



RELYING ON INFORMAL SOURCES IN SPEECH AND LANGUAGE THERAPY: WHY AND HOW?

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Abstract:

This study aims to explore whether and why speech and language therapists (SLTs) use informal sources to guide their intervention decisions for children with developmental language delay (DLD). A qualitative study was conducted. Sixteen Turkish SLTs participated in this study. The methods of interviewing, participant observation and audio diary were used. An inductive thematic approach was taken to analyse the data. Five main themes were revealed from the data: 'The lack of trust in the formal standardised tests and sources', 'experience over theory', 'trial-error', 'other professionals' opinion' and 'instinct' showed that the SLTs value variety of sources and their cumulative experience when making an intervention decision. While evidence-based practice (EBP) has been increasingly used and encouraged in the SLT profession, this study shows that informal sources play a significant role in SLTs' clinical reasoning. This study sheds light on the behind factors of relying on informal sources to make intervention decisions. The role and dynamic of using informal sources could help understand the value and risks of this approach in clinical reasoning.

Keywords: informal sources, speech and language therapy, clinical reasoning, developmental language delay

1. Introduction

1.1 The Use of Informal Sources by SLTs: Is it Good or Bad?

Literature indicates that when there is a lack of evidence-based research, guidelines, or frameworks that help practitioners make an informed decision, professionals might rely on their insight and experience (Benner & Tanner, 1987; Durgungoz & Emerson, 2021). It was stated that expert professionals no longer use analytical reasoning processes such as guidelines or protocols; they instead rely on contextual factors and tacit knowledge, which distinguishes them from novices (Thompson & Dowding, 2002). This might mean

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that tacit knowledge might become superior to analytical reasoning as the years of experience increase, as experts make better decisions than novices. Such notions have been criticised over the last two decades (Crow et al., 1995). It is claimed that such an approach is bound to specific contexts and cases, making it difficult to apply such a reasoning process to other contexts (*ibid*). However, it is the fact that SLTs are exposed to various factors and contextual differences, so this could force them to rely on informal sources to make unique intervention decisions for children with DLD. As these informal sources vary from case to case and professional to professional, no one explanation could confine these sources in one single definition. However, in the literature, experience, instinct, self-made evaluation tests, the environment, or parents could be listed as informal sources, directly or indirectly affecting SLTs' intervention decisions. A recent study in the SLT profession also concluded that:

"...treatment decisions are primarily pragmatically influenced and rely heavily on craft knowledge or practice evidence..." (McCurtin & Amanda, 2015, p.1185).

The informal sources could be said to be inherently related to therapists' personal opinion, as Kaye (1995) explained:

"Formal sources may be defined as those which are constituted in some regularised or legal manner in relation to the user, whereas informal sources have no such basis. Formal sources are often also impersonal, and informal sources are likewise often personal" (p.16)

Regarding on this explanation in the literature, the terms 'formal/impersonal sources' and 'informal/personal sources' will be used throughout the paper.

1.2 Same Cases but Different Actions

SLTs' decision-making processes play a crucial role in every phase of the intervention. One of the phases is whether a child should be accepted into therapy. The studies conducted in the UK show that there are geographical differences and referred to the postcode lottery (Enderby & John, 1999). While a child must have more severe language issues to be offered intervention in some health care trusts, this is different in other trust areas where mild language problems might be considered for intervention. It, therefore, depends on the practices of the trust where the children are diagnosed. It was also reported that such differences in practice are also related to individual SLTs (Records & Tomblin, 1994). For instance, Records and Tomblin (1994) asked 27 SLTs to evaluate various cases. The study showed differences in the SLTs' approach to cases. While one SLT diagnosed 89% of the children as language impaired, another found 20% of the children as having a language development issue (*ibid*). Such differences will eventually be reflected in further practice when SLTs decide whether these children need an intervention or not. Even if they need intervention, the nature of the intervention can show variation, depending on SLTs' decision about the severity of language-impaired.

