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WHAT IS APPLIED BEHAVIOR ANALYSIS? I KNOW I UNDERSTAND NOTHING. INVITATION TO DISCUSSION

CZYM JEST STOSOWANA ANALIZA ZACHOWANIA? WIEM, ŻE NIC NIE WIEM. ZAPROSZENIE DO DYSKUSJI.

Streszczenie: Celem niniejszego badania w podejściu jakościowym jest wnikliwa analiza zjawiska jakim jest SAZ i przedstawienie sposobu postrzegania SAZ przez osoby pracujące z dziećmi z ASC oraz przeze mnie w celu uzyskania trafniejszego i rzetelniejszego obrazu całokształtu badanego problemu. Podejmę się wyjaśnienia różnych znaczeń nadawanych SAZ i wynikających stąd nieporozumień. Będzie to również próba zastanowienia się, co właściwie krytykują lub popierają profesjonaliści pracujący z dziećmi autystycznymi mówiąc o SAZ? Innym celem jest uporządkowanie wiedzy na wspomniany temat poprzez ukazanie podłoża historycznego.

Słowa kluczowe: Stosowana Analiza Zachowań (SAZ), Autyzm/ASC, Motywacja, Autoetnografia, VBA (Analiza Zachowań Werbalnych), Wzmacnianie

Abstract: The aim of this study in the qualitative approach is to thoroughly analyse the phenomenon of ABA and to present the perception of ABA by people working with children with ASC² and by me to obtain a more accurate and reliable picture of the entirety of the examined problem. I will try to explain the various meanings given to ABA and the resulting

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 - Autistic Spectrum Conditions. On the 18 June 2018, World Health Organisation released its new International Classification of Diseases (ICD-11). The ICD catalogues different pathologies and conditions to provide a common language to inform and control their development, as well as comparing and sharing data following standard criteria between hospitals, regions and countries in different time periods. ICD-11 was presented at the World Health Assembly in May 2019 for adoption by Member States, and came into effect on 1 January 2022.

misunderstandings. This will also be an attempt to consider what professionals working with autistic children criticise or support when talking about ABA. Another goal is to organise knowledge on the subject by showing the historical background.

Keywords: Applied Behaviour Analysis, Autism, Motivation, Autoethnography, VBA (Verbal Behaviour Analysis), Reinforcement.

The goal of education in the schools should be creating men and women who are capable of doing new things, not simply repeating what other generations have done.

Jean Piaget

Introduction

ABA for years has been causing heated discussions among lay people as well as professionals. It seems to have a bad reputation, causing many controversies, misunderstandings, and ethical disputes in which I have been involved many times. My methods of work have been the subject of many conversations and professional disputes. Creative dialogues in the staff room at Clarendon Primary Centre³ about whether we use ABA could be a real intellectual feast that Socrates would not be ashamed of.

The topic has been causing frustration for a long time and as a result of many years of tension and friction this work is devoted to the above phenomenon. The prism of perception will be my long-term professional experience in working with autistic children⁴.

The need to explore this field arose from a conversation with my astute tutor a few years ago. Together, we then came to the conclusion that I should not use and deal with ABA without being a certified behavior analyst. The subject does not cease to bother me, and the last conversation during the summary of the teacher's work in the current workplace makes sure that this phenomenon needs to be analysed and detailed. In this article I will attempt to gather the facts and pieces together of this complex puzzle for better understanding.

The storm around the above problem reminds me of the snowball effect, with the fact that there are two of them here and we are divided into supporters and opponents of ABA and throw arguments ,for' or ,against' (R. Cialdini, 2021).

3 More about the school: <https://www.clarendon.richmond.sch.uk/page/?title=Primary+Centre&pid=7>

4 In my teaching career, I worked with no less than 150 children with ASC (mostly for the entire school year) – the average class in a special needs school in England is 10-13 children.

