Revista Românească pentru Educație Multidimensională
ISSN: 2066-7329 | e-ISSN: 2067-9270
Covered in: Web of Science (WOS); EBSCO; ERIH+; Google Scholar; Index Copernicus; Ideas RePeC; Econpapers; Socionet; CEEOL; Ulrich ProQuest; Cabell, Journalseek; Scipio; Philpapers; SHERPA/RoMEO repositories; KVK; WorldCat; CrossRef; CrossCheck

2024, Volume 16, Issue 1, pages: 195-223 | https://doi.org/10.18662/rrem/16.1/819
Submitted: January 16th, 2024 | *Accepted for publication:* January 26th, 2024

Humor Use in Speech and Language Therapy in Romania

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Abstract: *Humor, as part of our lives, is also extremely important in different professional settings. Speech and language therapy (SLT) sector is addressing both children and adults with specific language disorders or with non-specific language disorders, secondary to different syndromes or disabilities. In the SLT area, humor is a way through which therapy sessions can be easily introduced, it being an intrinsic modality of approaching children and adults. This article illustrates the data collected in the first Romanian study regarding humor use in the SLT sector, focusing on the way humor is perceived by specialists, but at the same time on the participants' needs regarding the enriching of the SLT field with more materials both digitally born and/or printed. This study presents extended descriptive data that help us consider humor as a vital element during speech therapy sessions, independently of the professionals' age, gender, experience and to create a collection of data regarding humor use in speech therapy for future therapeutic effective interventions. Thus, the most relevant collected data are as follows: of the 210 participants in this research just 12 (5.7%) responded that they do not use humor in their professional sector; 94.3% use humor in language disorder therapy activities; 39% use humor in every therapeutic session; more than 68% of participants use verbal humor during their sessions; 199 (94.8%) say that therapeutic materials with humorous content are mainly presented in traditional format (physical material resources); 129 responded they use humor (61.4%) in virtual format too - (digital resources); 68 % of the participants strongly agree/agree that a humor assessment tool is necessary for the effective use of humor in language disorder therapy.*

Keywords: *humor, speech and language therapy, health, education, wellbeing.*

How to cite: Bodea-Haţegan, C., Trifu, R. N., Talaş, D. A., Popescu, T. & Nemeş, B. (2024). Humor use in speech and language therapy in Romania. *Revista Românească pentru Educaţie Multidimensională, 16*(1), 195-223. https://doi.org/10.18662/rrem/16.1/819

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Theoretical framework of the study

Humor is part of our lives and plays an important role in our well-being. Humor is a complex concept which can be approached at a multidisciplinary level. Thus the humor concept and all humor related concepts (sense of humor, joke, irony, mockery, laughter, smiling, mirth, playfulness) are described and detailed from different scientifical perspectives, from philosophical, linguistic, psychologic, sociologic, esthetic, medical and neurosciences points of view (Mihalcea, 2007; Attardo, 2020), all these multidisciplinary facets of research on humor underlining its versatility. There are many articles on humor and the way humor can be put into practice, mainly in the health sciences field, emphasizing the positive and the negative impact of humor on the physical and mental health state (Baisley & Grunberg, 2019; Ruch & McGhee, 2014; Martin et al., 2010; Martineau, 1972; Martin & Lefcourt, 2004; Martin et al., 2003, Kfrerer et al., 2023; Stagg et al., 2021).

In the psychological and educational sciences field, humor has a large extension of approaches too. Thus, from the point of view of developmental psychology humor can be studied in relation with the way children or adults understand humor, irony and sarcasm (Johnson, 2012; Krishan et al., 2017; Loizou, 2005). From the point of view of social psychology humor has a great relevance in establishing social relationships, social cohesion and social support; it also has a function in configuring the social status in a particular social group (Lefcourt & Lefcourt, 2001; Ziv, 2010; Argüello et al., 2018), Health psychology investigates humor and its positive impact on health by reducing anxiety, attracting and sustaining attention, enhancing participation and increasing motivation, facilitating stress relief, promoting creativity, stimulating the immune system, ensuring pain relief, improving the blood flow, improving breathing and the functioning of all internal organs (Savage et al., 2017; Martin 2007; Wilkins, & Eisenbraun, 2009; Fry, 1992; Berk et al., 1989; Berk et al., 2001).

Using humor in education

In the last decades humor has become a pedagogical tool in teaching the new generation in many countries. The recent generation of students expect more fun in the educational environment and appreciate good humor in teaching. In a pandemic context, like we all lived in 2020, humor played an important role in teaching, by building positive emotion and increasing the students' wellbeing (Erdoğdu & Çakıroğlu, 2021).

Jonas, (2010, p. 5) identifies four types of humor considered appropriate in education:(1) Related humor: jokes, stories, school life stereotypes, teacher performance and role-playing activities related to the course content.; (2) Unrelated humor: Humor using the same categories listed above, but not related to class material; (3) Self-disparaging humor: embarrassing stories, making fun of self, making fun of silly mistakes made in class; (4) Unintentional or unplanned humor.

The studies in the field of humor usage in education offer two different perspectives. Some studies focus on the ineffectiveness or negative impact of using humor in education (Tsukawaki & Imura, 2020; St-Amand et al., 2023). Negative or aggressive humor has a negative impact on the learning environment, evaluations of instructors, student distraction and enjoyment of class (Banas et al., 2010). McMorris et al. (1997) researched the effects of humor on test performance and concluded with the following statement: "We found insufficient and inconsistent main effects and interactions to provide empirical support for using humor to raise scores" (p. 295).

Other studies highlight the benefits of using humor in the learning environment. Torok et al. (2004) consider that appropriate use of humor can enhance retention, increase learning, improve problem solving, relieve stress, reduce test anxiety, and increase perceptions of faculty credibility. Data about the humor quality during instructional and non-instructional presentation as well as about the distribution of humoristic aspects during presentations and the language engaged in order to express humor are other important aspects to be discussed and to be taken into consideration (Shoda & Yamanaka, 2021).

Sambrani et al. (2014) conducted a study where 56 8th grade Indian students were involved. Using a material presented in a humorous manner has a positive effect. The students show better engagement with the material and this material is better remembered than non-humorous material when learning English.