Roulstone (2001) also stated that although SLTs may agree about the nature of the child's issue, they may conduct different assessments and therefore, different intervention methods can be seen in practice. The author explored the agreements and disagreements among the therapists. She used mixed methods to investigate SLTs' decisions to include preschool children in speech and language therapy. Although it was reported that the SLTs agreed on similar categories concerning children's language impairments, they differed in their diagnostic approaches and the severity of language impairment that required intervention (ibid). This study also shows that the sources that lead an SLT to decide on a case require a significant investigation because every single decision of an SLT can affect a child's progress.

Another study illustrates two SLTs' decision-making processes Lum (2013), as follow; Jane might argue that it is therapeutic to tell a patient that what he is saying does not make sense because it helps him to self-monitor his speech, which will increase the likelihood that he will self-correct his speech. Sue, however, thinks that helping a patient acquire insight into his speech problem is not desirable because this will cause the patient to become depressed and remain so, as there is no guarantee that his speech will improve.

The above example illustrates two approaches that are opposite to one another, although the author underlines that Jane has more experience than Sue so that Jane's approach might be more acceptable because of the experience gap. Lum (2013), however, claims that a decision that is justified by the experience of the decision-maker cannot always be correct, as Sue will never be more experienced than Jane. Thus, another justification base should be claimed to be the scientific evidence behind a method. The critical point in the example of Jane and Sue is that we do not know the factors that lead Jane and Sue to make a specific intervention decision about a case. Could they both be right? Could their patients' personalities or social life require Jane and Sue to differ in their decisions? Or could Jane's and Sue's prior experiences or beliefs lead them to make such intervention decisions? Such questions underline the importance of factors behind certain intervention decisions, as they are the primary triggers for Jane and Sue to act in the way they do.

A survey study also confirms the importance of understanding the dynamic process of how professionals' values, beliefs and knowledge directly affect SLTs reasoning process. For instance, Weinsier (1987) reported that 74 per cent of first-year medical students considered the knowledge of nutrition as an essential element of their professions. However, only 13 per cent gave importance to such knowledge by the time they are in their third year. While it is expected that professionals' beliefs towards a particular topic are affected by various factors, there is little information about the hidden factors that provoke a change in an SLT's decision-making processes (Lum, 2013). Once such fundamental reasoning is understood, it might be easier to arrange better training programmes in universities and create workshops and seminars.

As can be seen, dealing with language and helping individuals to improve their communication is a complicated process. Therefore, this study will investigate the reasons behind Turkish SLTs' informal reasoning process. The following research question will be asked in this study:

Whether and how do Turkish SLTs' reasoning process is affected by informal sources?

3. Method

3.1 The Sampling Procedure

Sampling in qualitative research is flexible and depends on various factors. There has been an ongoing debate over how many participants are needed for a qualitative case study. Gall et al. (1996) stated that once a researcher gains "new insights" about his/her research area, then s/he can terminate the data collection process. However, the term 'new insights' is quite abstract, and it might be difficult for a novice researcher to understand whether enough data is collected to accomplish this. Data saturation is one of the most important signals that might indicate the generated data could shed light on new insights on the topic (Mason, 2010; Morse, 2000).

In this study, I first identified the cities. To increase the diversity and representation of different regions, five big cities in Turkey are chosen. These cities, altogether, represent most of the population in Turkey. Then, 19 SLTs are contacted via e-mail, with a brief description of the study, participant information, and consent. 16 SLTs replied to the e-mail and participated in this study.

3.2 Data Collection Methods

3.2.1 Interviews

Interviews provide rich and detailed information about the experiences of individuals. Since this study aims to understand behind reasons of SLTs intention to use informal sources, interviews can provide deep insight into their decision-making processes. According to (Yin, 2014, p.85), interviews are essential for those planning to take a case study approach because:

"Case studies are about human affairs... These human affairs should be reported and interpreted through the eyes of specific interviewees, and well-informed respondents can provide important insights into a situation."

In this study, participants were asked 21 semi-structured interview questions. Interviews were audio-recorded, and each lasted nearly 50 minutes. The interviews were conducted in private (in the participants' room). None of the interviews was interrupted for any reason.