Methodology

The form of the study is an intrinsic case study (Stake, 2014) with elements of auto-ethnography (Jones, 2014), defined by a personal interest in the above phenomenon in order to gain in-depth knowledge, rather than the use of specific data collection methods to create generalisations.

I also used crystallisation as the process of applying multiple perspectives to clarify a given meaning or interpretation of a problem. Crystals are prisms that reflect externalities creating different colours, patterns and arrays casting off in different directions. What we see depends on our angle of response (Richardson, Pierre, 2009). There are no longer homogeneous qualitative studies but many qualitative perspectives, adopting different methodological and theoretical approaches to the studied phenomena (Flick, 2011).

One of the many research questions posed in this paper is: 'what do the respondents support (or not) when talking about ABA'? Is it the scientific achievements of Skinner's (1938) experiments, instrumental conditioning or what others have tried to do with the results of Skinner's experimental research, such as the electric shocks introduced by Lovaas (Bowan, Baker, 2014)? Who are Certified Behavior Analysts (BCBA) and do they have a monopoly on ABA?

The research techniques and tools used in this article are creative interviewing as interpersonal interactionism (Denzin, 1989), CA (conversational analysis) as a comprehensive research approach and analysis of selected texts (Perakyla 2014), autoethnographic notes (AN) in order to make readers aware of how some strange-sounding names can be used in the teacher's everyday practice and what benefits can result from it. Hypothetical questions (HQ) are designed to reflect on the above issue.

The research will be linear/chronological, starting from the oldest sources and my most distant memories from the beginning of my work, up to the present experience.

Historical background

ABA is based on the principles of the behavioral approach and the work of B.F. Skinner (1938). It is a very broad term, elements of which have been shown to be helpful in treating a wide range of social problems, including Autism and other special educational needs (Matson, 2009; Fifer, Piazza & Roane, 2014). However, this is mainly due to the methods used in teaching speech to children with the ASC, based on Skinner's second major book, *Verbal Behavior* (1957), in which he stated that verbal behavior is behavior reinforced by the mediation of other people and defined the concept of verbal operands called: echoic behaviour, mand (request), tact (labelling) or interverbal (verbal response). The book is better known for its critique of Noam Chomsky (1959).

However, ABA is mainly associated with ways to eliminate undesirable behaviours, mainly in children diagnosed with ASC. Few people realise that the above approaches are also used in the treatment of drug addiction, weight loss or toilet training.

Examples of approaches that fall under the broad umbrella of the ABA concept include: (EIBI) Early Intensive Behavioral Intervention (Dene, 2017), Picture Exchange Communication System (PECS); Pivotal Response Teaching (PRT); Precision Teaching; Functional Communication Training; self-management; Modeling (UK ABA Autism Education Competence Framework 2011). What these therapies and approaches have in common is the science of ABA, of which the overarching question is ,How does behavior change over time and what does it tell us? ABA is not therapy (Chiesa 2005), but it is often mistakenly referred to as therapy. This is a misunderstanding. More specifically:

Like most other sciences, behavioral analysis covers three separate but related fields:

1. Philosophy of science: behaviorism⁵.
2. Basic Experimental Research: Experimental analysis of behaviour. Laboratory experimental analysis of behavior has developed over the past 100 years of research, such as operant conditioning (Sidman, 1994).
3. Applied research: Applied behaviour analysis (ABA) (Dillenburger, 2009).

Many lay people as well as professionals equate the pioneering work of Lovaas (1987) with beginning of ABA. However, behaviour analysts at the Princeton Child Development Institute demonstrated the effectiveness of early, comprehensive, intensive ABA many years before the publication of Lovaas's study (Ferster & DeMyer, 1961).