Bryant & Zillmann (1989), consider that using instructional humor effectively "depends on employing the right type of humor, under the proper conditions, at the right time, and with properly motivated and receptive students" (p. 74). Banas et al. (2010) identified the following factors related to the positive effect on learning when using humor in the educational environment: (1) Teacher's personality - if the teacher is humor oriented and he/she is comfortable with it; (2)Teacher's culture - the teacher may come from a culture that encourages or discourages humor use in the classroom; (3)The humor quality - only appropriate humor is related to positive perceptions of the learning environment and the teacher; (4) Children's age and their comprehension level; (4) The frequency of using

humor in class – too much humor may have a negative impact on the teacher's credibility; (5)The steps of using humor in the educational environment - Ziv (1988) proposes the following steps when using humor in education: (a) The teacher teaches a concept; (b) The instructional humor should illustrate the concept that has just been taught; (c)The teacher should then paraphrase the material again after the laughter subsides.

The pedagogical approach of including humor in education must be studied in the future, according to each culture. To create efficient materials, the student's age and understanding level must be considered. Teacher training in creating fun materials using digital tools and their appropriate use in class environment are needed.

Methodology

Scope and aim

The aims of this research were to investigate the opinions of specialists on the use of humor in the therapy of language disorders and to create a collection of data regarding humor use in speech therapy for future therapeutic effective interventions.

Research design

This research is qualitative and uses descriptive analysis methods. The design is phenomenological, as the study aims to investigate the views of specialists on the use of humor in the field of speech and language therapy (SLT). The examined theme (the use of humor in language disorder therapy) is poorly covered in the field of education in relation to SLT and there are not enough data and clarification. Therefore, the present phenomenological study aims to explain and discover the essence of the participants' experience on this theme.

The sampling technique is non-probability (non-random) sampling i.e., snowball sampling, a variant of convenience sampling. Participants were initially recruited through the Association of Specialists in Speech and Language Therapy in Romania (ASTTLR) via an invitation message to fill out an online questionnaire accessing a Google form link; respondents were also encouraged to share the invitation with other potential participants via social media, professional organizations etc.

The study methodology aims to answer the following research questions**(RQ)**: **(RQ1):** What kind of humor modalities and techniques do therapists use in speech therapy activities?; **(RQ2):** How often is humor used in therapeutic activities?; **(RQ3):** What benefits and limitations of using

humor in speech and language therapy are highlighted by professionals? **(RQ4):** What is the expert opinion on the understanding and appreciation of humor in people with different languages and communication disorders?; **(RQ5):**What are the main difficulties in understanding and using humor in children with language disorders?; **(RQ6):**What are the goals of speech therapy intervention to develop children's ability to understand and appreciate humor?; **(RQ7):**At which moments/stages of the speech therapy approach is humor valued by the specialists?; **(RQ8):**What types of humor resources are used by professionals in speech therapy practice?; **(RQ8a):**What is the opinion of specialists on the availability of specific speech therapy resources for humor development in children?

Participants

The research included a group of 210 specialists in the field of speech and language therapy and special education, working in various urban and rural areas of Romania. Table 1 presents the participants' characteristics based on socio-demographic and professional experience.

Table nr 1 - Socio-demographic and professional experience of the participants.

GENDER			
	Type	Frequency	Valid percent
	Female	202	96.2
	Male	8	3.8
	Total	210	100.0
AGE			
	Category	Frequency	Valid percent
	20-25	20	9.5
	26-30	15	7.1
	31-35	16	7.6
	36-40	23	11.0
	41-45	48	22.9
	46-50	54	25.7
	51-55	16	7.6
	56-60	15	7.1
	60+	3	1.4
PROFESSION			
	Type	Frequency	Valid percent
	SLT	118	56.2
	Special education teacher	46	21.9
	Resource Teacher	12	5.7
	Teacher	17	8.1
	Others	17	8.1
	Total	210	100.0

JOB SECTOR		
Type	Frequency	Valid percent
Public	183	87.1
Private	27	12.9
Total	210	100.0
TYPE OF RESIDENCE		
Type	Frequency	Valid percent
Rural	14	6.7
Urban	196	93.3
Total	210	100.0
SPECIALITY IN EDUCATION		
Type	Frequency	Valid percent
Graduate	15	7.1
Graduate psycho-pedagogy	195	92.9
Total	210	100.0
EDUCATION LEVEL		
Type	Frequency	Valid percent
Graduate	71	33.8
Post graduate	131	62.4
PhD	8	3.8
Total	210	100.0
PROFESSIONAL EXPERINCE		
Type	Frequency	Valid percent
Less than 1 year	17	8.1
2-4 years	26	12.4
4-6 years	7	3.3
6-8 years	6	2.9
9-10 years	16	7.6
10+	138	65.7
Total	210	100.0

Tools and instruments

To respond adequately to the specific research needs, the Questionnaire "Expert opinions on the use of humor in language disorder therapy" was developed and used. The instrument was designed based on individual interviews and it used in other scientific studies investigating the use of humor in education (Lovorn & Holaway, 2015; Şahin, 2021).

In the process of developing the questionnaire, the following steps were completed: to identify the relevant information to be obtained (determining the themes of the questionnaire and the specific information to each theme); to identify the best way to administer this questionnaire; to create the content of the questions and the answer modalities; to establish

the sequence of the questions; to review and revise the steps completed; to pre-test and revise the questionnaire.

The questionnaire has 29 questions: the first 8 questions focused on the demographic aspects of the participants, and the next 21 focused on both research questions about the use of humor by professionals in speech and language therapy (use of types of humor, ways of making humor, use of humorous materials, introduction of humor in different therapeutic moments/stages, the benefits of using humor and the difficulties related to understanding and using humor in children with language disorders, the objectives of speech therapy intervention for children's appreciation of humor), as well as on questions of nuance and deepening of aspects considered important in the investigation of the research topic.

The types of questions included in the questionnaire were diverse, constructed on the basis of the types of response, for further use in the research: dichotomous closed questions; trichotomous closed questions; closed with only one response option out of several possible answers; multiple choice closed questions; closed questions - Likert scale with a series of five graduated options of intensity of agreement (1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree); semi-closed questions and open questions.

