Speech-language pathology intervention on stroke-induced right hemisphere brain damage

A comparison between Sweden and France

Agnes Löfgren

Examensarbete i logopedi – 30 hp
HT 2015
Nr 127

Handledare:
Monica Blom Johansson
TABLE OF CONTENTS

1. INTRODUCTION ................................................................................................................. 3

2. BACKGROUND ................................................................................................................... 4
   2.1. THE RIGHT HEMISPHERE: LANGUAGE AND COMMUNICATION ........................................ 4
       2.1.1. History .................................................................................................................. 4
       2.1.2. Terminology and differential diagnostics ............................................................... 4
       2.1.3. Language and communication deficits following RHD stroke ................................ 5
           2.1.3.1 Prosody ......................................................................................................... 5
           2.1.3.2 Semantics .................................................................................................... 6
           2.1.3.3 Discourse .................................................................................................... 6
           2.1.3.4 Pragmatics ................................................................................................ 6
       2.1.4. Other characteristics ............................................................................................. 6
           2.1.4.1 Cognition and behavior .................................................................................. 6
           2.1.4.2 Perception .................................................................................................... 7
           2.1.4.3 Unilateral neglect .......................................................................................... 7
           2.1.4.4 Anosognosia .............................................................................................. 7
   2.2. SLP CARETAKING OF RHD PATIENTS TODAY ................................................................ 8
       2.2.1. Referral ............................................................................................................... 8
       2.2.2. Assessment ......................................................................................................... 8
       2.2.3. Treatment ........................................................................................................... 9
   2.3. CONCLUSION AND MOTIVES FOR THE PRESENT STUDY ............................................. 11

3. AIM ....................................................................................................................................... 13

4. METHOD ............................................................................................................................. 14
   4.1. RESPONDENTS .............................................................................................................. 14
   4.2. MATERIAL .................................................................................................................... 14
   4.3. PROCEDURE .................................................................................................................. 15
       4.3.1. The Swedish survey ............................................................................................ 15
       4.3.2. The French survey .............................................................................................. 15
   4.4. DATA ANALYSIS ......................................................................................................... 16
   4.5. ETHICAL CONSIDERATIONS ...................................................................................... 17

5. RESULTS ............................................................................................................................. 19
   5.1. RESPONSES ................................................................................................................... 19
   5.2. RESPONDENTS ............................................................................................................ 19
   5.3. GENERAL ...................................................................................................................... 20
       5.3.1. What professional competence is available for the work with the patient group? .......... 20
       5.3.2. How frequently do SLPs meet the patient group? ............................................... 21
       5.3.3. Where do SLPs meet the patient group? ................................................................ 22
   5.4. ASSESSMENT ............................................................................................................... 22
       5.4.1. During what circumstances are patients with RHD assessed for language and
              communication deficits? ......................................................................................... 22
       5.4.2. How is the patient group assessed? ....................................................................... 23
           5.4.2.1 Function .......................................................................................................... 23
           5.4.2.2 Activity and participation ............................................................................... 24
           5.4.2.3 Anamnesis from the informal network of the patient ........................................ 25
       5.4.3. Which diagnoses are established after assessment? ............................................... 26
   5.5. INTERVENTION ............................................................................................................. 27
       5.5.1. How often do SLPs intervene with the patient group? .......................................... 27
       5.5.2. What aspects of the communication deficits are targeted in intervention? .......... 29
           5.5.2.1 Prioritizations ................................................................................................. 29
           5.5.2.2 Prioritizations ............................................................................................... 30
SAMMANFATTNING
Forskning har visat att inte bara skador i vänster hemisfär ger upphov till språk- och kommunikationssvårigheter, men att dessa även observeras efter skador i höger hemisfär. Kommunikationsstörningar efter skador i höger hemisfär är ett logopediskt område i behov av utveckling. Studiens syfte var att undersöka hur svenska respektive franska logopeder arbetar med patienter med kommunikationssvårigheter efter stroke i höger hemisfär, för att identifiera positiva och negativa aspekter med omhändertagandet i de två länderna. En webbenkät med frågor rörande villkor för omhändertagandet av patientgruppen, utredning, intervention samt subjektiva upplevelser av omhändertagandet av patientgruppen skickades till yrkesverksamma logopeder i Sverige och Frankrike som arbetar med, eller har arbetat med patientgruppen. Skillnader påträffades mellan omhändertagandet i Frankrike och Sverige: franska logopeder träffade patientgruppen oftare och hade mer material för bedömning och behandling. Franska logopeder uttryckte fler positiva aspekter av omhändertagandet än svenska logopeder, vilket kan ha att göra med större yrkeskompetens för omhändertagandet av patientgruppen i Frankrike, till följd av forskning samt influenser från det välutvecklade omhändertagandet av patientgruppen i franska Québec, Kanada.

Nyckelord: högerhemisfärsskada, kognitiva kommunikationsstörningar, logopedisk intervention, enkätstudie.

ABSTRACT
Research shows that damage to the left hemisphere of the brain is not the only origin of language and communication deficits, these can also occur after damage to the right hemisphere of the brain. SLP caretaking of communication deficits due to damage of the right hemisphere needs to be developed. The aim of the present study was to examine the French and Swedish SLP caretaking of these communication deficits, in order to identify positive and negative aspects of the caretaking in the two countries. A survey with questions regarding the general conditions for the caretaking of the patient group, assessment, intervention and subjective experiences of the work with the patient group was sent out to Swedish and French SLPs who work with, or have worked with, the patient group. Differences between the caretaking in Sweden and France were found: French SLPs met the patient group more often, and had access to more tools for assessment and treatment. French SLPs expressed more positive aspects about the work with the patient group than do Swedish SLPs, which may be because there is more knowledge of the caretaking of the patient group in France, due to research and influences from the well-developed caretaking of the patient group in French Québec in Canada.

Keywords: Right hemisphere brain damage, Cognitive communication disorders, SLP intervention, Survey.
**Abbreviations**

*English*
ASHA – American Speech-Language Hearing Association  
CASPLO – College of Audiologists and Speech-Language Pathologists of Ontario  
LHD – Left Hemisphere Brain Damage  
RH – Right Hemisphere  
RHD – Right Hemisphere Brain Damage  
SLP – Speech-Language Pathologist

*French*
CAA – Communication Améliorée et Alternative  
PRL – Pédagogie Relationelle du Langage

*Swedish*
SBU – Statens Beredning för medicinsk och social Utvärdering
1. Introduction

Damage to the right hemisphere (RHD) of the brain, and not only left hemisphere damage (LHD), may induce deficits in language and communication (Joanette, 2004a). Language and communication deficits are definitely a task for the speech-language pathologist (SLP). However, it is not clear what would be an optimal SLP intervention for the language and communication deficits of patients having suffered from RHD (Moix & Côté, 2004). In fact, neither the SLP assessment nor intervention are well elaborated for the patient group (Moix & Côté, 2004). Nevertheless, the deficits in language and communication, often seen in patients who have suffered from RHD, can result in handicaps, notably psychosocial and functional. For that reason, both the assessment and the intervention for this patient group need to be developed (Lehman-Blake & Tompkins, no date, Moix & Côté, 2004).