Even earlier, in 1959, an article by Theodor Ayllon and Jack Michael ,The psychiatric nurse as a behavioral engineer' was published. The authors describe how the staff of a psychiatric hospital modified the behavior of mentally ill patients using procedures derived from experimental behavior analysis. In 1968, the most important scientific journal in the field of applied behavior analysis was created – Journal of Applied Behavior Analysis (JABA). In the first issue, a historical article by Donald M. Baer, Montrose Wolf and Todd Risley was published, defining the applied behavior analysis and specifying its characteristics (Babel, Ostaszewski, Suchowierska, 2012).

Considering the above-discovered facts, Skinner's laboratory research gave rise to applied research.

5 I omit the explanation because it is not necessary for the purposes of my article. Interested persons are referred to: Leigland, S. (Ed.). (1992). *Radical behaviorism: Willard Day on psychology and philosophy*. Reno, NV: Context Press. Translation by the author for personal use.

Behavior Analysts Certification Board (BACB)

It is a non-profit corporation that was founded in 1998 to meet the professional certification needs of behavioral analysts, the (US) government, and consumers of services. BACB's mission is to protect ABA consumers by systematically establishing, promoting and disseminating professional standards of conduct. There are several ways to get certified. To put it simply, anyone with a master's degree or above, who will work about 2000 hours under the supervision of a certified BCBA Analyst and pass the exam, will receive the certificate.

It surprises me that a Certified Behavior Analyst does not have to be qualified in the field of autism and does not have to be a teacher (BCBA-Board Certified Behavior Analyst Handbook, 2022).

AN – my perception of ABA

My first work with an autistic boy was a home-based program, due to his aggressive behavior towards himself and the environment (biting, kicking, screaming), G could not continue his education at school. When I joined the team in 2005, the program used was „Growing Minds” under the supervision of its creator – Steven Wertz and his wife Kaitryn. It was then that I came across for the first time with the concept of ABA (an integral part of the ‚Growing Minds’ program). I learned the basics and its practical application in teaching a child to speak, read, write, or eliminate aggressive behavior. The boy was learning to talk, and I was polishing my very basic English at that time. This was not the slightest problem for the program, or boy's development in accordance with the principle that was overriding: the less we (the team working with the boy) talk, the more opportunities G will have to do so.

Practical use and application of Discrete Trial Teaching.

There were detailed instructions – step by step for working at the table with the teacher (as opposed to ‚Work Alone’ when the goal was to do an easier task on your own). The pattern is as follows:

$$\begin{array}{ccccc} \mathbf{DS} & \rightarrow & \mathbf{R} & \rightarrow & \mathbf{SR} \\ \mathbf{(Demand)} & & \mathbf{(Response)} & & \mathbf{(Reinforcement)} \end{array}$$

First, we informed G in a clear way using simple words (previously agreed in the team what we require and what vocabulary we use) what tasks DS has to perform. We did not repeat the command (the autistic child needs a time to analyse and respond (R), when we repeat it – the processing process starts from the beginning. Then we give the boy a response time of 5-10 seconds – to initiate the action. If there is no response within a given time, then we initiate the beginning of the response, e.g., the first letter or gesture (prompt). This is called errorless learning. Immediately after completing the task, we provide the reinforcement (reward),

according to the principle that the reward will strengthen behavior and the lack of it – will weaken it. The reward must of course be motivating for the student, i.e., something he loves and is not generally available to him (yet something he can also get without completing the task)⁶.

In practice, before we invited G to the table, the work for him had to be prepared with all the details (regardless of whether it was ‚work alone’ or working with us at the table).

Of course, we started with basic reinforcements, which were small portions of crackers or cookies, which G loved, always combining it with verbal reinforcement: „good boy” or „good work” to make those words meaningful to him. I would like to add here that it was not about feeding the child sweets. The boy would get the same for a snack during the day or for dessert after dinner without the slightest effort. In this case, however, he had to do the work first. And it didn’t take long before we could move on to the next level – social reinforcements: playing together, tickling, hugging or getting stars or stickers with a smiley face. However, then the child already understood the importance of those reinforcements that acquired properties as a result of association (pairing) with conditioned reinforcement.