3.2.2 Observations and Stimulated Recall

In this study, observations were conducted with eight participants overall; they were the ones who provided their consent to be observed. The therapy sessions where the SLTs engaged with the children for the first time were chosen. Such purposeful selection allowed the SLTs to form their decisions through tests and evaluate the cases. The first two sessions of the SLTs and the tools and materials that they used were observed. As

the literature suggested, the observation method can allow researchers to understand the participants' practices in their natural setting, and it can yield rich qualitative data, which is stated as a thick description (Geertz, 2008). When each observation was completed, a semi-structured interview was conducted with participants to understand why they did what they did and why they used what they used. This is called "stimulated recall" in literature which can be employed in various ways. However, it can generally be done by replaying a video or audiotape of a session and taking notes on specific actions to obtain participants' relevant thoughts, decisions, and perspectives by asking questions after the observation (Moreland & Cowie, 2007). This method helped participants to remember and explain their actions.

3.2.3 Audio Diary

After the participants read the participant information form, they were also asked for providing audio diaries. All the SLTs already had an instant messaging app, called WhatsApp, on their smartphone. This app allows voice recording, so users can instantly send voice recordings to another user. The participants were asked to send voice recordings about what they do in their sessions and the reasons behind such actions. Initially, twelve participants were involved audio diary process, but seven of them were the ones who sent audio records consistently for three months. In qualitative research, diary methods offer the generation of important data as they *"are flexible, heterogeneous, have the potential to yield rich qualitative data and unlike methods which rely on retrospection, offer the potential to ensure that accounts are sequentially ordered and reduce the likelihood of feelings or events being forgotten"* (Williamson et al., 2015, p.2).

3.3 Data Analysis

As stated previously, multiple data collection methods were utilised, including interviews, observation, and audio diaries, and a vast data set has been generated. Approximately 13 hours of interview records, 13 pages of observation field notes, six hours following interviews (after observation), and an hour of audio recording were generated. Braun & Clarke (2006)'s steps were followed during the data analysis, but it should be noted that this was an iterative process, meaning that I regularly went back to each step to better present what the data reflected about the aim of this thesis. The data were analysed independently by the author of this study and another PhD candidate trained in using qualitative analysis methods. Then, codes, initial themes and main themes were formed through detailed discussions by using Nvivo software.

3.4 Ethics

The researcher followed the British Educational Research Association's (BERA) ethics and guidance documents. Children with DLD and their parents were considered a vulnerable research population. For this reason, extra precautions were taken into consideration by researchers. The necessary permissions have been obtained from governors of the institutions, the therapists, and the children's parents. Additionally, the

Turkish Ministry of Education (MoNE)'s permissions was obtained to conduct the study in Turkey.

4. Results

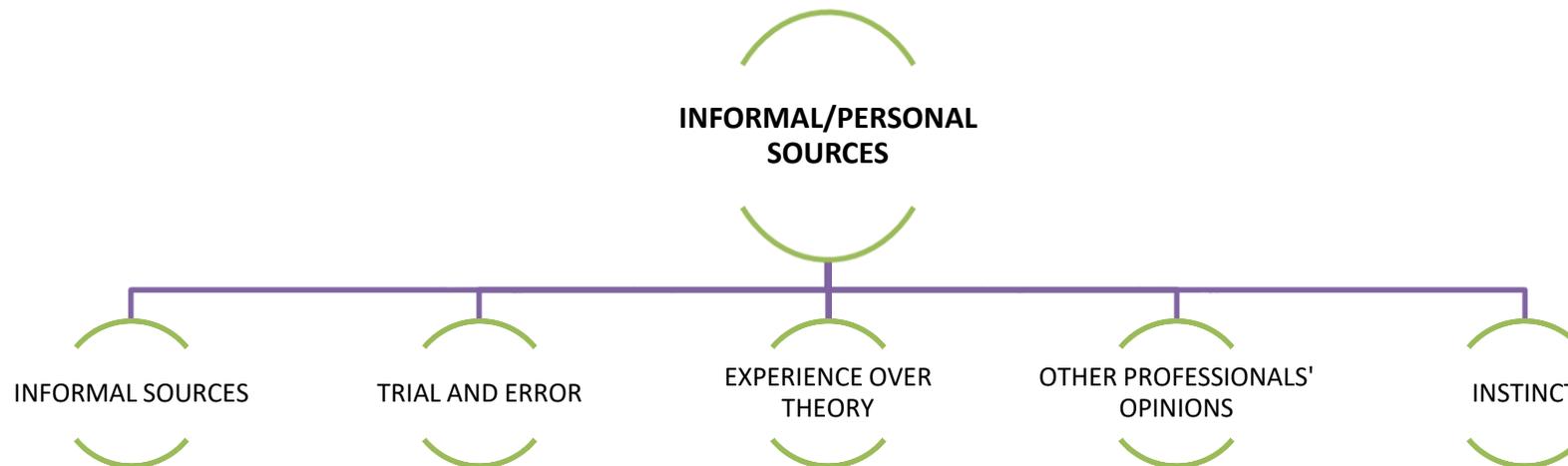
The SLTs in this study were found to use various sources to make an intervention decision. It was revealed that while, on some occasions, the SLTs give more importance to formal sources and use well-known standardised measurement tests, most of the time they tend to give more value to evaluating the children through informal sources such as SLTs' self-made information sheets, tests, informal observations or informal chats with other professionals. The presented data here is a part of a larger study (Durgungoz FC, 2019) which explored SLTs' decision-making process. One of the main themes of the study was found as formal/informal sources. As the use of informal sources found to be significant outcome, this paper will discuss the aspect of using informal sources in intervention reasoning.