In Sweden there is no standardized and validated test designed for the assessment of language and communication deficits after RHD. Instead, the evaluation proceeds by the selection of relevant parts of already existing SLP tests, such as Bedömning av subtila språksvårigheter “BESS” (Laakso, et al., 2000), or the Swedish version of The Boston Naming Test “BNT” (original version: Kaplan et al., 1983, Swedish version: Tallberg, 2005). Typically, an informal evaluation of the individual’s linguistic and pragmatic ability is carried out as well (Saldert, 2008, p. 211). In France, on the contrary, a test battery for assessing language and communication deficits after RHD has been available since 2004. The Protocole Montréal d’Évaluation de la Communication “MEC”1 was developed in Montreal, Canada, to meet the demands of formal assessment of a group of patients for which there were no test batteries (Joanette et al., 2004).

As for the SLP treatment of patients with RHD, evidence-based procedures are lacking (Moix & Côté, 2004). According to the American Speech-Language Hearing association (ASHA), however, there is some evidence for the effect of treatment of cognition and pragmatics (Lehman-Blake & Tompkins, no date).

The present study aims to examine the speech pathology assessment and treatment of patients with RHD due to stroke, in France and in Sweden. As far as we know, this has not been examined in neither France nor Sweden. However, Canadian researchers (Côté et al., 2003) have examined how French-Canadian speech pathologists intervene with right hemisphere injured patients, and a similar study, on patients with aphasia, has been carried out in Sweden (Blom Johansson et al., 2011).

---

1 English translation: “Montreal protocol for the evaluation of communication.”
2. Background

2.1. The right hemisphere: language and communication

2.1.1. History
During the 19th century, the discovery was made that the human communication typically depended on the functions of the left hemisphere of the brain, at least for the right handed (Joanette, 2004a). However, Jon Eisenson (1959, 1962, referred to in Joanette, 2004a), proved that also right handed patients with damage to the right hemisphere could have verbal deficits. Thus, while linguistic symptoms, such as word naming difficulties and deficits in grammar, have been described in patients with aphasia ever since the 19th century, pragmatic symptoms are only acknowledged since the middle of the 20th century (Joanette, 2004a). As of today, there is sufficient evidence that some aspects of the verbal ability and communication are located in the right hemisphere (Joanette, 2004a, Vitali & Tettamanti, 2004, p. 98). However, uncertainty remains with regards to both the width, and the exact nature of these right-hemispheric contributions.

2.1.2. Terminology and differential diagnostics
Researchers have asked themselves what the origin of the language and communication deficits sometimes observed after RHD is, as well as how the deficits should be classified. Are they distinguishable from aphasic symptoms? Can they be separated from cognition as such, or should they be seen as language and communication disorders directly stemming from cognitive decline? Traditionally, RHD language and communication symptoms have been distinguished conceptually LHD language and communication symptoms - aphasia. However, Joanette (2004a) suggests that the communication deficits of RHD patients should in fact be considered a form of aphasia. The term aphasia was invented at a time when the conception of language was different than the conception of language of our time (Joanette, 2004a); the latter has now come to include concepts such as discourse and pragmatics. Therefore, the conception of aphasia, originally meaning language dysfunction, should be extended to include deficits in communication (including pragmatics and discourse) as well.

In Swedish literature the term ”pragmatisk språkstörning”\(^2\), is used to cover RHD language and communication deficits (Saldert, 2008). However, Saldert (2008), acknowledges the fact that accepting this definition requires the inclusion of the concept of pragmatics in the concept of language; an inclusion on which not all researchers agree. Consequentially, some choose to etiquette the deficits in another manner, for example cognitive-communication disorders (Saldert, 2008, p. 207). In the French language, there is no consensus on nomenclature for naming the RHD deficits in language and communication (Côté et al., 2004, p. 114).

Although the present study focuses on language and communication deficits after RHD due to stroke, these deficits are not entirely exclusive for this particular patient group; they can also be observed after traumatic brain injury (TBI), or as a consequence of dementia, even though no direct damage to the right hemisphere (RH) is found (Joanette et al., 2004).

---

\(^2\) English translation: “Pragmatic language impairment”.
2.1.3. Language and communication deficits following RHD stroke

Every other RHD patient could present one or several signs of language and/or communication deficits, which is the same incidence as for aphasia due to LHD (Joanette et al., 1991). Although the language and communication deficits following RHD may constitute a significant obstacle to the patient’s daily life, they are generally less noticeable, and more difficult to detect than aphasic symptoms following LHD (Joanette, 2004b). In fact, during the rehabilitation phase, the communication deficits may not be perceived as significant, and they often become more obvious when the patients return to their homes (Moix & Côté, 2004, p. 135). Furthermore, there is variability in the manifestation of the language and communication symptoms in RHD patients (Joanette, 2004b, Monetta & Champagne, 2004, p. 31). It is noteworthy that the patient group have communication strengths as well: their syntactic, morphological and phonological abilities are often relatively intact (Tompkins, 2012, p. 63).

The underlying causes of the language and communication deficits sometimes seen in RHD patients are unknown (Monetta & Champagne, 2004, p. 29), and up to date, there is no accepted theory of them (Lehman-Blake, 2007, p. 338). Possible explanations and theories are: specific problems with inferential capacities, general loss of cognitive function, problems with theory of mind (meaning the ability to understand the difference between one’s own and other people’s thinking, Berk, 2006, p. 296), impairments in executive functions (an umbrella term for various complex cognitive processes such as task-switching and planning, Elliott, 2003, p. 49), or most likely a combination of all or several of the above (Champagne et al., 2005). Furthermore, it is not clear how specific the deficits are: are they pure language deficits, or a part of a bigger cognitive symptom? Monetta and Champagne (2004, p. 31) discuss the possibility that because of the fact that the difficulties increase with increased complexity of the communicational situation (as supported by Gagnon et al. 1989, 1994 and Tompkins 1990, all in: Monetta & Champagne 2004, p. 31), the deficits seen in RHD patients may be caused by a general decline in cognitive resources or executive functions. Furthermore, even for patients with aphasia due to LHD, cognitive decline interplay with language impairment, particularly working memory and phonological deficits (Joanette et al., 2004b). Joanette (2004b) sums up that the origin of the language and communication deficits in RHD patients is most likely both language specific injury, and general decline in cognitive functions, but that future research is needed before this can be claimed with certitude.

