named Positions in

Experienced Episodes; 6) Application of the Analysis of Emotions in Narratives framework for the interpretation of meanings, considering the utterances and components of emotion, voice intonation and facial expression (SOUZA, 2019).

3. Results

Results show that the participant had access to socialization and experience compatible with the theorization of compensation, which may have contributed to the achievement of a valued social position, difficult enough even for people with Typical Development (TD). It also demonstrates skills of Executive Functions (FE) normally affected by Intellectual Disability (ID), according to the Behavioral Phenotype of Downs Syndrome (BPDS) . The outcomes are presented in the following order:

a) Summary of the narratives with central experiences and the participant's positions, on a compensatory timeline, uniting past, present and future, focusing on the conditions of socialization and emotions in dialogue with theories on compensation; b) Description of compensation in the narratives, focussing on the theorization of the DS Behavioral Phenotype.

3.1. Summary and compensatory time line

Narratives were performed in places chosen by the participant. Some were held in spaces familiar to him, such as universities, restaurants, public spaces, gyms, homes. The participant described places and events, with clarity of detail, introduced acquaintances, colleagues, close friends, and spoke of partners.

In the presente, the participant positions himself as a volunteer and formal teacher, drama actor , dancer, taekwondo sportist. He says he is famous due his deeds, specially for the movies he acted in, the dance presentations and for being approved and graduated in a federal university. He has a very active life, with many friends, with and without DS, especially Luana, who also has DS. He is engaged with many activities with the DS group, like dancing, traveling, acting in movies and also to have fun. He travels, reads, goes to many appointments and presentations, gives speeches, and enjoys life. He is very proud of his personal trajectory , that is an example for friends, family and aims to show himself to the world to end prejudice, since people with DS can do everything. He says he is happy, with many friends and family. These positions are in dynamic relations with experiences that started in the past and future expectation.

From the past , he had started basic education in a private school until the 5th grade and then moved to the local state school, where he finished primary education. When asked if he had ever kept back for a year, he replied that it happened at the private school but never at the local school, completing his studies and entering university. He said that he read all the Harry Potter books and that, according to friends from primary education, he looked like him. When asked, he said he had difficulties with Mathematics and History, which he overcame, and that, at the end of the course, he passed two national entrance exams for federal university, obtaining 2nd place in one of them. Asked how he thought his approval was possible, he replied through hard work. He said that his approval at the university was reported on the radio and, when asked what he felt when he heard his name, he used the expression “Bah”, typical of southern Brazil, used with a positive emphasis, saying that everyone in his house was moved, “ everyone cried, father, mother, sister, grandmother, me, everyone ”. At university, he took theoretical as well as practical subjects, giving paid and voluntary presentations in various places in addition to workshops for completing the course. He said that his topic for graduation was Shakespeare, and cited the phrase "to be or not to be". During the narratives, he presented several mementoes from university days - photos, books he had read, diplomas, graduation souvenirs, stories, reports and certificates, in addition to places, friends and teachers of the period. On the difficulties he faced, he said that, like every student, he took catch-up classes, following material for the whole year, but had passed, and that the practical subjects helped to balance the theoretical ones. He said that he had had two job