Table -2-Types of questions used in the construction of the questionnaire

Types of questions	**Question number in the questionnaire**	**Total number of questions/types**
Dichotomous enclosures questions	2, 3, 4, 5, 6, 9, 26	7
Trichotomous enclosures questions	11, 12	2
Closed with only one of several possible answers	1, 7, 8, 18, 19, 20	6
Closed with multiple choice of answers	16, 17	2
Closed/Likert scale (1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree)	21, 22, 23, 24, 25, 28, 29	7
Semi-closed (final option "Other")	10, 13, 14, 15	4
Open answer questions	27	1

Procedure

The questionnaire questions were transferred to the free Google Form application through which a link to the questionnaire was generated. The link (https://forms.gle/ivRPbNJSYWJNa3AT7), accompanied by an invitation to complete the questionnaire (with information about the purpose of the study, its addressability, author) was distributed by ASTTLR via email to all members of the association. The questionnaire was also disseminated through other promotion and social networks/websites (Facebook) of some County Centres for Educational Resources and Assistance (CJRAE) or Inter-School Speech Therapy Centres (CLI) in various counties of the country (Arad, Bistrița-Năsăud, Buzău, Constanța, Dâmboviţa, Gorj, Ialomiţa, Mehedinţi, Prahova, Satu-Mare, Sălaj, Sibiu etc.).

The period available for the participants to complete the questionnaire was four weeks (January-February 2022).

Results

Qualitative coding of the data was the next step in the data analysis process. This stage involved a process whereby segments of data are identified as illustrations of a theme or conceptual category. In this way, a structure was built that links the empirical data and the concepts related to these data in the form of a coding scheme. After examining the codes and the answers given, 6 significant research themes were generated, themes related to the research questions and questionnaire items.

Theme 1. Types, ways, techniques of using humor: Research Question (RQ)1. What are the ways and techniques therapists use to achieve humor in speech therapy activities? / Questionnaire items (QI11). What types of humor do you use most often in therapeutic activities?; (QI13) What are the modalities of humor you use in your speech therapy practice?; (QI17). What are the ways in which you present humorous therapeutic materials to children?

Theme 2. Use of humor, frequency: Research Question (RQ)2. How often is humor used in therapeutic activities? / Questionnaire items: (QI9). Do you use humor in language disorder therapy activities?; (QI)10. What is humor?; (QI) 20. How often do you use humor in language and communication disorders therapy?

Theme 3. Benefits and limitations of using humor in language disorder therapy: Research Question (RQ)3. What benefits and limitations of using humor in language disorder therapy are highlighted by experts? / Questionnaire items (QI) 19. I believe that the introduction of humor in

therapy is beneficial in most language disorders;(QI) 21. I believe that humor in therapy can have the following benefits (...); (QI) 22. I believe that, under certain conditions, humor can have the following negative effects: (...).

Theme 4. Access to humor for people with language and communication disorders: Research Question (RQ)4. What is the experts' opinion on the understanding and appreciation of humor in people with different languages and communication disorders? / Questionnaire item(QI) 24. I think that understanding and appreciating humor is possible in people with: (...); Research Question(RQ) 5. What are the main difficulties in understanding and using humor in children with language disorders? Questionnaire item(QI) 25. What do you think are the main difficulties related to understanding and using humor in children with language disorders?

Theme 5. Effectiveness of the use of humor in therapy (objectives, evaluation, intervention): Research Question (RQ) 6. What are the goals pursued in speech therapy intervention to develop children's ability to understand and appreciate humor?; / Questionnaire item(QI) 23. For children's appreciation of humor, speech therapy intervention should focus on the following objectives: (...); Research Question(RQ) 7. At which moments/stages of the speech therapy approach is humor valued by specialists? / Questionnaire item(QI)16. At which moments of the therapeutic approach do you value humor?; Other items related to theme 5: (QI)12. Sense of humor is a measurable characteristic; (QI)14. I think it is important to consider the following when planning therapy sessions for the introduction of humorous stimuli: (QI)18. I believe that sense of humor is a trainable skill; (QI)28. For the effective use of humor in therapy of language disorders I consider that a tool to assess the sense of humor in children would be useful; (QI)29. For the effective use of humor in language therapy, I believe that a specific humor training program for children at different developmental stages would be useful.

Theme 6. Material/digital resources with humorous content used/needed: Research Question(RQ) 8. What types of humorous resources are used by professionals in speech and language therapy practice? / Questionnaire items: (QI)15. What types of humorous materials do you use in therapy activities?; (QI)17. What are the ways in which you introduce children to therapeutic materials with humorous content? Research question(RQ) 8.a. What is the opinion of specialists on the availability of specific speech therapy resources for developing children's sense of humor? / Questionnaire items: (QI)26. Do you consider that there are sufficient specific speech therapy resources for the development of children's sense of

humor?; (QI)27. Please specify 1-2 material or digital resources with humorous/funny/funny content that you use with children in therapeutic activities (e.g., books, apps, games, etc.).

Theme 1. Types, ways, techniques of using humor

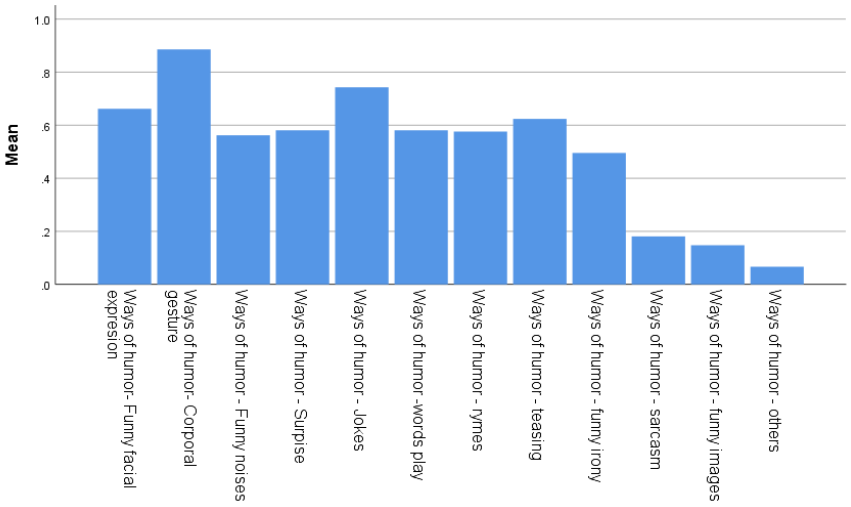
This theme is related to the first research question RQ1 -*What are the ways and techniques therapists use to achieve humor in speech therapy activities?*- and incorporates the results obtained from the analysis of the questionnaire responses to items (QI)11 - What types of humor do you use most often in therapeutic activities? and (QI)13 - What types of humor do you use in your speech therapy practice?