As for the concrete deficits, evidence from brain imaging studies, visual field studies, as well studies of, and clinical experience from brain injured individuals, have shown that RHD often induces deficits in the subtleties of language. Mainly, RHD affects four aspects of language: prosody, semantics, discourse and pragmatics (Joanette, 2004b), all further specified below.

2.1.3.1 Prosody

Concerning prosody, RHD mostly induce problems with emotional prosody (the expression of emotion by means of prosody) and modal linguistic prosody (the expression of linguistic modality, for example question or affirmation, by means of prosody). This differs from prosodic deficits seen in LHD patients; mainly problems with lexical accentuation (Joanette, 2004b).
2.1.3.2 Semantics
The semantic deficits mostly concern *comprehension of rare and abstract words and metaphors*. Similarly, *decline in verbal fluency* has been observed (Joanette, 2004b).

2.1.3.3 Discourse
Regarding discourse ability: deficits in *narrative, procedural or conversational discourse* have all been observed following RHD. The most prominent deficits have been observed in narrative discourse, although this may be because there are guidelines on how to research narrative discourse, as opposed to the other types of discourses (Joanette, 2004). RHD patients have a tendency to disrespect *discourse coherence*, include less *information* in their stories, and have a hard time drawing *inferences* in story comprehension (Joanette, 2004b). The discourse deficits seen in RHD patients are not entirely specific for the patient group and have also been observed in patients with other neurological conditions, or with acquired brain injury to other regions than the RH (Joanette 2004b).

2.1.3.4 Pragmatics
Pragmatic deficits have become somewhat emblematic of RHD individuals, and go hand in hand with the conception that they are poor communicators despite correct usage of basic linguistic tools such as syntax and phonology (Joanette, 2004b). Pragmatic deficits include difficulties understanding and appreciating *humour* (Gardner et al. 1975). They also include difficulties with *interpretation of indirect speech acts*, for example understanding that a speaker wants to communicate “Can you please close the window?” when pronouncing “It is cold in here”. However, research has shown that this only true for indirect speech acts that aren’t well established in the language that the individual is speaking (Stemmer et al., 1994). Thus, the above-mentioned indirect speech act would not be hard to interpret due to its conventionality, whereas a less well established speech act would. Furthermore, research indicate that the deficits were only observed when the patients had to reason metacognitively (meaning have knowledge about one’s own cognitive processes, Colman, 2015) about the speech acts, but not when they had to understand or produce them in ecological (real-life) situations (Vanhaile et al., 2000). Finally, another pragmatic issue is problems with *shared knowledge* with the interlocutor, meaning the understanding of what knowledge the speaker and listener have in common and thus what does and what does not need to be explicitly stated (Chantraine et al., 1998).

2.1.4 Other characteristics
In order to understand the language and communication deficits of patients with RHD, other symptoms associated with RHD needs to be explained as well. To cite Tompkins (2012, p. 61): “Non-language cognitive performance has been hypothesized, and demonstrated to underlie, co-vary with, or otherwise modulate communication in adults with RHD”.

2.1.4.1 Cognition and behavior
The symptoms of cognitive decline in RHD patients vary, but certain characteristic features can be outlined. Impairments in *attention* are often observed: the patient can be easily distracted, and is likely to orient towards external interrupting stimuli during conversation or testing. The patient may seem impulsive in conversation, and interrupt or talk or act seemingly without thinking. Lengthy instructions and conversation may
become a problem (Tompkins, 2012). Furthermore, unilateral neglect (outlined below) is considered an attentional deficit.

*Memory* is often more or less impaired after RHD. Memory is often divided into two separate units: short-term and long-term memory. Both units can be damaged after RHD. Problems in short-term memory may result in difficulty recalling information recently heard or read, or in difficulty following lengthy or multiple step instructions (Tompkins, 2012). For example, long-term memory impairment may result in difficulty remembering to bring belongings to the SLP, or in difficulties with other aspects of daily life that needs remembering over time (Tompkins, 2012).

Deficits in *executive functions* following RHD give a wide range of symptoms, such as difficulties planning for activities of daily life (ADL), keeping track of belongings, and managing time.

Behavioural problems, such as problems sustaining *appropriate behaviour*, and adjusting the behaviour appropriately to the situation, may appear after RHD (Tompkins, 2012, p. 62). The patient group are referred to as *too literal* and *socially inappropriate* (Tompkins (2012, p. 63), and *impatience*, *frustration* and *irritability* may be observed (Moix & Côté, 2004, p. 129) Furthermore, *apathy* may follow RHD stroke (Godefroy et al., 2007).

2.1.4.2 Perception
Impairments in perceiving the environment can be seen following RHD. The patients may have problems with *visual processing*, for example difficulties interpreting emotional facial expression (Tompkins, 2012, p. 63).

2.1.4.3 Unilateral neglect
Unilateral neglect is a constellation of disorders of spatial exploration and selective attention (Tompkins, 2012, p. 63). The patient who suffers from unilateral neglect is biased towards one of his sides (the right side if the right hemisphere of the brain is injured), and tends to miss stimuli on the other side of the body. The syndrome may have different observable symptoms, such as bumping into objects on the left side, forgetting the left side when making copies of drawings, gaze towards the right or leave food on the left side of the plate (Tompkins, 2012, p. 63). The influence of the unilateral neglect on reading (omission of parts of words, words or texts to the left) (Tompkins, 2012) as well as the tendency to ignore auditory stimuli on the left side may have an impact for SLP intervention.

2.1.4.4 Anosognosia
The term anosognosia refers to impaired knowledge of one’s own deficits, and how these deficits affect daily life functioning (Tompkins, 2012, s. 63). This “denial of illness” (Lehman-Blake, 2007, p. 338) occurred in about 38% of individuals with RHD admitted to a rehabilitation unit (Blake et al., 2002). The symptoms are denial of obvious deficits, and lack of effort to correct for them. In addition, patients with anosognosia often seem to lack awareness of the social consequences of their behaviour (Tompkins, 2012). Anosognosia may severely hinder rehabilitation, since the patient may not be motivated to take part in it (Godefroy et al., 2007).


2.2. **SLP caretaking of RHD patients today**

To the knowledge of the author of the present study, there has not been any scientific investigation of the SLP caretaking of RHD patients in neither France nor Sweden. However, in French Québec in Canada, Côté et al., (2003) analyzed the work with the patient group among 11 Canadian SLPs, by means of a semi-structured interview (Moix & Côté, 2004, p. 128). Furthermore, there is English literature on the subject (for example Blake et al, 2002, Lehman-Blake, 2007, Tompkins, 2012). This section presents evidence from the above mentioned sources, as well as what can be found about the caretaking of the language and communication deficits of RHD patients today, in France and Sweden.