HQ – At school, especially with younger children, don’t teachers use similar practices by rewarding with stickers?

However, when I try to call a spade a spade and say that this is the approach of ABA science (reinforcing desirable behavior), I meet a wall of resistance.

I often hear during various types of training that we should use the child’s motivation. However, I have not yet received an answer, what could it be if we are considering a child whose cognitive development is between 0 and 2-3 years and the only thing that matters to a child is the cookie? What will fill the gap from this to the smiley face so that it gains meaning (value)? A typically developing toddler will appreciate tickling or other forms of play, but let’s not forget that for an autistic child avoiding physical contact and new experiences, this will not be achievable in many cases. I am not talking about the real age, because the developmental path of children with additional educational needs is different.

HQ – What would we do if all attempts at social (secondary) reinforcements, such as a smile, ‘good job’, high five, did not work, and the use of a few crackers would contribute to the start of learning to read or speak in a child diagnosed as non-verbal?

I realise how innovative the cooperation with Steven was only now in the post-pandemic reality. These were teleconsultations conducted by the boy’s mother with the creator of the program⁷. We would specify what problem we had to solve, or

6 Steven Wertz explains it very well in a short video on YouTube: <https://www.youtube.com/watch?v=aBgYGPFBORw>

7 More about the program: <https://www.autism-programs.com/our-programs/index.htm>

we would send a video of the child's behavior, and Steven would email a scenario to use. After evaluation, in case of failure, he presented a different solution.

AN – VBA in practice

VBA is derived from Skinner's behaviorist approach to motivating the child to speak and reinforce verbal behavior. It teaches children with special needs to communicate, express their needs, and reduce frustration.

In practice, this started with rewarding every, even the smallest sound that G made „on demand” (echoic) – not to be confused with spontaneous noises. Each attempt was reinforced to motivate him to talk more.

Once G had spoken single words, the next step was to teach him to mand when he needed things, and they weren't within reach. A higher form would be to ask for something out of sight (like asking for a pill when you have a headache).

We on purpose created situations where G lacked something and had to ask for it. Food was always the most motivating factor, so for example we served him lunch without a spoon or fork. In front of him, in sight, we would put a piece of paper with pictures and start saying the beginning of the sentence: „I need ... and then giving him time to finish. And so on, creating more and more situations like this. When the boy could read, we used written words of things he liked and might desire, and which we hid from him. It also allowed to reduce aggressive behavior, as it taught the boy to express his needs.

What is tact in VBA? It is the ability to say cat when we see a cat or a picture of a cat, but without verbal stimulation because when we say cat and the child repeats it, this is echoic behavior. We used many similar exercises with various pictures and photos.

HQ – What mother hasn't stood with her child in her arms, pointing to the lamp with the finger and waiting for the toddler's response to say the word? Reinforcement will be turning on and off the lamp and joint, joyful celebration when the child says the word. And when I state at this point that this is the science of ABA, I often meet with indignation – we do not train dogs ...

AN – I'm doing my thing – they know nothing

Knowing thoroughly the basic principles of using ABA in practice allowed me to deal with many problems when I started working in a school for autistic children. I knew how to reduce undesirable behaviors and motivate children to work using positive reinforcement techniques. I have gained a reputation of a person for difficult cases. However, the successes were better interpreted in light of the magic I was applying rather than the simple methods I used. No one wanted to hear about them when I mentioned the unpopular word ABA... It was common approach that a pupil cannot be rewarded with food, while at snack time children were given

desired item with minimal effort – providing the appropriate picture (PECS). I'm not against the picture method but I can't understand why it's generally acceptable and using the same snacks to teach verbal behavior is not? My stubbornness in this matter caused several students who were diagnosed as non-verbal to start talking. However, there was nobody who wanted to learn about the techniques I used.

Dialogue period at Clarendon

It was the same in other schools. Only at my current workplace did a dialogue took place.