The investigation of the specialists' preference in terms of using a particular type of humor in therapy reveals that most therapists 144 (68.6%) predominantly use verbal humor; 58 (27.6%) of the respondents prefer to use nonverbal and paraverbal humor and 8 (3.8%) of the specialists use visual humor more often. Regarding the modalities of humor used in speech therapy practice, it is found that professionals use a variety of humor production modalities in therapy (funny facial expressions, body gestures, funny noises and sounds, voice modulation, surprise technique, jokes/anecdotes, puns, songs with comic effects, teasing, comic irony, sarcasm, funny pictures/images). In addition, role-playing, funny riddles, scenarios, self-irony, games with fairy-tale characters, humor combined with surprise are mentioned. Most of the professionals (88.6%) say that they mainly use facial expressions, 74.3% voice modulation and word games (62.4%); less frequently used are teasing (18.1%), comic irony (14.8%) and sarcasm (6.7%).

Table 3- Descriptive statistics regarding types of humor used in SLT`s sessions.

	Type	Frequency	Percent	Cumulative Percent
Valid	Verbal	144	68.6	68.6
	Nonverbal and paraverbal	58	27.6	96.2
	Visual	8	3.8	100.0
	Total	210	100.0	

Fig 1. Ways of expressing humor in SLT sessions



Theme 2. Use of humor in therapy, frequency

The analysis of this theme responds to the second research question (How often is humor used in therapy activities?) by examining the responses to items(QI) 9 - Do you use humor in language disorder therapy activities; (QI)10 - What is humor? and 20 - How often do you use humor in language and communication disorders therapy?

The results indicate that out of 210 professionals, 198 (94.3%) use humor in language disorder therapy activities, whereas 12 respondents (5.7%) mention that they do not use humor in therapy activities.

Table 4- Descriptive statistics regarding humor use

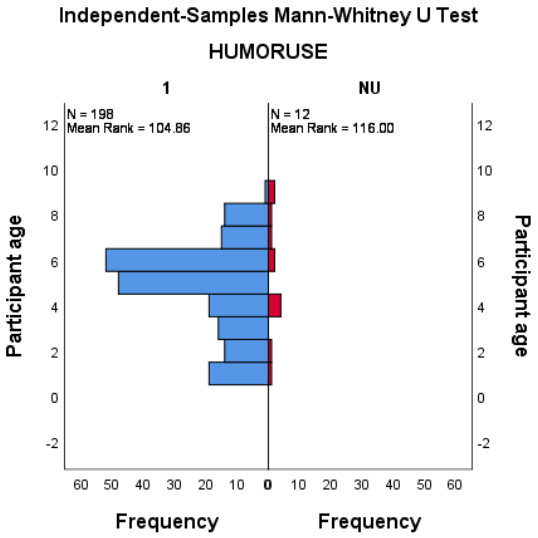
	Type	Frequency	Valid Percent	Cumulative Percent
Valid	NO	12	5.7	5.7
	YES	198	94.3	100.0
	Total	210	100.0	

These data demonstrate a wide range of humor use in speech and language therapy field, humor being a modality in which speech therapy can be implemented.

Humor use and age

The relation between humor use and age was tested and there is no relation between use/no use of humor in relation with the age of the SLTs.

Fig 2. The relation between humor use and participants age



Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of participants age is the same across categories of HUMORUSE.	Independent-Samples Mann-Whitney U Test	.531	Retain the null hypothesis.

`Asymptotic significances are displayed. The significance level is .050.

Most respondents agree with the definition of humor as a form of communication and interaction that leads to an emotional experience of amusement, pleasure and/or mirth respectively, a form of social play with cognitive, emotional and behavioral components. In addition, specialists mention other delimitations of the concept of humor: "A combination of the above two definitions, "The quality that makes something funny", "A way of correcting behaviors more or less pleasant behavior, the basis of relationships".

When asked about the frequency of using humor in language and communication therapy activities, out of the total number of specialists who

completed the questionnaire, 83 (39.5%) state that they use humor in every therapy session, 71 (33.8%) several times a week, 42 (20%) weekly, 5 (2.4%) - only once a month, 8 (3.8%) - very rarely and only one respondent states that they never use humor in therapy. This illustrates the fact humor seems to be a means through which speech therapy is often organized.

Benefits and limitations of using humor in language therapy

By analyzing the answers given by professionals to items (QI)19 - I consider that the introduction of humor in therapy is beneficial in most language disorders; 21 - I consider that humor in therapy can have the following benefits (...) and (QI) 22 - I consider that, under certain conditions, humor can produce the following negative effects: (...) the third research question (What benefits and limitations of the use of humor in language disorder therapy are highlighted by professionals?) is answered.

The specialists' agreement on the benefits of introducing humor in therapy and its use in most language disorders, as shown by the analysis of the responses, varies in intensity. Of the 210 respondents, 113 strongly agreed that humor has benefits in most language disorders, 68 (32.4%) agreed; 3 respondents disagreed; 1 strongly disagreed and 25 expressed a neutral response.

When asked about the potential benefits of humor in therapy, the specialists were able to agree by choosing one option for each of the benefits mentioned, namely, triggering positive emotions (optimism, joy, cheerfulness); developing divergent thinking; more creative problem solving; improving memory; capturing attention and developing the ability to focus; stimulating motivation; facilitating and developing communication; changing perspective on a stressful situation; overcoming difficulties/coping; reducing emotional distress; positively influencing psychological well-being; contributing to physical and mental health and improving social relationships, skills and communication. For each of these benefits mentioned by the experts, there is a high percentage of "total agreement" options respectively between 55.2% - development of divergent thinking, improvement of memory and 79% - positive influence on psychological well-being.