In this study, data showed that informal/personal sources of information briefly consist of informal evaluations (self-made information sheets), trial and error (trying a method if it works, sticking to it), experience over theory (prior experiences matters), other professionals' opinions (using professionals' ideas and methods) and instinct (feeling, cannot explain why they choose a particular method or action). Figure 1 illustrates the themes.

4.1 Informal Sources: Lack of Trust in Formal Standardised Tests

Sources that participants use have an essential impact on the decision-making process. Although there are formal assessment tests to evaluate a child's level of the language issue, the SLTs seemed to like using formal tests as a supplementary tool to support their informal evaluations.

Figure 1: The main theme and sub-themes that emerged from the data



"I do not always use language evaluation scales, standardised tests to understand the necessities of a child... I can say that my observations are more important than what tests say..." (P6, Interview)

It was revealed that the SLTs instead prefer to make informal evaluations by observing children and talking with parents. It was also found that although there was a common agreement that formal tests yield specific and reliable results, conversely, a lack of trust in formal tests was also reported. The SLTs reported that formal assessments generally fail to determine the language problem for Turkish-speaking children, leading to applying counter-productive intervention methods. P12 was one of the participants who use formal and informal evaluations and gives more importance to informal evaluations. P12's statement *"informal evaluations are critical to know a child"* is widely accepted by most participants. As P12 pointed out, participants seemed to negatively base their intervention method decisions on only formal tests. More importantly, P12's definition of informal evaluations illustrates the SLTs' approach when evaluating a case. It was seen that the SLTs could not explain their judgement process in detail when it is based on *"informal evaluations"*. Thus, such informality could be interpreted as their experiences. P16 stated that:

"Formal tests could give different results depending on when and how you apply them. Sometimes children do not want to do anything at all; sometimes they just want to play, sometimes they are sleepless and do not do what they normally do at home. That is why formal tests barely affect my decisions... I make little use of formal tests, generally to see the very general picture." (P16, Interview)

An essential reason for informal evaluations is the lack of informal trust assessments, as expressed by P1. He stated that:

"The data we get from formal tests are not trustworthy. It generalises the outcomes, but I know that even if the results of two different children are the same, there could be major differences. More importantly, I don't think the tests are very well standardised for the Turkish language; they are copied from the ones that were developed in English-speaking countries." (P1, Interview)

There are several formal tests that initially developed in other countries standardised to the Turkish language. This seemed to lead some participants to become suspicious and use their judgments to decide the nature of intervention methods. Thus, relying on only standardised tests were not trustworthy by most of the SLTs in this study. For this reason, they use informal evaluations. Since each child needs to be examined deeply to administer the best intervention method for him/her, the informal way of collecting knowledge also seemed valuable. The participants also emphasised that relying on formal tests led them to apply similar intervention methods to children;

however, informal evaluations require applying dynamic and varying intervention methods with children who have similar language issues.