- Hush, don't say that word (ABA) you know we don't support it here.
- But you know that I use the science of ABA in my methods?
- Yes, you've talked about it many times.
- And you say many times that I'm a great teacher.
- Because you are. The children in your class are happy, behave well and make good progress.
- What do you have against ABA?
- Children who came to our school from the ABA school could only raise their hand to get a prize...
- So you're talking about ABA schools?
- Yes
- But I always emphasise that I use ABA science, not school. It's two different things. Though I wouldn't say ABA schools are all bad. Maybe the school the kids came from wasn't good? Maybe only a particular teacher could not pay attention to details and rewarded the wrong things? Also, don't you know better and worse teachers?
- Of course, I do.
- Shouldn't we rather talk about good ABA and bad ABA, just as there are better and worse teachers? I'd be careful with bad teachers though. Maybe they just haven't found what they good at? I was bad in mainstream school. And I'm not good with toddlers either, because they are very sweet little people that break my heart. They know it and use it.
- Good and bad ABA... You convinced me Danuta. You can!

AN – At least don't unintentionally reinforce negative behavior – conversation with colleagues during breakfast time with children at school

- Why, when you are at the table, S (known as a fussy eater at school) always starts eating and she doesn't eat with us?
- Because I use the power of positive reinforcement.
- I used the same thing too, but all I got was a punch in the face?

– Then you had to reward not eating, but reactions to a slap. You probably yelled, said NO or made a funny face. And if the rest of the table joined in wagging a finger or shouting, that was it – great fun for a small person with autism, which she will try again when the opportunity arises. I do not react to the hit, point at food and wait until she starts eating, possibly saying ready, steady, go... And when the child bites the sandwich, I beat loudly BRAVO. Have you noticed in how many funny ways people say NO (especially when they want to give something to their child and feel uncomfortable saying that short word)? Take a look sometime – I'm sure you won't stop laughing. NO, NO/NO/NO, NOO with low or high pitch. It's a wonderful incentive to do just the undesirable thing.

AN – throwing toys over the fence

From observations on the playground: a boy throwing toys through the fence and people shouting just as described in the dialogue above. Wouldn't it be more appropriate to propose a 'throw and fetch' game encouraging the boy to throw? In this case, we can control where the toy will go (uncontrollably, the toy was unrecoverable when it fell into inaccessible terrain). Throwing and other undesirable behaviors make no sense when allowed. The behaviour exists as long as is reinforced. And shouting 'NO' is just such reinforcement (interaction).

It will be similar with any other reinforcement when the baby cries for example (I want it and I want it now). If at this point the student gets what he expects, we will reinforce crying. However, when we wait until the crying stops even for a moment and say: Now I can give it to you because you are quiet – in this case we teach that crying will not achieve anything. The rules are simple, but easy to forget.

AN – Punishment

There are as many misconceptions here as there are with reinforcements. In my practice, I always use positive reinforcement first, but in some complex cases it is unfortunately not enough. It's just that the punishment is not only a stick, but also taking a few minutes out of play time if this is motivating for the child. Consistently applied a couple of times, it allowed me to stop screaming in class or flooding the bathroom.

HQ – don't we use similar practices to motivate Good Choices?

AN – Summary of the teacher's work

– We still need to think of a task you could undertake that would benefit the whole school.

– I would like it to be something from the field of my strong interests.

– We can't let you do that. You are interested in ABA.

– I can't believe that a school that offers a 'Kindness jar' (with mini toys and sweets that children like) as a tool to reinforce friendly and positive behaviour claims not to use ABA? In addition, we offer Precision Teaching and PECS. After all, it is an immediate reinforcement of an appropriate reaction (symbol) in order to receive a desired snack.

– We are not an ABA school.

– But I never said ABA schools, I always say science to differentiate between the two!

– So when you say 'science of ABA' you mean operant conditioning?

– That's right. I certainly don't mean what the US Certified Analysts did with Skinner's research.