2.2.1. **Referral**

The language and communication deficits of individuals with RHD are not automatically assessed by SLPs (Moix & Côté, 2004, p. 128). According to the already mentioned French-Canadian study (Côté et al., 2003), RHD patients are more commonly referred to an SLP due to dysarthria, dysphagia or facial palsy. Similarly, in the US, Blake et al. (2002) found that only 45% of RHD patients taken care of in a rehabilitation centre were referred for SLP assessment/treatment, although 94% of them were diagnosed with at least one cognitive or communication deficit.

One reason for SLP under-referral may be lack of knowledge of the communication deficits among members of the medical and para-medical staff. Information and education to the latter, may give rise to better routines for referring these patients to an SLP (Côté et al., 2004, p. 113). Furthermore, anosognosia may constitute an obstacle in referring individuals with RHD to an SLP. Since the patient with anosognosia is not aware of the communicative symptoms, it is rarely the complaints of the patient that leads to referral (Côté et al., 2004, p. 113).

Under-referral may reduce the quality of rehabilitation of the patient. Primarily, the low number of RHD patients seen may result in lack of efficient routines for, or expertise knowledge of, the SLP caretaking of the patient group (Lehman-Blake, 2007). Furthermore, the risk of not identifying the communication deficits should be taken seriously, since the latter may affect the patient’s daily life in a serious way (Joanette, 2004b). In Canada, according to guidelines from the College of Audiologists and Speech-Language Pathologists of Ontario (CASPLO), all individuals with acquired brain injury should be screened for cognitive-communication disorders, ideally by an SLP (CASPLO, 2002, p. 9).

2.2.2. **Assessment**

RHD language and communication deficits cannot simply be assessed using classical aphasia test batteries designed to target deficits after LHD, since the first are fundamentally different from the latter (Côté et al., 2004, p. 113). In Sweden, there are no specific tests targeting communication deficits following RHD, and the SLP is obliged to invent assessment material, choosing from an existing battery of linguistic tests. A test that mentions RHD in its introduction is *Bedömning av Subtila Språkstörningar- BeSS*³ (Brunnegård & Laakso, 1998), or the elaborated version of the

---

³ English translation: “Assessment of subtle language impairments”
The lack of sufficient assessment tools for the patient group was acknowledged by a group of researchers in French Québec who created *Le Protocole Montreal de l’Évaluation de la Communication* (MEC) in 2004. Although developed in French speaking Québec in Canada, the test is usable on the European French speaking population as well thanks to collaborative work with European SLPs (Joanette et al., 2004). MEC targets the five following aspects: prosody (linguistic and emotional), semantics (lexical evocation, semantical judgement, interpretation of metaphors), discourse (conversation and narration), pragmatics (conversation, interpretation of indirect speech acts and interpretation of metaphors) as well as non-linguistic cognitive impairments (mainly anosognosia, by means of a questionnaire). It consists of 14 tasks, and takes about 1-2 hours to complete (Joanette et al., 2004). The use of MEC is widespread in France today, although some criticism has been made regarding the construction of the test. Brouillet & Lolmède (2011, p. 36) mentioned that what is tested in MEC is often metalinguistic ability (ability to analyze language itself, with a higher-level language, Crystal, 2009) and not actual communicative ability. Furthermore, some of the test items hardly resemble ecological situations, and thus become a test of basic language comprehension instead of understanding of communicative intent. Other criticism towards MEC includes the fact that it does not target all on the components of communication possibly affected after RHD; there is for example no evaluation of humor and sarcasm (Côté et al., 2007, p. 742-743). Despite this criticism, MEC can be a very useful tool when identifying gross communicative deficits of patients with RHD, and the specificity of the test is one of its main assets.

Côté et al., (2004, p. 114) concluded that assessment of activity and participation should take place, in addition to the evaluation of function. Furthermore, to get a more accurate view of the extent and impact of the deficits, it is crucial that the SLP gather information from someone close to the patient (Côté et al., 2004, p. 115). It is also recommended to observe the patient in an ecological group situation, where deficits that may not be discovered in more structural contexts may appear (Côté et al., 2004, p. 115).

### 2.2.3. Treatment

Evidence for the effect of training of function in patients with RHD due to stroke is scarce. Côté et al. (2004, p. 128) concludes the following: “It is not until recently that

---

4 English translation: “Test battery for assessment of subtle language impairments”.
5 The abbreviation deviates from the three letters on the basis of which participants are asked to evoke words.
6 English translation: “Sentence analysis and morphological completion”
7 English translation: “The Montreal protocol for evaluation of communication”.

---

9
intervention strategies have been elaborated for communication deficits in RHD individuals, which means that SLP intervention for the patient group is a real challenge, both theoretically and clinically.8 Regarding pragmatic deficits, there was only one treatment study as of 2007 (Klonoff et al., 1990) On the other hand, there is some evidence for the effect of treatment of cognitive functions such as attention (including neglect), memory and executive functions, which is important since these factors may influence language and communicative ability (Tompkins, 2012, p. 66). There is also evidence for the effect of treatment of prosodic deficits (Lehman-Blake, 2007, p. 331).

In lack of evidence, treatment of communication deficits in patients with RHD needs to be carried out based on other principles. One approach is to derive treatment methods from existing theories of the communication deficits (Lehman-Blake, 2007). Moix and Côté (2004, p. 132) exemplifies that the SLP may accept the theory that the communication deficits in RHD patients are due to insufficient cognitive resources, and therefore work on tasks targeting these. However, it is important that these hypotheses are tested and re-evaluated during treatment. Yet another attempt to treatment is to take inspiration from existing treatment programs for patients with other neurological conditions or injuries, with symptoms similar to RHD communication deficits. For example, certain approaches to discourse used in work with patients with frontal TBI, could be useful with RHD patients as well (Moix & Côté, 2004, p. 133). Similarly, there is evidence for treatment of discourse and pragmatic deficits associated with TBI, and these methods could possibly be used with RHD patients. Nevertheless, a careful examination of the method, as well as its theoretical background should take place before chosing to adopt it for treatment of RHD patients (Lehman-Blake, 2007, p. 336).

As for treatment methods, metacognitive and metalinguistic strategies could be used in intervention. Lehman-Blake (2007, p. 335) suggests that the clinician and the patient discuss different possible meanings of an utterance, and why one would be preferred over the other. In parallel the therapist and the patient identify relevant contextual cues as support for the conclusions. In the same way, executive functions could be targeted discussing the similarities between organizing a meal and organizing one’s thoughts (Lehman-Blake 2007, p. 335). However, meta-methods are hardly ecological (resembling real-life situations), and other researchers (Moix & Côté, 2004) maintain the importance of staying as close to ecological situations as possible when treating this patient group.