4.2 Trial and Error: "Because It Works"

There was a common understanding among participant SLTs that theories do not always work well in practice. They stated that they prefer to do therapy either based on their experiences or whatever works for an individual child. Although the SLTs want to find new ways of working with children with DLD, they tend to use the methods that they believe are the most effective ones. This can be called trial and error, as P8 stated:

"I design what to do in each therapy session, then modify and reshape it according to the outcome. So, if the child is okay with it and s/he makes some progress, then I stick to the method." (P8, Interview).

P8's extract demonstrates why the SLT relied upon a specific method for his future therapies. Observation data below that gathered from P3's session also provided a similar example. P3 followed the interests of the child during the therapy. In the following interview, when I asked her how she decided her practices, P3 reported that the therapists tended to prioritise the intervention methods that they found beneficial. Instead of making structured, rule-based evaluations about what children need and the family background, the therapists seemed to first start with their confident methods. This seemed to lead to direct and structured therapy sessions, giving little attention to the formal sources. This indicates that practice-based intervention methods become superior to the theories that the therapists claim to follow.

4.3 Experience over Theory

It is found that participants feel more confident when they rely on their past experiences. This seemed to lead the participants to use similar intervention methods that were found beneficial before and feel confident to use. So, the participants seemed to be more dependent on their experiences rather than following structure, framework or scientific sources to apply a certain intervention method:

"The child-centred approach seems nice in theory, but I saw that it does not always work..." (P14, Follow-up Interview)

"I choose intervention methods depending on my previous experiences..." (P16, Interview)

As can be seen from the extract, participants stated that practice is more valuable than theoretical knowledge in real life. It seems like practical knowledge gives a therapist an idea about what to do when faced with a child who has similar difficulties to the ones with whom they have engaged before. Furthermore, participants could not have

explained well when asked how they use theories in their practices. They seemed to be unaware of how to use theory in practice. P12 explained it as:

"We learnt the theories, but I can assure you that almost all theories are too abstract for practice." (P12, Interview)

Other participants also underlined the difficulty of using theoretical knowledge in practice:

"I do not think that theories can directly help our practices. Theory's good for knowing, but not for practice." (P3, Follow-up Interview)

All the participants hesitated when they were asked about the impact of theories on their decision-making process. They could not explain clearly which theory they use or how they use the theories for their practices. However, this does not mean that the intervention methods they use are entirely dissociated from theory. They stated that:

"learning theories is so important for practice, but I am [SLT] not sure how to use them in my [their] therapies" (P11, Interview).

Participants' decisions are mainly shaped by their previous practices rather than following theories and applying them to practices. It was seen that there were a few instances when a child's emotional needs or interests were ignored for the sake of an intervention method that was previously found beneficial.

4.4 Other Professionals' Opinion

Rather than sharing knowledge with their colleagues, it was seen that Turkish SLTs benefit from the opinion of other professionals from different professions (e.g. special needs, child development specialists, physiotherapists).

"The institution I work in is a rehabilitation centre. People are coming from different backgrounds. You then have conversations about your cases and get their opinion. There are physiotherapists, special needs educators, child development specialists etc. I think this feeds me a lot." (P8, Interview)

P8 seemed to benefit from the conversations that he had with other professionals. P16 was also seemed to be in a more relationship with other professionals. She stated that:

"I think other professions are very important. The decisions I make about what to apply as an intervention method are hugely affected. There are two psychiatrists, one psychologist, and me as a language therapist in this institution. I generally get psychiatric consultations about my cases to see if there are additional issues that I don't see. I also consult with the

psychologist; I mean we share information. If I see any need I also consult with the neurologist. When there is such a collaboration, you see different aspects, and this affects your practices.” (P16)

Although participants were sharing opinions with other professionals, they were not sharing opinions with their colleagues, which seemed to be a common problem. The reason for not revealing what they are doing is the competition amongst them. As most of language therapists work in private clinics, they want to be unique in what they are doing. P3 stated that;

“When I first started this job, I was keeping a blog about what I was doing, but when I realised there is such a competition and no one shares anything, I just stopped blogging. It seems to be ridiculous—but it is what it is...” (P3, Interview)

P1 is another who mentioned why Turkish SLTs do not want to share their knowledge with another colleague:

“I have to say that not all of us want to share. I guess it is because of money, they or we don't do anything novel or magical but when it comes to marketing and money; they use it... like they say 'no one uses these intervention techniques...” (P1, Interview)

The extracts above indicate that although all Turkish SLTs mentioned the importance of sharing knowledge, they were not open to sharing their practices to be unique in their area and marketing.