proposals while at high school and as an undergraduate, which he did not accept so as not to hinder his studies. He also had to stop dancing and Taekwondo to concentrate on his university career. He started to have dance classes years ago with his DS friends in an extension university project. He took the researcher to the dance, presenting friends and their dance. After graduating, he was pleased to get back to these activities and then to work. Arcanjo worked as a volunteer teacher in a project at the Federal University, delivering theater classes for people with disabilities, with some of his friends with DS as students. Speaking of friends, He said that Luana is his friend from childhood and he sees her as a sister. They engage in a lot of activities together, like traveling, going to parties, and also one of the movies he acted in was from Luanas relatives' invitation. Also he had some girlfriends. When asked how the dating was, in a very polite way, he avoided answering the questions. He says that the project was initially drama-based, but, following his example in qualifying, some students expressed the desire to resume their studies and, for this reason. He invited the researcher to his workplace, to meet colleagues and to observe classes. His colleagues, who gave warm testimonies about Arcanjos contributions, praised his example and engagement which motivated them to work and overcome personal crises, such as depression. The formal job was due indications of two colleagues from the undergraduate course, to deliver workshops in a private early childhood school. When asked if he was nervous at the beginning of the formal work, he replied, "Never - but thrilled, of course, proud to be there, to work there, everything is an emotion that I do". He said he liked both jobs, that he was happy, that he felt welcome, that he felt comradeship and that such unity was strength. The participant reported no negative experience and, being asked several times and in different moments if he had suffered any prejudice or mistreatment, specially in school and university, replied that he suffered nothing, that wherever he went he felt "respected, accepted, welcomed". He recalled the project, in which he and other teachers worked "together". He said that two friends had suffered prejudice, because one was friendless and the other pressured to pass the university entrance exam, and so they ended up being transferred to the same state school where he was. The researcher insisted, asking how he would feel if it happened. He replied that, as it did not happen, he does not have the answer, but only that it would prove tedious, so thankfully it was not the case. On another day, the researcher returned to the subject, and he, showing disappointment, reaffirmed that he felt nothing, that he did not remember anything, justifying that if he did not remember it is because it did not happen. The researcher insisted, asking if he had not suffered prejudice, why he acted in a movie related to DS on the theme. He looked at her with an expression of not understanding the question, answered, slowly, that it was a film in which everyone in the city had DS and as he had DS and his friends too, they decided to participate. Upon this, he returned to the portfolio he was showing materials related to the narratives and the researcher let the matter go, feeling uneasy and fearing that he might misinterpret that she failed to understand what he meant. During the narratives, to prove your stories and pointes, he showed several reports, photos, books, documents of activities, such as exams, science fairs, graduation invitations, etc. Also took the researcher to know places and family, friends from the narrated experiences.

About the future, he was thoughtful, reflective, and said that nobody knows the future, only God, and it's a case of, "Let Life Take Me", asking if the researcher knew the music of the Brazilian composer Zeca Pagodinho. Probing she asked if there were any expectations, dreams to fulfil, he replied that he wanted to continue with family, friends, but nobody knows about the future. He said he would continue to do his thing and "let's see what happens. Today it's work school, tomorrow, only God knows". In all narratives he justified that most of his actions were due to end with prejudice with DS people, since they can do everything.

3.2. Indicators of compensation theorization

In the narratives considering the compensation theorization (VYGOTSKY, 1997), the search for social validity, drawn on participation in typical social settings, learning driven towards abstract thinking and affective motivators, stands out. These elements are present in the narrative that can be organized on a timeline of compensatory development, considering the present, past and future of the participant. On

the timeline the search for social validity permeates and directs the participant's conduct. This motivator is identified by current positions, as a theatre and film artist, dancer, volunteer and formal worker, and the actions he took and is taking to achieve his goals. Actions are energized by emotions that display their affective motivations and their conduct.

Here, experiences in typical social settings are characterized by access to state education, and to university, where A followed a performing arts course, and in working with people with typical development (TD), in addition to various cultural spaces common to people with TD. Schooling driven to abstract thinking is displayed through attendance at all basic and higher educational levels, access to classes and academic activities. The narratives point to diversified activities of interest to A. The affective motivators within the emotion process, which energize actions requiring EF affected by ID are diverse in permeating the search for social validity. The expectation of completing basic and higher education, activities with friends with and without DS, especially the second group, academic and social events, theatre, cinema, dance presentations, getting known, becoming an example to counter prejudice against people with DS. Actions oriented towards goals are energized by emotions such as effort, pride (in being an example), passion (to end prejudice, complete studies), joy, friendship, love, among other emotions that regulate conduct and its actions. .

3.3. Compensation indicators from Behavioural Phenotype of Down Syndrome (BPDS)

The narratives suggest actions with performance in EF considered as weaknesses when considering the BPDS. It also demonstrates that some features of ID, depending on the context of socialization, can generate individual-products of positivity, instead of deficits, named here as Singularity Effect.

The subject was skilled in Short-Term Verbal Memory (STVM) and Long-Term Explicit Memory (LTEM), including spoken information. For example, when narrating that family members had attended the same school he had, as well as his uncle and his father, which suggests that the information was passed on orally. During the narrative, he re-visits topics, reminding the researcher of what he had told her the day before, in addition to citing past events, such as classes, parties, outings, including participants and the dates. A's skills in STVM were shown by his recalling the conversation with the researcher in short-term information, competently articulating the subjects. In expressive language, A presented a large and coherent lexicon, making himself easily understood. Pragmatically, he introduced subjects, related stories from read and accumulated experiences, and could detail narratives of films, books and other events.