– So you're talking about using motivation to teach reading or writing?

– That's right. Motivating children with autism to overcome their own resistance to something new is extremely difficult. We struggle sometimes with motivation ourselves. I see that it would be necessary to research the topic of ABA more closely and write an article?

– I would love to read your article.

Conclusions

At this point it occurred to me that maybe I was misleading everyone by saying that I was using ABA, and that perhaps I should have said Operant Conditioning instead? However, in the light of the above facts, I apply ABA in school practice. Then I am one of many enthusiasts of science. However, I do not have a Behavior Analyst Certificate. Therefore, should I not use ABA techniques in my professional work? I also do not understand why most sources, when writing about ABA, imply the need to have the aforementioned certificate? (Suchowierska, Denne). The associating institution has a pedigree much later than the field of science of ABA.

What I do not support in the ABA proposed by behavioral analysts is the over-emphasis on the exercises such as 'touch your nose'⁸ for autistic audiences "who have inefficient motor-sensory feedback to coordinate brain and body and collaborate purposefully. We call this the "brain-body disconnect" (Torres, 2019). Therefore, it would be worth analysing what the criticism of ABA in scientific publications concerns in particular.

Although research shows the effectiveness of a homogeneous behavioral therapy (I suppose the one commonly recognized as ABA). I would advise you to show an open mind so as not to ignore children from the margin of the statistical curve, who turn out to be not susceptible to this method.

For me, ABA is just a technique to deal with a specific problem that is stopping a child from learning new things. When the child is afraid of going to the swimming

⁸ I talk about the book: Ido in Autismland. Climbing Out of Autism's silent Prison by Ido Kedar.

pool, I will use social story and ‚chaining’, i.e. the method of small steps: today we will only go to see the building, next time we will visit the changing rooms, then the swimming pool and finally we will change clothes and, if you want, we will go to the swimming pool. Leaving your child in control and choice should always be helpful.

If, however, it is a problem with distinguishing letters b/d, I will use Precision Teaching. The method focused on careful observation of the child, relationship with him and evaluation is definitely superior.

HQ – Aren’t we losing our common sense for fear of being accused of being a behaviorist?

After all, every school has sanctions for students who break school rules. Sanction is a form of punishment. Children with autism are no exception and, as they say, they want to be treated on an equal footing with other children (Błeszyński, 2022), but the punishment used here will give us an undesirable association.

Discussion

It would be worth to conduct further research in the field of autism to observe what methods are used in other SEN schools working with ASC children and how they relate to the above thesis.

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Bibliography

- Ayllon T., Michaela J. (1959). *The psychiatric nurse as a behavioral engineer*. In: “Journal of the Experimental Analysis of behavior”: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1403907/> (access: 25.05.2023).
 BCBA-BOARD CERTIFIED BEHAVIOR ANALYST HANDBOOK, 2022: https://www.bacb.com/wp-content/uploads/2022/01/BCBAHandbook_230321-a.pdf (access: 24.05.2023).
 Błeszyński J. (2022). *Gdybym był nauczycielem... – refleksje osób ze spektrum autyzmu o wizji nauczyciela*. IN: “Forum Pedagogiczne” no 1, p. 259-271.
 Bowman R.A., Baker J.P. (2014). *Screams, slaps, and love: The strange birth of applied behavior analysis*. In: “Pediatrics”, no 133 (3): p. 364–366: <https://pubmed.ncbi.nlm.nih.gov/24534411/> (access: 25.05.2023)