4.5 Instinct: Feelings Matter

The majority of the participants stated that choosing an intervention method became automatic after a particular time. They rely on their feelings when approaching a child. This might be the reason why they could not have explained the theoretical aspects of their reasoning.

“When you see and observe a child, you can guess what to do to overcome his/her difficulties in a short time... With your experience, you can decide your practice in a very short time.” (P11, Interview)

Data suggest that participants generally use a method they felt would be best for an individual child. They use a method alone or mixing regarding the child's needs:

“I feel that this child will also like to play with it; that is why I chose water play in this session.” (P2, Audio Diary)

“I will prepare another activity that includes car toys for the next session. I am sure it will take his attention, and he will like it.” (P16, Audio Diary)

The SLTs often used terms like "I feel", "I am sure... he will like it". They feel it and then decide what to do by using their knowledge. This is about automaticity that can be used by synthesising all information and practical knowledge that they know, as P9 states:

"No single method, theory or technique can overcome language problems, or none of them is enough to explain our practices. A mixture of multiple methods and interventions can work, which comes from individual therapists' knowledge and instinct." (P9, Interview)

According to P9, practice is not based on one single pure intervention method or technique. Instead, most of the time, where the intervention comes from is "not clear" (P9, Interview). Even some participants are not aware of why they decide to do an action or method:

"I can guess what can work for this child and what could not. This ability comes you after you see lots of similar cases." (P7, Interview)

"After a little conversation with the child and his/her family, I can see where the problem is, and how to intervene... without collecting lots of information and without conducting any standardised tests. I think the more you see the similar cases beforehand makes you more automatic." (P6, Interview)

Extracts indicate how participants' decisions come from a mixture of methods, knowledge and techniques that lead SLTs to create the most effective approach based on their instinct.

5. Discussion and Conclusion

This study focused on sources that are used by SLTs' assessment and therapy decisions. It was seen that the therapists' decision-making process is supported by various forms of sources that can be contrasted as formal and informal. It was revealed that participants use those sources in harmony, which was presented in another author's paper (Durgungoz & Emerson, 2021). While Durgungoz and Emerson (2021) discuss the shift between analytical thinking and intuition, this study details the behind factors of whether and why the SLTs rely on informal sources. Although the SLTs use formal sources like well-known standardised measurement tests and administer evidence-based practices, data showed that they give more value to evaluating the children through informal sources.

It is stated in the literature that specific guidelines have been created to improve therapy services for SLTs (ASHA, 2005). These guidelines suggest using specific steps for SLTs to employ current research evidence in the literature. Such guidelines propose two main steps to make an intervention decision. The first step is conducting formal standardised tests and informal assessments that allow SLTs to understand the

individual child's speech, language, communication, and oral functions (*ibid*). As Topbaş (2014) stated, there are various tests developed in Turkey within the last years to assess Turkish children's language problems, and many types of research have been conducted at DILKOM, Anadolu University. Such formal/objective sources seemed to help the therapists be confident about their decisions, as they believe their practices are supported by evidence-based research. It was found that such formal sources help the therapists to follow an objective guideline, protocol and make intervention decisions accordingly. On the other hand, informal sources are generally perceived to be more practical to apply in therapies by participants of this study. Such informal processes mainly include the therapists' opinions about a specific case. They seemed to compare previous cases and the present ones to support the diagnosis process.