Similarly, when asked about the potential negative effects of using humor in therapy, professionals could express their choice for each of the listed negative effects respectively, humiliation, ridiculing people; discriminating against different social categories; inappropriately masking emotions or pain; alienating others in the group; creating conflicts and tensions between individuals or social groups; more than half of the therapists expressed agreement respectively, total agreement on the listed

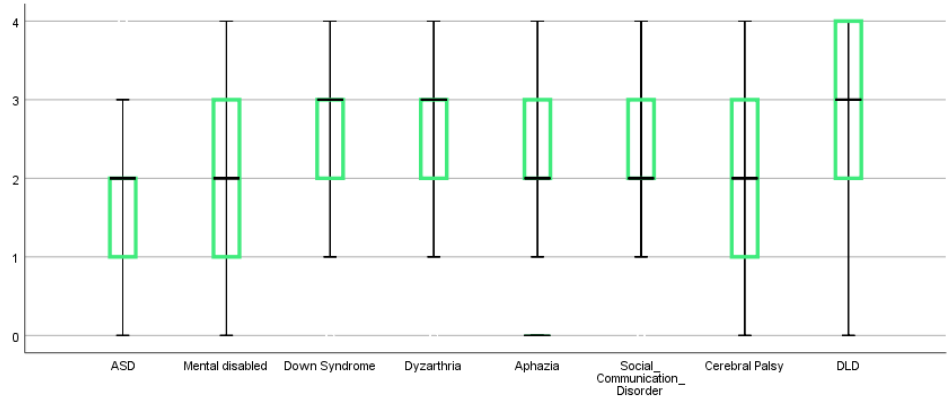
potentially negative effects. A relatively high percentage of professionals (between 21.4% and 27.1%) choosing the middle option on the Likert scale (neither agree nor disagree) is noted; neutral responses may indicate a certain level of uncertainty among respondents regarding the knowledge of potential negative effects of using humor in therapy.

Access to humor for people with language and communication disorders

The theme groups the results of the analysis of the specialists' answers to items: 24 (I think that understanding and appreciating humor is possible for people with: (...) and 25 (What do you think are the main difficulties related to understanding and using humor in children with language disorders?), results directly related to RQ4. What is the opinion of specialists on the understanding and appreciation of humor in people with different language and communication disorders? and RQ5. What are the main difficulties in understanding and using humor in children with language disorders?

Of the 210 professionals who answered question 24 of the questionnaire, 11 respondents (5.2%) fully agree that understanding and appreciating humor is possible for people with ASD; 22 (10.5%) for intellectual disability; 32 (15.2%) - Down syndrome; 28 (13.3%) - Dysarthria; 17 (8.1%) - Aphasia; 30 (14.3%) - Social Communication Disorder (pragmatic); 17 (8.1%) - Cerebral Palsy and 56 (26.7%) for people with Developmental Language Disorder; the "agree" option was selected, for all types of disorders, by a relatively high percentage of respondents, between 20% (Cerebral Palsy) and 41.9% (Developmental Language Disorder. The number of undecided/neutral specialists is much higher for all disorders, ranging from 21.4% (Developmental language disorder) to 35.7% (Dysarthria).

Fig 3. The humor use in different pathological settings



Regarding the main difficulties in understanding and using humor in children with language disorders, of the 210 specialists, the majority agree and totally agree that the barriers to accessing humor are, in order: difficulty in understanding abstract linguistic concepts (multiple meanings words, figurative language, etc.) - cumulative, 180 respondents; limited vocabulary - cumulative, 161 respondents; difficulties with executive functions (problems communicating a story/jokes in an organized and sequential manner, difficulties with memorizing and retelling etc.) - cumulative, 160 respondents; difficulties understanding social rules (inappropriate jokes or jokes at inappropriate times etc.) - cumulative, 150 respondents; difficulty accepting another person's perspective - cumulative, 135 respondents.

Table 5- Factors which influence humor use into SLT practice

	Limited vocabulary	Difficulty understanding abstract linguistic concepts	Difficulty accepting another person's perspective	Difficulty understanding social rules	Executive function impairments	Availability for resources for humor
N Valid	210	210	210	210	210	210
Mean	2.92	3.24	2.74	2.85	2.99	.36
Median	3.00	3.00	3.00	3.00	3.00	.00
Mode	3	4	3	3	3	0
Minimum	0	0	0	0	0	0
Maximum	4	4	4	4	4	1

Effectiveness of using humor in therapy (objectives, evaluation, intervention)

The theme concerning the effectiveness of using humor in therapy (objectives, evaluation, intervention) encompasses Research Question (RQ)6. What are the goals of speech therapy intervention to develop children's ability to understand and appreciate humor? (QI) 23: For children's appreciation of humor, speech therapy intervention should focus on the following objectives: (...) and Research Question (RQ) 7. At which moments/stages of the speech therapy approach is humor valued by specialists? (Item 16 of Questionnaire: At which moments of the therapeutic approach do you value humor?). Other items related to the theme: Item (QI)12. Sense of humor is a measurable characteristic; Item(QI) 14. I think it is important to take into account when planning therapy sessions, when to introduce humorous stimuli:(...); Item (QI)18. I think that a sense of humor is a trainable skill; Item (QI)28. For the effective use of humor in the therapy of language disorders, I think that a tool to assess children's sense of humor would be useful; Item (QI)29. For the effective use of humor in language therapy, I think that a specific humor training program for children at different developmental stages would be useful.

Of the 210 participants who completed the questionnaire, the majority strongly agree/agree that for children's appreciation of humor, speech therapy intervention should focus on the following goals (in order): training the pragmatic level of language (187 specialists); identifying elements of figurative language (185 specialists); generating synonyms and antonyms (181 specialists); differentiating pairs of paronyms (181 specialists); delineating word meanings in different communicative contexts (178 specialists); identifying polysemantic words (173 specialists); differentiating the meanings of homonymous words (172 specialists) and constructing new words by derivation with prefixes and suffixes (168 specialists).

Regarding the moments or stages of the speech therapy approach in which humor is used, most specialists consider that humor can be implemented during exercises, speech therapy training (153 respondents); after performing demanding exercises (145 respondents). The use of humor before the introduction of speech therapy exercises is suggested by 85 respondents; at the stage of generalization of acquired communication skills and abilities (80 respondents), when giving feedback (76 respondents) and at the stage of speech therapy assessment, 57 respondents.