There may be challenges in treating patients with communication deficits following RHD. Anosognosia, together with other associated symptoms such as impatience, frustration and irritability, may lead to the impression that the work with the patient group is less rewarding than working with patients with aphasia after LHD (Moix & Côté, 2004, p. 129). Clinicians, and other people surrounding the RHD individual, may misunderstand the symptoms and take them for an expression of rudeness and laziness, and perceive the patients as not being suited for treatment (Tompkins, 2012, p. 67). However, for example SLPs in Canada state that they negotiate with the patient to try treatment in case of anosognosia (Moix & Côté, 2004, p. 131). If the patient has unrealistic goals concerning the treatment, clinicians could engage the patient in

---

8 Translation of the author of the original quotation: “Ce n’est que récemment que des stratégies d’intervention ont été élaborées pour les troubles de la communication chez les CLD. Dans ce contexte, l’intervention auprès des CLD constitue pour tout orthophoniste un réel défi théorique et clinique.”
supported exploration of possible and more realistic sub goals (Tompkins (2012, p. 67). This procedure is thought to, in extension, improve the patient’s awareness of the impact of their own deficits. The approach should be used with caution however, since a full realisation of the deficits may cause a strong emotional reaction in some patients.

An important aspect to consider is the fact that training of function may not always be the most appropriate method for treating a specific deficit. The International Classification of Functioning, Disability and Health acknowledges that while certain deficits impact on everyday life, contextual factors may in return influence the deficits as such (Tompkins, 2012, p. 65). Thus, an adaptation of the environment may sometimes be more beneficial to the patient than training of function. In the Swedish tradition, praxis is rather directed towards palliative treatments: such as informing the entourage of the patient about the communicative deficits, and supplying strategies for facilitating the communication (Saldert, 2008, p. 211). In fact, information to the patient about the deficits, but also information about the deficits to the informal network of the patient may be an important tool when there is uncertainty about the efficiency of treatment of function. In Canada, 80% of the SLPs stated that counselling to the informal network is crucial for their intervention (Côté et al., 2003 in Moix & Côté, 2004). However, this type of intervention is not acknowledged in the French “actes d’orthophonistes”. The latter only acknowledges direct treatment (Pugliese, 2011, p. 47). In addition to information to the informal network of the patient, information about the patients and the patient group should be offered to the formal network (health care professionals) as well (Moix & Côté, 2004, p. 135).

2.3. Conclusion and motives for the present study

Due to the fact that language and communication for long was considered a property of the left hemisphere of the brain, in combination with the fact that communication symptoms following RHD are less obvious than aphasia following LHD, there is a lot of research regarding the caretaking of patients with aphasia due to LHD, while research is scarce on the caretaking of patients with language and communication deficits due to RHD. However, today we know that RHD stroke is as common as LHD stroke (Joanette, 2004a), and communication symptoms following RHD stroke are thought to be as common as aphasia following LHD (Joanette, 2004b). We also know that communication and language deficits following RHD may cause a substantial decline in the patients’ daily life functioning (Moix & Côté, 2004). According to researchers on the subject, it is not clear what would be an optimal SLP caretaking of these patients, and the caretaking needs to be developed (Moix & Côté, 2004, Tompkins, 2012). For the above cited reasons, it is of interest to investigate what the caretaking of these patients look like, as of today.

To the knowledge of the author of the present study, there is no description of the SLP caretaking of communication deficits in RHD patients in neither France nor Sweden. What are the conditions for the caretaking of the communication deficits of patient group? What does assessment and treatment of the communication deficits of the patient group look like? And what are the subjective experiences of the caretaking of the communication deficits of the patient group? A comparative analysis of two relatively

---

9 Administrative codes that states what types of assessment and/or intervention that has been offered
similar European countries may shed light on positive as well as negative aspects of the caretaking.

One may assume that there are differences between the two countries, considering that while French SLPs do have access to specific assessment material of the patient group, Swedish SLPs do not. Furthermore, a substantial amount of French-Canadian literature on the subject (notably the edition of the scientific revue Rééducation orthophonique on communication deficits following RHD, Joanette and Monetta, 2004) is available for the French speaking population, but not for the Swedish. Consequentially, one could imagine that the caretaking of the patient group is somewhat more developed in France than in Sweden. Hopefully, the results of the present study will identify positive and negative aspects of the caretaking in both countries, and may allow for SLPs in both countries to get mutually inspired.

The focus of the present study lies on the language and communication deficits of the patient group, and thus deficits in speech (dysarthria), or swallowing (dysphagia) will not be examined. Furthermore, although all patients having suffered from RHD may show communication symptoms, the patient group targeted in the present study will be limited to individual’s having suffered from stroke in the RH, all other types of RH-injuries excluded.
3. Aim

The aim of the present study is to describe how patients with right hemisphere brain damage (RHD), due to stroke, are managed in speech-language pathology in the countries of France and Sweden, and to compare the caretaking in the two countries, by means of a survey addressed to SLPs.

The specific research questions are:

General
1. What professional competence is available for the work with the patient group?
2. How frequently do SLPs meet the patient group?
3. Where do SLPs meet the patient group?

Assessment
4. During what circumstances are patients with RHD assessed for language and communication deficits?
5. How is the patient group assessed?
6. Which diagnoses are established after assessment?

Intervention
7. How often do SLPs intervene with the patient group?
8. What aspects of the communication deficits are targeted in intervention?
9. How do SLPs intervene with the patient group?

Subjective experiences
10. How do SLPs experience the work with the patient group?
4. Method

4.1. Respondents

The criteria of inclusion were being an SLP working in either Sweden or France currently working, or ever having worked, with patients with RHD due to stroke.

Respondents were recruited by several means, and the recruitment procedure differed somewhat between the two countries, due to practical reasons such as organisational differences. The survey was intended to reach as many SLPs as possible, since a high number of respondents would support more valid and generalizable results. The aim was to reach SLPs working in different types of establishments, both within the private and the public sector. A thorough description of how the survey was distributed, is found in the section "procedure", below.

4.2. Material

The survey was created using SurveyMonkey (SurveyMonkey Inc.), a tool for developing and distributing questionnaires on the internet. Both the French and the Swedish versions of the survey were distributed by links to a webpage. The study-specific survey was inspired by the survey of Blom Johansson et al. (2011), and the publication by Eljertsson (2014). The survey was constructed of 37 questions distributed over 5 sub-sections:

1. General conditions for the work with the patient group, e.g., how many of these patients the SLPs meets, where they meet them and which other medical and para-medical professionals that are involved in the caretaking (n = 6)
2. Assessment, e.g., when and how the patient group is assessed and with which tests (n = 7),
3. Intervention, e.g., how often and how intervention takes place (n = 13).
4. Subjective experiences of the work with the patient group (n = 4)
5. Demographics of the respondents (age, years as professionally active, town of studies etc.) (n = 7).

The nature of the questions was both quantitative and qualitative. The quantitative questions included multiple choice-questions with single or multiple allowed answers, likert scale-questions, and dichotomous questions such as yes/no-questions. The qualitative questions were open answer-questions, either comment or essay box questions. The two full versions of the survey can be found in Appendices 1 and 2.