The other most significant factor that led Turkish SLTs to use informal sources identified in this study was a lack of trust in formal tests. Their reasoning was that many of the assessment tools and sources in use today originally developed in countries such as the USA or the UK. Carter et al. (2005) confirms this issue and states that "*the lack of appropriate assessment tools can be equally damaging, confounding the results and producing biased, inaccurate conclusions*" (p.386). The authors underlined the importance of using culturally appropriate and accurate assessment and intervention sources. For example, when Denver Developmental Screening Test was administered to Vietnamese children, it was seen that children were consistently confused in selecting the blue and green coloured blocks (Miller, 1984). The reason was that the names of these colours come from the same colour group in the Vietnamese language, and it was not possible to distinguish them without a clear explanation (*ibid*). Another issue of the Denver Developmental Screening test was seen for Costa Rican children in relation to the instruction: 'draw a man' (Howard & de Salazar, 1984). The most proper instruction is found as 'draw a doll' for these children. Thus, these examples and this study confirm the SLTs' hesitation to use standardised tests. This can be overcome by developing culturally appropriate and contextually relevant tools.

It has been discussed that there is a dramatic increase in using scientific, evidence-based practice as a guide to intervention decision-making processes among healthcare professionals (Zipoli & Kennedy, 2005). The concept of EBP contains three main factors: the combination of using best research evidence into the clinical practice, professionals' expertise, clients' preferences and values (ASHA, 2005). EBPs have an important place in SLT. The American Speech-Language-Hearing Association (ASHA) has published an official document about principles of clinical decision-making for audiologists and speech and language pathologists to offer high-quality care (ASHA, 2005). The use of EBP increases objectivity, decreases variety in practices and administering the best therapy by using well-reasoned decisions and reducing the gap between research and practice (Schlosser & Raghavendra, 2003). The ASHA Evidence Maps (ASHA, n.d.) were also recently created to extend and integrate more factors in EBP.

However, although EBP has a significant value, some studies reported that research evidence does not have as much influence on SLTs' decision-making processes as expected (Brener et al., 2003; Zipoli & Kennedy, 2005). Studies repeatedly have shown

that SLTs' therapy decisions do not align with evidence-based decision-making principles (Kahmi, 2006; McCurtin & Amanda, 2015; Thome et al., 2020; Waller & Turner, 2016). It is stated that the application of components of EBP was challenging (Thome et al., 2020). Especially, using the best research evidence was not always possible because of the lack of time and workload of cases (ibid). Furthermore, this study shows that SLTs heavily use their pragmatic stance, instinct and practical experiences as sources categorised as reflective judgement. It was reported that SLTs often use any guidance or best research evidence (Law et al., 2003); instead, they use "*only one example of science in practice*" (Arlene & Bernie, 2015, p.1143).

In this current research, it was also found that although the participants interviewed desire to use formal sources that were theoretical knowledge and evidence-based practices, the observed participants tend to be heavily influenced by the practicability of the intervention method rather than using formal sources. Waller and Turner (2016) also stated that although evidence-based tools and approaches are necessary for clinicians, they are less effective in practice. The reasons are "*our personalities, knowledge, emotions, beliefs, behaviours and social milieus*" (Waller & Turner, 2016, p.129). Waller and Turner (2016, p.130) call it a "*therapist drift*", in which they claim that even though therapists receive formal training or are under supervision, they tend to shift from evidence-based approaches to more practical ones.

Thus, the use of informal sources should not be underestimated nor excluded from EBP. Informal sources do not mean that these sources are not scientific, or they are wrong. For instance, an SLT could be influenced by his/her past practices and experiences, including the principles of action research, so that reflecting their practices in a scientific manner would also increase the scientific nature of the judgment process. While it has been increasingly recommended to use more evidence-based practice in Speech and Language Therapy (ASHA, 2019), informal sources and reasoning still have a significant role in therapy. It is clear from this study that Turkish SLTs gave more importance to practical experiences, their instincts, and their interpersonal factors rather than formal sources.

6. Limitations

Even though the present study's findings offer valuable insights related to SLTs' use of sources, the study had some limitations. The most challenging part of the study was the data collection and analysis part. A vast amount of data was collected with the aid of four different methods from different regions in Turkey. It necessitated a considerable amount of time to collect, transcribe and analyse the data. Collecting more observation data might have been given more insights about the use of sources so that future research might address the details of the use of informal tools used by SLTs and their effectiveness.

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Conflict of Interest Statement

The author declares no conflicts of interests.

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