Table 7- Descriptive statistics regarding the distributivity of humor during a SLT session

		Moment_When_use_Humor_Before_SLT_Session	Moment_When_use_Humor_During_SLT_Session	Moment_When_use_Humor_After_SLT_Session	Moment_When_use_Humor_During Feedback	Moment_When_use_Humor_During Generalization
N	Valid	210	210	210	210	210
Mean		.40	.73	.69	.36	.38
Median		.00	1.00	1.00	.00	.00
Minimum		0	0	0	0	0
Maximum		1	1	1	1	1

The experts' opinion on the measurability of the sense of humor is reflected in the responses to item (QI)12 of the questionnaire. Out of a total of 210 respondents, almost half (48.1%) believe that sense of humor can be measured; 17.1% disagree with this statement and a significant percentage (34.8%) say they do not know whether sense of humor is a measurable skill.

Table 8- Descriptive statistics regarding the measurability of humor

		Frequency	Valid Percent	Cumulative Percent
Valid	No	36	17.1	17.1
	Yes	101	48.1	65.2
	I don't know	73	34.8	100.0
	Total	210	100.0	

Regarding the factors to be considered in the planning of therapeutic interventions when considering the introduction of humorous stimuli, most specialists consider, in order of importance: age (89.9%); level of language proficiency (69%); specificity of the language disorder (66.2%); type of humor (61.9%); gender (25.7%). In addition, specialists list other factors such as: intellectual development, cognitive and emotional development, personality structure. Of the 210 respondents, 45.7% respectively, 35.2% strongly agree/agree that sense of humor is a trainable skill; 15.2% of the specialists are undecided/neutral; 2.9% respectively, 1% strongly disagree/disagree that sense of humor is trainable.

Regarding the usefulness of a humor assessment tool in children, 144 professionals out of 210 respondents to this item strongly agree/agree that a humor assessment tool is necessary for the effective use of humor in language disorder therapy. 49 respondents choose neutral answers; 12 professionals disagree, 5 strongly disagree.

The perceptions of specialists regarding the usefulness of a specific sense of humor training program for children at different stages of

development are definitely underlined. The high number of specialists who consider a sense of humor training program for children to be useful is highlighted, with 170 specialists choosing the "Strongly agree" (47%)/"Agree" (33.8%) options.

Material/digital resources with humorous content used/needed

The theme groups the results directly related to Research Question (RQ)8. What types of humorous resources are used by professionals in speech and language therapy practice (Item 15. What types of humorous materials are used in therapy activities; Item (QI)17. What are the ways in which you introduce children to humorous therapy materials?) and with Research Question (QI)8.a. What is the opinion of specialists on the availability of specific speech therapy resources for the development of humor in children? Questionnaire items (QI) 26. Do you consider that there are enough specific speech therapy resources for the development of children's sense of humor? and 27. Please specify 1-2 material or digital resources with humorous/funny/funny content that you use with children in therapeutic activities).

Results obtained by analyzing the specialists' answers to the question "What types of humorous materials do you use in therapy activities?" show the following categories of humorous materials used in language disorder therapy (in order): games and toys (mentioned by 78% of the 210 respondents); role-playing games (70%); word games (69%); funny poems (68, 6%); funny stories and histories (63%); funny songs (62.4%); riddles (61%), language games (57, 6%); jokes (48.6%); cartoons and comics are mentioned less (34.3% and 25.7% respectively). Specialists add, in the category of materials with humorous content used in therapy, the following: "Experiential activities, role-playing combined with tongue twisters and funny short stories" and "Funny therapeutic stories".

Of the 210 respondents who answered Item 17 of the questionnaire, 199 (94.8%) say that therapeutic materials with humorous content are mainly presented in traditional format (physical material resources) - toys, books, speech therapy sheets, photos, games, etc.; 129 (61.4%) in virtual format - (digital resources) software, interactive applications and games, animations, etc.

Table 9- The format to introduce humor during SLT sessions.

		Frequency	Valid Percent	Cumulative Percent
Valid	Traditional	81	38.6	38.6
	Digital	11	5.2	43.8
	Traditional/Digital	118	56.2	100.0
	Total	210	100.0	

Regarding the availability of specific speech therapy resources for the development of children's sense of humor, most professionals 134 (63.8%) think that existing materials cover the needs for specific resources for the development of sense of humor; 76 (36.2%) think that there are not enough specific speech therapy resources.

Of the 210 participants who completed the questionnaire, a total of 167 professionals responded to the invitation to specify material or digital resources with humorous/funny/fun content that can be used with children in therapeutic activities.

Specialists indicated, from the category of resources/materials in physical format: books/books with stories, poems, riddles (e.g., "Pettson and Findus" series by Sven Nordqvist; "Franklin" by Paulette Bourgeois; "In Search of the Mischievous Spirit" by Zaharia Zanzibon; "Shush! We Have a Plan!" by Chris Haughton; "Grandma Buna and the Starry Sky" by Waikiko Sato, "Funny Speech Therapy" by Loredana Bejan, "Phonoarticulatory Gymnastics in Pictures" by Laura Hărdălău, etc.); various toys and games. As regards resources in virtual format, respondents indicate the use of various software, applications and interactive games existing or created on different platforms (https://voxikids.com/; https://wordwall.net/; https://livresq.com/ro/; https://learningapps.org/; Tell Me A Story - Google Play etc.). Humor use or non-use is not dependent on the specialists` age, this aspect underlining the fact that humor is an intrinsic condition of SLT practice.

Discussions and limitations

Summary of results

In this study, the opinions of 210 professionals on the use of humor in language disorder therapy were investigated using an online questionnaire developed as part of the research. The evaluation of the research results was based on the process of thematic data analysis; the themes were related to the research questions and questionnaire items. This research did not need an ethics committee approval prior to development; the participants in the research were adults and they gave their informed consent for participating

in the study; they were informed about the research, its aim and scope and about the withdrawing possibility, with no other consequences on their status.