- Chiesa M. (2005). *ABA is not a therapy for autism*. In: "Psychology": <https://www.semanticscholar.org/paper/ABA-is-not-%27a-therapy-for-autism%27-Chiesa/o65f8b9be650448bafc926a7e7f48bcda4f6a27b> (access: 25.05.23).
- Chomsky N. (1959). *A Review of B.F. Skinner's Verbal Behavior*. In: "Language", 35, No. 1, 26-58: <https://web-archive.southampton.ac.uk/cogprints.org/1148/1/chomsky.htm> (access: 24.05.23).
- Cialdini, R. (2021). *Influence, new and expanded: The psychology of persuasion*.
- Dene L. (2017). *Evidence-based practice, autism education and Applied Behavior Analysis: Do Behavior Analysts need to practise what they preach?* Wales: Bangor University.
- Denzin N.K. (1989). *The research act: A theoretical introduction to social methods* (wyd. 3). Englewood Cliffs, NJ: Prentice Hall.
- Dillenburger K. (2009). *None of the As in ABA stand for autism: Dispelling the myths*, In: "Journal of Intellectual & Developmental Disability" nr 34(2):193-5: https://www.researchgate.net/publication/24379606_None_of_the_As_in_ABA_stand_for_autism_Dispelling_the_myths (access: 25.05.23).
- Ferster C. B., DeMyer M.K. (1961). *The development of performances in autistic children in an automatically controlled environment*. In: "Journal of Chronic Disease", no 13, p. 312-345.
- Flick U. (2011). *Jakość w badaniach jakościowych*, tłum. P. Tomanek. Wydawnictwo Naukowe PWN.
- Growing Minds: <https://www.autism-programs.com/about-growing-minds/staff-bios.htm> (access: 30.05.23).
- Kedar I. (2012). *Ido in Autismland. Climbing out of Autism's silent prison*. Amazon.
- Lovaas O.I. (1987). *Behavioral treatment and normal educational and intellectual functioning in young autistic children*. In: "Journal of Consulting and Clinical Psychology", no 55(1), p. 3-9: <https://pubmed.ncbi.nlm.nih.gov/3571656/> (access: 25.05.23).
- Matson J.L. (2009). *Applied Behavior Analysis for Children with Autism Spectrum Disorders*. New York: Springer.
- Perakyla A. (2014). *Analiza rozmow i tekstow* In: N.K. Denzin, Y.S. Lincoln, (red), t. 2, *Metody badan jakościowych*. Wydawnictwo Naukowe PWN.
- Richardson L., Pierre E.S. (2009). *Pisanie jako metoda badawcza*, In: Denzin N.K., Lincoln Y.S. (red). *Metody badań jakościowych* t. 2, Wydawnictwo Naukowe PWN, Warszawa 2009.
- Sidman, M. (1994). *Equivalence relations and behavior: A research story*. Boston: Authors Cooperative.
- Skinner B.F. (1938). *The behaviour of organisms. An Experimental Analysis*. New York: Appleton-Century-Crofts.
- Skinner B.F. (1957). *Verbal behavior*. Cambridge: MA: Prentice Hall. [Google Scholar]
- Stake R.E. (2014). *Jakościowe studium przypadku*, W: Denzin N.K., Lincoln Y.S. (red). *Metody badań jakościowych*, t.1, Wydawnictwo Naukowe PWN, Warszawa 2009.
- Suchowierska M., Ostaszewski P., Bąbel P. (2012). *Terapia behawioralna dzieci z autyzmem. Teoria badania i praktyka stosowanej analizy zachowania*. GWP Gdańskie Wydawnictwo Psychologiczne.

- Torres E. (2019). *On Autistic Neuromotor Differences*: “The TPGA” (Thinking Person’s Guide to Autism) interview: <https://thinkingautismguide.com/2019/01/elizabeth-torres-on-autistic-neuromotor.html> (access: 25.05.23).
- UK ABA Autism Education Competence Framework 2011: <https://jigsawschool.co.uk/wp-content/uploads/sites/3/2016/06/UK-ABA-Autism-Education-Competence-Framework.pdf> (access: 30.05.23).
- World Health Organisation. (2023). *Autism*: <https://www.who.int/news-room/fact-sheets/detail/autism-spectrum-disorders> (access: 26.05.23).