The survey was translated into French by the author of the present study, who is a sequential bilingual in Swedish and French, with several years of work experience in France, including an SLP internship. The translation was essentially direct, with some minor changes that reflect differences between the countries (such as different institutions where the SLPs could meet the patient group). In addition, the French version of the survey was corrected by an SLP native in French.
4.3. Procedure

4.3.1. The Swedish survey

After the creation of the Swedish survey, it was test run by 5 Swedish SLP students. They were asked to provide feedback on the form and content of the survey, and a few minor changes were made after their feedback. The time needed to answer the survey was estimated to 15 minutes. Subsequently, the survey was made available for 3 weeks: from October 12th 2015 until November 2nd 2015.

Several steps were undergone to distribute the survey to Swedish SLPs. Firstly, an e-mail was sent to each 20 county councils with a request to reach the head of each SLP unit in the county. All of the county councils (except for two) answered, and supplied contact details, thus permitting the distribution of the survey. Furthermore, the habilitation centres in each county were provided with the link to the survey. In addition, the survey was sent to certain SLPs, who work within the research field of the study, in order for them to aid with the distribution of the survey. To get in touch with SLPs working in the private sector, a search was made on Google, and thereafter 21 adequate private practising SLP establishments were identified and contacted. A link to the survey was published on Logopedforum\textsuperscript{10}, an online forum for Swedish SLPs. Finally, the survey was dispersed on Facebook.

4.3.2. The French survey

The French version of the survey was made available on November 2\textsuperscript{nd} 2015 until November 23\textsuperscript{rd} 2015, three weeks later than the Swedish study, because of a combination of the time of its completion, and to avoid a French public holiday vacation.

As with the Swedish version, several channels were used to reach respondents. Firstly, e-mails with the survey were sent to public hospitals and private hospitals with a non-lucrative purpose, in each of France’s 22 metropolitan regions (including Corsica) and to the 5 overseas departments (Guadeloupe, Martinique, Réunion, Mayotte and Guyane). Military hospitals and psychiatric hospitals were excluded. The survey was sent to a few private hospitals and clinics as well, but these requests were almost exclusively all replied to that the service was lacking an SLP. Furthermore, after checking the websites of a few private hospitals and clinics, no SLPs were identified (as opposed to for example physiotherapists). Consequentially, and due to the potential time save, no more private hospitals or clinics were contacted. Thirty-one hospitals were excluded since the opportunity of contacting them via e-mail was lacking.

In total, 138 French hospitals were contacted. Some of the hospitals over-group other smaller hospitals, which means that the number of hospitals reached may be higher. The hospitals were all identified via the website of Le Point\textsuperscript{11}, a French weekly political and news magazine which website holds contact details to French hospitals, including a ranking of them.

The survey was also sent to SLPs in France personally known by the author, with the request that they replied to, and forwarded the survey. In addition, the survey was

\textsuperscript{10} www.logopedforum.se
\textsuperscript{11} www.lepoint.fr
published on the website of UNADREO¹² (L’Union Nationale pour le Développement de la Recherche et de l’Evaluation en Orthophonie), the French national society for the development of research and evaluation in speech-language pathology. Furthermore, a link to the survey was sent to the union FNO (Fédération Nationale des Orthophonistes), as well as to relevant social media pages, the Facebook communities “Orthos Infos”, “Les Orthophonistes et la Neuro”, “La recherche en neuroscience cognitive et l’orthophonie” and “Orthophonie et la Recherche”.

Finally, a request was sent to the head union of SLP in France: FOF (Fédération des Orthophonistes de France), and they agreed to send the link to the survey to all of the sub-unions throughout France in order for them to be able to distribute the survey to their members.

For both the French and the Swedish version of the survey, every SLP that answered the questionnaire was asked to contribute to the distribution of the survey by forwarding it to SLP colleagues and contacts.

A summary of the study has been written in French, as to make the present research more available for the French speaking population.

4.4. Data analysis

The data was analysed quantitatively or qualitatively, depending on data type. Answers to multiple choice questions, likert-scale questions and open-end questions with responses of quantitative nature were analysed with descriptive statistics.

Answers to open-end questions were analysed with qualitative content analysis, inspired by the procedure described by Graneheim and Lundman (2004, p. 107-109). The same is true for the information provided in the clarifying “Other”-box responses of multiple choice questions, in case of more than four replies in the Other-box, as to facilitate the presentation of the data. A content analysis was carried out for both countries respectively; i.e., no French data have been analysed based on codes and categories identified during the analysis of the Swedish data; in order to keep a naive perspective when analysing the data, and to allow the data to speak for itself. The present study only aims to identify the manifest content of the responses, and not the latent content, according to the definitions of Graneheim & Lundman (2004, p. 106).

The procedure of the qualitative content analysis was the following: Firstly, the responses were read through several times to create a deeper understanding of their content. Secondly, each response was divided into one or several meaning units (depending on how many different meaning units the respondent was considered to express in the reply). The meaning units were then condensed and abstracted into a code to create a more general understanding of what the respondent had intended to express. The codes were thereafter sorted into categories, presenting a higher level of abstraction that allowed for the summative meaning of the respondents replies to come through. The process was not entirely linear, and both codes and categories could be revised in any step in the process, to account for their accuracy. The author often had to go back to the original reply of the respondent, to make sure that the abstraction corresponded to

¹² www.unadreo.org
what the respondent had wanted to express. Examples of the procedure for identifying and condensing meaning units, as well as codifying and categorising them, are given in Table 1 below. A and B are translated from French while C and D are translated from Swedish. A and C are examples of replies resulting in one meaning unit while B and D are examples of replies resulting in several meaning units. For the replies resulting in several meaning units, each meaning unit is coded and categorized separately. Thus, when looking at B for example, the first meaning unit (1) “Photos” is coded as “Photos” and categorized as “Ecological material”, the second meaning unit “Situations from life and language” is coded as “Ecological situations” and categorized as “Other”, and so on.

Table 1. Examples of identifying and condensing meaning units, as well as codifying and categorising them.

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Reply</th>
<th>Condensed meaning unit</th>
<th>Code</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Personal material, adaptation of already existing material</td>
<td>Personal material (adaptation of already existing material)</td>
<td>Self-developed material</td>
<td>Non-standardized assessment</td>
</tr>
<tr>
<td>B</td>
<td>Photos, linguistic situations from life, PACE technique</td>
<td>1) Photos 2) Situations from life and language 3) PACE</td>
<td>1) Photos 2) Ecological situations 3) PACE</td>
<td>1) Ecological material 2) Other 3) SLP/neuropsychological material/methods</td>
</tr>
<tr>
<td>C</td>
<td>Checklist for social communication developed at the clinic in alignment with references</td>
<td>Checklist for social communication developed at the clinic</td>
<td>Self-developed material for assessment</td>
<td>Non-standardized assessment</td>
</tr>
<tr>
<td>D</td>
<td>Identifying the patients and having enough time to give the patients the caretaking they need</td>
<td>1) Identifying the patients 2) Having enough time to give the patients sufficient caretaking</td>
<td>1) To identify the patients 2) The lack of resources</td>
<td>1) Knowledge and competence 2) Work-related factors</td>
</tr>
</tbody>
</table>

When answers contained both quantitative and qualitative data, the analysis was performed in two steps: the quantitative summative analysis was performed firstly, and thereafter a qualitative content analysis on the non-quantifiable information.