The first significant theme for the present study focused on types, ways, and techniques of using humor in the therapy of language and communication disorders. Investigating the preference of specialists in using a particular type of humor in therapy reveals that most therapists predominantly use verbal humor in the therapeutic process. This is in accordance with others studies from literature. In a research (Ziyaeemehr & Kumar, 2013) findings indicate that using verbal humor facilitates access to linguistic and cultural knowledge resources and is a useful tool in learning a language. Nonverbal and paraverbal forms of humor are also used in our study; visual humor appears less frequently as a preference for use in therapeutic activities. It is found that therapists use a variety of ways of producing humor; the use of facial expressions is the most preferred, followed by voice modulation and puns; teasing, comic irony and sarcasm are present, but less frequent in therapeutic activities.

The theme "Use of humor in therapy, frequency" encompassed several important data related to the number of professionals who use humor, the definition of humor and the frequency of humor use in therapy. The results illustrate that most therapists use humor in their language disorder therapy activities. However, 12 out of 210 practitioners say they do not use humor in therapy activities. Most respondents agree with the definition of humor as a form of communication and interaction that leads to an emotional experience of amusement, pleasure and/or mirth, but also with the definition of humor as a form of social play with cognitive, emotional, and behavioral components. In addition, specialists mention other conceptual delimitations of humor: "A combination of the two definitions above"; "The quality that makes something funny"; "A way of correcting more or less pleasant behaviors"; "The basis of relationships". In terms of frequency use of humor in language and communication therapy activities, the results indicate a frequency of daily or several times a week use of humor reported by most professionals; a small number of responses refer to monthly or very infrequent use of humor.

Another significant research theme has focused on the benefits and limitations of using humor in language disorder therapy. The specialists' agreement on the benefits of introducing humor in therapy and its use in most language disorders, as shown by the analysis of the responses, varies in intensity, with the majority of therapists fully agreeing or agreeing that humor has benefits in most language disorders; only 3 respondents disagree

respectively, 1 totally disagrees, 25 people out of 210 who completed the questionnaire express a neutral response. In fact, the benefits of using humor in practice in connection with speech and language therapy, were underlined by previous research published by ASHA (Anderson, 2015). When asked about the potential benefits of humor in therapy, experts agreed by choosing one option for each of the benefits mentioned in the section of the questionnaire dedicated to this topic, i.e., triggering positive emotions (optimism, joy, happiness); developing divergent thinking; more creative problem solving; improving memory; gaining attention and developing the ability to focus; stimulating motivation; facilitating and developing communication; changing perspective on a stressful situation; overcoming difficulties/coping; reducing emotional distress; positively influencing psychological well-being; contributing to physical and mental health and improving social relationships, skills and communication. For each of these benefits mentioned by the experts, there is a high percentage of "total agreement" options mentioned for: developing divergent thinking, improving memory and positively influencing psychological well-being. Similarly, when asked about the potential negative effects of using humor in therapy, professionals expressed their option for each of the listed negative effects respectively, humiliation, ridiculing people; discriminating against different social categories; inappropriately masking emotions or pain; alienating others in the group; creating conflict and tension between individuals or social groups; with more than half of the therapists expressing agreement respectively, total agreement on the listed potential negative effects. The benefits or negative effects of using humor were previously documented in relation with psychotherapy; the authors consider that "deliberately bringing together humor and psychotherapy is not without its risks" (Saper, 1987). In another research Kirsh & Kuiper (2003) pinpoint that the sense of humor is in relation with the construct of individualism, which might bring some negative effects in practice. In our study, a relatively high percentage of professionals (between 21.4% and 27.1%) choose neutral responses, which may indicate a certain level of uncertainty among respondents about the potential negative effects of using humor in therapy.

The theme "Access to humor of people with language and communication disorders" relates directly to two research questions, RQ4 - *What is the opinion of specialists on the understanding and appreciation of humor in people with different language and communication disorders?* and RQ5- *What are the main difficulties in understanding and using humor in children with language disorders?* Out of 210 specialists, 5.2% fully agree that understanding and appreciating humor is possible for people with ASD; 10.5% for intellectual disability;

15.2% for Down Syndrome; 13.3% - dysarthria; 8.1% - aphasia; 14.3% - social communication disorder (pragmatic); 8.1% - Cerebral Palsy and 26.7% for people with Developmental Language Disorder; the "agree" option was selected, for all types of disorders, by a relatively high percentage of respondents, between 20% (Cerebral Palsy) and 41.9% (Developmental Language Disorder). The number of undecided/neutral respondents is relatively high for all types of disorders, ranging from 21.4% (Developmental Language Disorder) to 35.7% (Dysarthria). The lower score in using humor in SLT is for ASD. These data confirm a remark made by Lyons & Fitzgerald (2004) that usually the use of humor for ASD is perceived as being impaired, but their study observes that actually there are specific discrepant humor uses depending on the type of functionality and in connection with gender, girls being less impaired than boys. Out of the 210 specialists, in our research case, the majority agree and strongly agree that the barriers to accessing humor are, in order: difficulty in understanding abstract linguistic concepts (words with multiple meanings, figurative language, etc.); limited vocabulary; difficulties with executive functions (problems communicating a story/jokes in an organized and sequential manner, difficulties with memorization and recall etc.); difficulties understanding social rules (inappropriate jokes or jokes at inappropriate times etc.); difficulty accepting another person's perspective. These data are in concordance with others in literature (Keegan et al., 2021) which underlines that in case of TBI (traumatic brain injury) the capacity of using humor is limited.