A demonstrated reading skills in complex comprehension, revealing abstract thinking skills, citing various works read, both literary and academic, in rich detail such as characters, plot, quoting Shakespeare and other classics. He demonstrated reflection and psychological preparation of what he was about to say, including such statements as, "What else can I say", or "I said, I said...", showing potential in activities that require Cognitive Flexibility (CF), in addition to the ability to return gradually and connectedly to interrupted with a certain dose of humour.

Processes linked to Inhibition (I) and Cognitive Flexibility (CF), to imagination and thinking focused on abstraction were revealed by jokes, comparisons and metaphors that A used in explication, such as the hobby of reading and the certainty of not having suffered discrimination, when he states that, "If it had happened I would remember, as I don't remember, it's because it didn't happen". Preparation of the discourse by the participant was noted, since it led to discovering people and places that he anticipated in the narratives. Similarly, the Inhibitory control (I), for answering the questions about any prejudice suffered, despite the researcher's insistence on returning to a subject, did not interest him. He showed discomfort, but did not show any inappropriate conduct. When approached about his sex life, A managed, despite showing some unease, to gently dodge the question. Skills of daily living were observed from the organization of his room, where he keeps his life-diary in folders of photos, diplomas,

tests, reports, etc. He enjoys independence in moving from one place to another and being with friends without the interference of family. He travels alone and with friends, walks throughout the city, visits contacts' homes on his own. Family members drive him to places or allow him to hail a taxi to places more distant. Regarding self-care, for enjoyment and fitness he practices sports, he likes to get ready to go out, despite being a little overweight.

Some ID traces that could be associated with CF could be noted in some issues related to the discipline and rigid discipline in carrying out the activities he undertakes. However, based on the reports of the people with whom he works and lives, they are seen as qualities. The hot EFs also stand out for the subjective exchanges based on the affectionate reports of family and friends with and without DS, in overcoming personal crises such as depression and how responsibly and tirelessly he leads his life.

4. Discussion

Compensation is proven through narrated experience, which requires performance in skills mediated primarily by cool EFs (BENNETT; HOLMES; BUCKLEY, 2013; DAUNHAUER *et al.*, 2014; SOUZA; BARBATO, 2020). This process is explained by access to typical social collectivities, opportunities for the development of abstract thinking through schooling, and in actions energized by affective motivators in the search for validity and social fulfilment (VYGOTSKY, 1997). It also embraces the compensatory reaction, named here by singularity effect, and the importance of participation in collectivities of people also with DS for greater autonomy that favours development through mediation, especially implicit. What's more, the emphasis is on emotions, such as passion or commitment, which energize action aiming to end prejudice.

The successive setbacks faced by A in his early years demonstrate that difficulties in abstract thinking were evident, as is common in DS (SOUZA; BARBATO, 2017). The process of compensatory development begins with the disruption of school failure, at the change from private to state school. By not failing, there appear uninterrupted pathways to social groups of people with TD, allowing the expansion of concepts through access to scientific knowledge in basic education and university. Studies highlight that school inclusion corrects problems with language and literacy to a greater extent than segregated schooling (BUCKLEY *et al.*, 2006; VIANELLO; LANFRANCHI, 2009; 2011). This may be because school inclusion exposes the person with ID to opportunities for explicit mediation, through access to knowledge artificially produced by teachers, as is the case with the participant. In addition, exposure to a varied cultural apparatus, co-existence with others and the need to communicate with TD peers expand the opportunities for implicit mediation. This process takes place via the natural course of language, in communication, in the demands of coping and regulation, in the demands of adaptation and transformation of the cultural spaces where the participant acts. Thus, the participant benefits from different Zones of Proximal Development that can also occur implicitly. (SOUZA; BARBATO; 2020; SOUZA, 2019; VYGOTSKY, 1997; WERSCHT, 2007).

Another crucial element is access to social communities of people with AD. Participation in dance and theater groups via university extra-mural projects for people with DS, allows the establishment of deep relationships, such as close friends and partners. They also reinforce independence and autonomy through travel and activities with friends. Studies show that people with DS who only participate in school inclusion lack in-depth relationships, tending towards isolation (BUCKLEY *et al.*, 2006). These deep relationships also allow new effective motivators, in addition to fun and leisure, such as being an example for friends to note and remove prejudice.