A particular procedure was adopted for the analysis of diagnoses. For the Swedish data, all of the diagnoses expressed by the respondents were translated into a conventional diagnosis as established by ICD-10, unless a diagnosis was impossible to derive from the response. Due to the nature of the French data, the French diagnoses were not assimilated to an ICD-10 diagnosis, they were instead analysed according to qualitative content analysis.

4.5. Ethical considerations

Respondents were anonymous, except for certain demographic information, only available for the author. The responses to the survey were kept on a password protected server, and the analysis in a password protected document, both only accessible by the author.
Information about the purpose and method of the study were enclosed to the survey, and respondents were offered contact details to the author should they have any questions about the study or their participation. Respondents approved of participating in the study by responding to the survey, and were properly informed about this in the information text accompanying the survey.

It is possible that some respondents may have felt uncertain about their own caretaking of the patient group in association with participation in the study. However, all respondents were invited to take part of the results of the study, and the author was available for answering questions about the participation in the study.

The risk of respondents revealing patient confidential information in their responses was accounted for in the information text accompanying the survey, where it was specified that no personal, or other revealing information about patients, should be conveyed in the replies to the survey.

Quotations and the like, presented in the study, from the replies of the respondents were presented in a way that does not reveal the identity of the respondent.
5. Results

5.1. Responses

In Sweden, all of the county councils replied to the e-mails while very few private practising speech therapists did. Many of the habilitation centers replied that they did not work with the patient group. At the end of the distribution time of the Swedish survey, 59 SLPs had responded to the survey. Twelve French hospitals out of the 138 contacted replied that they did not have an SLP working at their establishment. Eleven hospitals actually replied to the demand to distribute the survey, although it cannot be concluded that the other 127 did not forward the survey to their SLPs. Eighty-three SLPs had replied to the French version of the survey by the end of its distribution time.

Response rates (the percentage of respondents that replied to a specific question) were similar between the two countries, and decreased progressively as the survey proceeded with the different categories (presented in list form on page 20 of this paper). This was with the exception of the last category (demographics) in which the response rates suddenly rose again. High response rates were seen in the first category of the survey: general conditions for the caretaking of the patient group with 95 % (SD=0.03) for France and 93% (SD= 0.04) for Sweden. Relatively high response rates were seen for the second category of the survey (assessment): 68% (SD= 0.06) for France and 69% (SD= 0.04) for Sweden. Relatively low response rates were seen for questions targeting intervention: 50% (SD= 0.06) for France and 53% (SD=0.07) for Sweden. Low response rates were seen for questions targeting subjective experiences of the work with the patient group: 40% (SD=0.08) for France and 43% (SD=0.08) for Sweden. Relatively low response rates and relatively high (for France and Sweden respectively) were seen for questions targeting the demographics of the respondents: 54% (SD=0.05) for France and 62% (SD=0.01) for Sweden.

5.2. Respondents

The Swedish respondents worked in all parts of the country (14 out of 21 regions represented), with a higher representation of the larger urban populated areas such as Stockholms läns landsting (25% of the respondents) and Västra Götalandsregionen (17% of the respondents). All universities in which the SLP education program is available were represented among the respondents, Stockholm being the most common option (24%) closely followed by Lund (22%).

The French respondents were also from all over the country (16 out of 27 regions represented), and the biggest urban populated region Ile-de-France (region of Paris) was the most common place of work, with 30% of the respondents working there. All universities at which the SLP education program is available were represented, except for the universities in Amiens, Limoges, Montpellier and Rouen.

In both France and Sweden most of the respondents were women, and the mean age of the respondents were 44 years in Sweden and 39 years in France (Table 2). The mean of years of having been professionally active as an SLP was 12 years in Sweden and 13 years in France. The respondents most commonly worked within the public sector in both Sweden and France, although this was more common in Sweden with 89% as opposed to 60% in France. Consequentially, working in private sector or working in
both private and public sectors were more common in France than in Sweden with 20% against 5% and 20% against 3% respectively.

Table 2. Number, age, gender, years of professional activity and sector of work of the respondents.

<table>
<thead>
<tr>
<th>N of participants working with RHD due to stroke</th>
<th>Sweden</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>59</td>
<td>83</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Mean= 44 (SD= 12)</th>
<th>Mean = 39 (SD= 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Women = 89%</td>
<td>Women = 91%</td>
</tr>
<tr>
<td></td>
<td>Men = 8%</td>
<td>Men = 7%</td>
</tr>
<tr>
<td></td>
<td>Didn’t wish to state their gender = 3%</td>
<td>Didn’t wish to state their gender = 2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years of professionally active SLP</th>
<th>Mean= 12 (SD= 9)</th>
<th>Mean= 13 (SD= 9)</th>
</tr>
</thead>
</table>

| Sector of work                                  | Public sector= 89% | Salariat**= 60% |
|                                                 | Private sector= 5% | Libéral***= 20% |
|                                                 | Both public and private sector= 3% | Exercice mixte****= 20 % |
| Other= 3%*                                      |                   |                  |

Note: *= The (n=1) respondent qualified: “private, and at a school within the commune”.  
Note: **= French work form meaning working as hired by a public or a private institution.  
Note: ***= French work form meaning working as your own employer, within the private sector.  
Note: ****= mixed practice, meaning work in both ”salariat” and ”liberal”

5.3. General

5.3.1. What professional competence is available for the work with the patient group?

The mean number of years of having worked with the patient group was 10 years in Sweden and 8 years in France (Table 3). There were generally other SLPs at the work site who also worked with the patient group, and typically the SLP was a part of a multi-professional team regarding the patient group (Table 3). The organisation of the team, depicted in Figure 1, differed between the countries. Whereas physiotherapists and occupational therapists were the most represented professionals in both countries, they were more frequently represented in Sweden (94% and 9%, respectively) than in France (51% each). While neuropsychologists were as common in France as physiotherapists and occupational therapists, the former were only available in 31% of the cases in Sweden. Psychologists were more common in French teams (31%) than in Swedish, where they were rare (9%). Doctors and nurses were equally common members of the team, but they were more common in Sweden than in France (69% each versus 39% and 36%). Additionally reported professionals were dieticians, special educators, behavioural scientists, sports instructors, psychomotor therapists and orthoptists.
Table 3. Professional competence available for the caretaking of RHD patients.