The effectiveness of humor usage in therapy (objectives, evaluation, intervention) is an important topic for research and covers reference topics such as: the objectives pursued in speech therapy for the development of children's capacity to understand and appreciate humor; the moments or stages of the speech therapy approach in which humor is used; the measurability and trainability of the sense of humor; factors involved in the planning of therapeutic sessions; the usefulness of tools for evaluating and training the sense of humor in children. The majority of specialists strongly agree/agree that, for children's sense of humor, speech therapy intervention should focus on the following objectives (in order): training the pragmatic level of language; identifying elements of figurative language; generating synonyms and antonyms; differentiating paronyms pairs; delineating word meanings in different communicative contexts; identifying polysemantic words; differentiating the meanings of homonymous words and constructing new words by derivation with prefixes and suffixes. Regarding the moments or stages of the speech therapy approach in which humor is used, most

specialists consider that humor can be implemented during exercises, speech therapy training, after performing demanding exercises. The use of humor is less often mentioned by specialists before the introduction of speech therapy exercises; at the stage of generalization of acquired communication skills and abilities, at the time of giving feedback and at the stage of speech therapy assessment. The analysis of the opinions expressed by professionals on the measurability of sense of humor shows that almost half of the therapists consider sense of humor a measurable skill. A significant percentage of professionals (34.8%) say they do not know whether humor is a measurable skill. As regards the factors to be considered in the planning of therapeutic interventions when thinking to the introduction of humor stimuli, many specialists consider, in order of importance, the following factors: age; level of language proficiency; specificity of the language disorder; type of humor used; gender. In addition, specialists add other factors such as: intellectual development, cognitive and emotional development, personality structure. Regarding the usefulness of a humor assessment tool in children, 144 out of 210 professionals who responded strongly agree/agree that a humor assessment tool is necessary for the effective use of humor in language disorder therapy. However, there are 49 therapists who choose neutral responses; 12 professionals who disagree, and 5 - strongly disagree. Next, the high number of specialists (80.9%) who consider a specific sense of humor training program for children at different stages of development to be useful is highlighted.

The analysis of the theme *Material/digital resources with humorous content used/needed* reflects the results showing the categories of humorous materials used by professionals in language disorder therapy (in the field): games and toys; role-playing games; word games; funny poems; funny stories and histories; funny songs; riddles, language games; jokes; cartoons and comics are less mentioned by professionals. This analysis also shows a lack of digital resources in SLT field that can be used to ensure humor based therapeutic approaches. This lack of materials can be exploited to enrich the field with necessary materials and tools.

Therapists also list other humorous materials used in therapy, for example: "Experiential activities, role-playing combined with tongue twisters and funny short stories" and "Funny therapeutic stories". The professionals present humorous content materials in therapy sessions both in traditional format (physical material resources) - toys, books, speech therapy sheets, photos, games, etc., and in virtual format - (digital resources) software, interactive apps and games, animations, etc., with most humorous content materials used being in the traditional format category. Regarding the

availability of specific speech therapy resources for children's sense of humor development, more than half of the professionals think that the existing materials cover the needs for specific resources for humor development; 36.2% think that there are not enough specific speech therapy resources. Specialists indicated in the category of resources/materials with humorous content in physical format that can be used with children in therapeutic activities the following materials: books/books with stories, poems, riddles, various toys, and games. Concerning resources in virtual format, respondents specify the use of different software, applications and interactive games existing or created on different platforms.

Implications

Investigating the views of specialists on the use of humor in speech and language therapy answered the research questions and also allowed us to highlight additional theoretical and practical aspects related to the phenomenon of humor, its relationships and implications in speech therapy, which have not been investigated before.

The analysis of the issue of humor, the ways of using it in therapeutic interventions (e.g., knowledge of children's preference for certain types and structures of humor; assessment of specific capacities of appreciation or production of humor in people undergoing therapy; construction/selection/correct use of humor elements in the approach to strategies, therapeutic materials, etc.) can bring added knowledge, performance and effectiveness in the therapy of language and communication disorders.

Limitations

The critical analysis carried out during the study, with the aim of improving the investigative approach, led to the identification of some limitations of the research: (1)The absence of information on the implications of humor in a range of language disorders (developmental language disorder, rhythm and fluency disorders, written language disorders) for which no specific literature sources, studies and research were identified; (2) the prevalence of closed questions over open questions in the construction of the questionnaire, which made it impossible for the researcher to sample participants' responses; also, no opportunity for respondents to provide clarification of their answers or to add to their responses for clarification; (3) possible subjectivity of the researcher in interpreting the qualitative data related to the issue under investigation.

Conclusions

This study is the first Romanian research to investigate the opinions of specialists on the use of humor in the field of language disorder therapy. In accordance with the results obtained from the questionnaire, the presence of humor and interest in it among the specialists is highlighted, suggesting that humor has notable implications in language disorder therapy. Whether it is facilitating and developing communication, positively influencing psychological well-being or improving relationships, skills and social communication, humor is not a component to be neglected.

Access to humor for people with language and communication disorders depends to a large extent on factors such as: age, level of language proficiency, specificity of the language disorder, type of humor used.

In order, the main difficulties related to understanding and using humor in children with language disorders are related to: difficulty in understanding abstract linguistic concepts (words with multiple meanings, figurative language, etc.); limited vocabulary; difficulties with executive functions (problems communicating a story/joke in an organized and sequential manner, difficulty memorizing and actualizing, etc.); difficulty in understanding social rules (inappropriate jokes or jokes at inappropriate times, etc.); difficulty in accepting another person's perspective.

Humor can be incorporated into speech therapy activities in a variety of ways and used at different times or stages of the speech therapy approach.

Even though some resources with humorous content are used in different speech therapy tasks and exercises, some specialists agree that specific speech therapy resources for developing children's sense of humor are insufficient. Also, a large number of specialists agree that it is useful to develop a tool for assessing children's sense of humor, i.e., a specific program for training the sense of humor in children at different stages of development.

The information provided by the literature review on humor, combined with the data from the thematic analysis of the research and the materials proposed as a model for assessment/intervention, may be relevant both for theoretical specialists concerned with the topic of integrating humor into the field of language disorder therapy and for speech-language pathology practitioners who use or intend to use humor to make therapeutic interventions more effective.

Future research directions

The possibilities for humor research are not to be neglected. This paper can be a starting point for further research investigating, in depth, the use of humor in speech therapy interventions. Future studies could also focus on other important issues related to the present research topic e.g., the relationship of humor to a range of language disorders, investigations of therapists' humor styles, etc., which have not been explored so far.

Also, the three materials created in the course of this research, the Questionnaire "Specialist opinions on the use of humor in language disorder therapy" ; the "Questionnaire for assessing the sense of humor in children" and "Speech therapy with smiles - Speech therapy exercises to train and develop children's sense of humor" are sources that can inspire, guide and support specialists in the development of new materials, assessment tools or the implementation of intervention programs focused on training the sense of humor in children at different stages of development.

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