A vital feature of this work is the observation of aspects of the participant's conduct which could refer to problems with Cognitive Inflexibility or Inhibition in controlled tests, such as esteem, high morale and fixation in activities (LEWIN, 1945; VYGOTSKY, 1997). In the conditions of socialization to which the

participant had access, however, these traits were reverted into qualities that enhanced the compensation of ID. The emphasis on activities is derived from a commitment to fulfill the actions they propose, by a sense of duty and responsibility, by the rigid routine of such pursuits (LEWIN, 1945; SOUZA, 2019; VYGOTSKY, 1977). High self-esteem, usually due to CF problems, is denoted by the lack of prejudicial attitudes in a society of which it is part, and by the acceptance that DS may be something affirmative. The feeling / emotion of self-esteem may have contributed to A's remaining in and benefiting from inclusive spaces, such as the school, without succumbing to the social gaze of discredit and worthlessness. For people who live with the participant and act together with him, these traits assume a qualitative, singular function, being signified as willpower, esteem, trust, partnership and friendship. These and other qualities inspire the people who live with him, making him exemplary for overcoming personal crises such as depression. The ease of subjective exchanges favors the engagement of people with TD in joint actions with the participant, not through feelings of pity, but in recognition of their contribution to the improvement of the collectivity they are part of. From the university's interpersonal relationships, formal and voluntary work, from contact with SD friends, for example, acting in films, among other things that are valued and meaningful in joint activities.

This epiphenomenon, named here as the *singularity effect*, is understood as a compensatory reaction of the organism, a positive dysontogenesis (SOUZA; BARBATO, 2020; VYGOTSKY, 1997). This process stems from a reorganization of the participants' behaviour between cognitive and social components, impacting the individual and the people who are part of their surroundings and perhaps explains the ease in interpersonal relationships, due to higher performance in the hot EFs (DAUNHAUER *et al.*, 2014; LEE *et al.*, 2011; SKOTKO; LEVINE; GOLDSTEIN, 2011).

The participant's efforts towards compensatory development, enhanced by actions such as reading, studying, striving, are energized by emotions like love, friendship, joy, effort, pride (SCHERER, 2019; 2005) generated in actions with and for others. As Lazarus (2006) points out, human behaviour is guided by emotional encounters between people, bringing new ways of existing and acting in the world.

Among the participant's motivations, we would say that actions to end prejudice stem from passion. According to Frijda (2010), passion is equivalent to a type of emotion that puts feeling, thought and action at its service, for motivation that assumes priority in functioning, disregarding cost and risk. Attention turns to what favours its achievement and action only ceases when the goal is reached. Interrupting the flow of actions requires effort from the person or others around them. These acts can be impulsive and highly reflexive. The participant in question displays this emotional state by an intense routine, which requires dedication, time, physical and intellectual effort steered towards oneself and the other. In DS, passion can be accentuated by cognitive inflexibility and in the case of the participant, this emotional state assumes a motivation of personal and social benefit, of virtuous orientation (MIETO; BARBATO; ROSA, 2016; ROSA; GONZALEZ, 2012).

Virtue, from a Greek conceptual basis, associated with Christian morality, results from processes that tend to promote actions, attitudes oriented to the search for excellence within what is ethically acceptable and best in a given cultural context. In virtuous actions, reflexivity is indispensable, where the individual self-evaluates, and self-positions as an agent capable of changing self and the cultural environment (MIETO; BARBATO; ROSA, 2016; ROSA; GONZALEZ, 2012; VAN HOOFT, 2006). Taking an example from others and, for this reason, acting so that people can achieve the same successes. generates feelings of esteem and well-being on the understanding that life has a greater, noble, virtuous side, shaped for the good of others (ROSA; GONZALEZ, 2012). This emotional process energizes the participant's conduct towards activist feelings and actions (VIANNA; STETSENKO, 2011, 2014), in the heartfelt motivation to end prejudice against people with DS.

The concept of activism is based on studies by Vianna and Stetsenko (2011, 2014) that the development of learning and identity are simultaneous processes that can be enriched by a Transformative Activist Stance (TAS). Identity is a construction made possible by a life plan understood as significant in the

expectation of developing oneself and social practices, where the individual is placed as a transforming agent. This positioning links to learning as it builds on formal and critical teaching in the participation of community practices aimed at social improvements. In the study in question, action oriented towards social change may have been motivated by basic and higher education, combined with interpersonal DS relationships and self-awareness, of being an example to others. This activism assumes an even more complex character, of a higher intellectual order (DIAMOND, 2013; FRIJDA, 2010), as it is not directly oriented towards personal goals, the result of direct experiences, of lived traumas, but for the good of others who suffer. Thus, extrinsic appraisals guide the emotional process not to adapt to what is put into the world, to cope with (LAZARUS, 2006), but to transform it, change it, improve it.

The narrated experiences reveal reflexive processes in self-awareness, capable of intervening in the course of personal history, friends and society (MIETO; BARBATO; ROSA, 2016; VIANNA; STETSENKO, 2011; 2014; VYGOTSKY, 1925, 1984). Awareness/self-awareness demands a level of change in cognitive synthesis, when someone's experience becomes the object of another's consciousness, and at more complex levels, identification with the concerns of others can be bolstered (FRIJDA, 2010). These reflexive processes, free thinking, feelings and decisions arrive on a direct line from stimuli, which we consider immediate experiences, as well as by ways of perceiving the world or the social instant as a correct and immutable truth (FRIJDA, 2010; VYGOTSKY, 1997). Self-reflection may have been fostered by the options and opportunities to exercise free will (FRIJDA, 2010) between what to study and where to work, made possible by the effectiveness of education.

Thus, virtue-oriented activism is a consolidated, relational process that unites individual, culture and biology (OVERTON, 2015), fostered by interpersonal relationships that define life. Passionate or intense emotional processes mobilize the entire organism, with physical and psychological efforts, so that prejudice in society is curtailed. Such zeal is incorporated into the development of the activist identity, from reflective processes, extracted from personal and immediate experience, the result of sharing experiences with other people through emotional exchange.

5. Final considerations

This study aims to show that ID compensation/overcompensation is a process of relational development, in the joint action between incorporated elements of an organic, cultural and individual order. This development is triggered by emotional processes in conditions of socialization, with an emphasis on interpersonal relationships. The apparent singularity epiphenomena may possibly depend on the organic apparatus, but especially on the type of conditions of socialization, the quantity and quality of access to social collectivities in the acquisition of cultural goods.

In this process, the conditions of socialization must prioritize co-existence and/or participation in social collectivities of people of typical development, especially through learning focused on abstract thinking. Attendance and access to all basic education in regular schools in classes with TD peers is understood as an important factor for compensatory development. This accrues from the expanded possibilities of implicit-explicit mediation in opportunities for co-existence and joint action with TD people in access to the cultural good, such as via conduct, values and motives. The understanding that schooling is the gateway to better conditions for socialization and empowerment is an important affective motivator in the search for social validity by people with ID. It is suggested that this context of socialization is conducive to compensatory development, in the achievement of socially valued positions such as work and empowerment. Also, co-action with peers with Atypical Development (AD) is also important to develop more independence through strong relationships, such as best friends and girlfriends. We call attention to public policies that offer inclusive education and also special education as a complement in Basic Education.

The role of educational institutions that promote inclusive practices is foremost, with diversification of assessments, in addition to written ones, allowing people with Intellectual Disability (ID) to have access to all basic education, benefiting from learning the curricular components and coexistence with people with TD (SOUZA; BARBATO, 2017). Similarly, public universities and other institutions that promote projects with people with disabilities, without replacing regular education. Such provisions for AD and TD socialization in different cultural spaces were the result of public policies that allow the inclusion and promotion of extension projects in public universities. Thus, attention is drawn to the role of institutions and public policies in engaging people with ID .

In this study the main content of the participant narrative is not family, father and mother, but his work, other friends, and expectations. It is understood that the family gave freedom for the participant to establish other relationships instead of them. Thus, we highlight the role of the family, both for its affectionate and valuing environment of shared experience, and for promoting greater participant independence, enabling the forging of in-depth relationships with other people and coping processes (LAZARUS, 2006) thus meeting the demands of regulation through adaptation/ transformation.

The study aims to contribute with methodologies for the study of emotions and DS that until now have been carried out with a focus on cross-sectional drawings, in addition to strengthening the theory of compensation, which has not yet been developed when it comes to social achievement. Among the weaknesses, we point out the small number of participants, justified by the expectation of an in-depth qualitative analysis and only one case of ID, in this case DS. It is suggested to expand the work with DS people from similar socialization contexts and with other cases of ID. This may lead to a further appraisal of conclusions presented and continuity of advances in studies to understand the compensation of ID.

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