<table>
<thead>
<tr>
<th></th>
<th>Sweden</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Years of having worked with the patient group</td>
<td>Mean= 10 (SD= 9)</td>
<td>Mean= 8 (SD= 8)</td>
</tr>
<tr>
<td>2. Number of SLPs on the work site also working with the patient group</td>
<td>Mean= 3 (SD= 2)</td>
<td>Mean= 3 (SD= 2)</td>
</tr>
<tr>
<td>3. Work in a multi-professional team concerning the patient group</td>
<td>Yes= 70% No= 30%</td>
<td>Yes = 73% No= 27%</td>
</tr>
</tbody>
</table>

Figure 1. Other professionals working with the patient group on the work site. Note that one respondent could choose several replies, and thus the summary of the answer frequency is not 100%. Note: *= Option not available in the French version of the survey.

5.3.2. How frequently do SLPs meet the patient group?

French SLPs tended to meet the patient group more often than the Swedish SLPs, as the most commonly stated option for French respondents were “one, or more, patients per week”, and the most commonly stated Swedish option was “one, or more, patients per month” (Figure 2). In addition, more French than Swedish SLPs meet “one, or more per day” of the patient group. Fourteen percent (n=8) of the Swedish respondents answered by filling out the “Other”-box, and their replies were “It depends” (n=3), “I meet none/very few of the patient group” (n=3), or “I don’t know” (n=2).
5.3.3. Where do SLPs meet the patient group?

Patients were most commonly seen in outpatient rehabilitation in Sweden (41%), and in Physical medicine end rehabilitation in France (56%). Other locations of meeting the patient group for Swedish SLPs were (in falling order): emergency room (36%), outpatient rehabilitation (36%), inpatient rehabilitation (34%), the patient’s domicile (21%), primary care (9%), Scandinavian folk high school (2%), aphasia centre (1%) and other (4%). Further locations of meeting the patient group for French SLPs were (in falling order): private SLP cabinet (35%), the patient’s domicile (15%), waking unit (11%), emergency room (5%), private clinic (1%) and other (22%) including neurovascular care or intensive care unit (n=12), geriatric unit (n=3) and nursing homes (n=2). The respondents could choose several replies, and thus the summary of the answer frequency is not 100%.

5.4. Assessment

5.4.1. During what circumstances are patients with RHD assessed for language and communication deficits?

Generally, it was more common in France that all patients with RHD due to stroke were screened for communication deficits (27% versus 7% in Sweden) (Figure 3). However, most commonly, in France and in Sweden, patients with RHD due to stroke were only screened for communication deficits in case of suspected communication deficits. The responses in the “Other”-category (n=4) and (n=7), provided some additional information. Two Swedish respondents stated that patients were not normally assessed where they worked, and one Swedish respondent stated that the doctor in charge refers the readily assessed patient to the rehabilitation centre. The remaining Swedish respondent stated that the communication deficits are often mistaken for cognitive deficits. In France, three respondents expressed that they were not able to answer the question because they were working in a private SLP cabinet, and the remaining four that patients with RHD due to stroke are only screened for communication deficits if they are suspected to have such deficits.
5.4.2. **How is the patient group assessed?**

5.4.2.1  **Function**

Formal assessments was the most commonly stated way of assessing the patient group with regards to function \((n_s=91)\) \((n_f=101)\). The formal tests used in assessment can be found in Table 4, and are further specified with references in Appendix 3. Several unspecified tests were also mentioned such as dysarthria tests \((n_s=5)\), tests of verbal fluency \((n_f=6)\), aphasia tests \((n_f=3)\), language tests \((n_f=2)\), “classical” test batteries \((n_f=2)\), communication tests \((n_f=1)\) as well as different tests of cognitive functions \((n_f=9)\). Non-standardized tests were reported twice as frequently in the Swedish data \((n_s=30)\) or 21% compared to French data \((n_f=14)\) or 10% (Table 5). Furthermore, anamnesis was mentioned as way of assessment by eight Swedish respondents, and two French respondents. In addition six Swedish respondents stated that they proceeded in the same with assessment after RHD as with LHD. Three Swedish participants stated that they rarely or never asses the patient group. One French respondent claimed to use the technique of PRL (Pédagogie Rélationnelle du Langage) in assessment, while one stated that no measurable tests were used in the specific intensive neurological care unit. One French respondent stated that the tests used depended on the severity of deficits of the patient, and one French respondent expressed not knowing what tests were used.
Table 4. Formal assessment of function of communicative ability after RHD due to stroke. A description of all the tests with references can be found in Appendix 3.

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Sweden</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language and/or communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-ning (n=24)</td>
<td>MEC (n=31)</td>
<td></td>
</tr>
<tr>
<td>BESS/TBSS (n=24)</td>
<td>TLE (n=11)</td>
<td></td>
</tr>
<tr>
<td>BNT (n=18)</td>
<td>GNU (n=9)</td>
<td></td>
</tr>
<tr>
<td>GNU (n=7)</td>
<td>MT86 (n=9)</td>
<td></td>
</tr>
<tr>
<td>PAPAP (n=5)</td>
<td>DO80 (n=8)</td>
<td></td>
</tr>
<tr>
<td>SBP (n=3)</td>
<td>La Gestion de l’Implicite (n=6)</td>
<td></td>
</tr>
<tr>
<td>Token Test (n=3)</td>
<td>Lexis (n=5)</td>
<td></td>
</tr>
<tr>
<td>FAS (n=2)</td>
<td>MEC-P (n=3)</td>
<td></td>
</tr>
<tr>
<td>DLS (n=2)</td>
<td>ECVB (n=2)</td>
<td></td>
</tr>
<tr>
<td>KAP (n=1)</td>
<td>BIA (n=2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluences de Purpan (n=1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TLC (n=1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Token Test (n=1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluences Cardebat (n=1)</td>
<td></td>
</tr>
<tr>
<td>Neuropsychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AQT (n=1)</td>
<td>BEN (n=3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BEM 144 (n=2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approche RV (n=1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TMT (n=1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BREF (n=1)</td>
<td></td>
</tr>
<tr>
<td>Dysarthria</td>
<td>Hartelius &amp; Svensson (n=1)</td>
<td>BECD (n=3)</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Profile of Functional Impairment in Language and Communication (n=1)</td>
<td></td>
</tr>
</tbody>
</table>

Table 5. Non-standardized assessment of function of communicative ability after RHD due to stroke.

<table>
<thead>
<tr>
<th>Type</th>
<th>Sweden</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical observation</td>
<td>(n=10) or 7%</td>
<td>(n=1) or 0.07%</td>
</tr>
<tr>
<td>Self-developed material</td>
<td>(n=8) or 6%</td>
<td>(n=1) or 0.07%</td>
</tr>
<tr>
<td>Non-standardized assessment of language and communication</td>
<td>(n=11) or 8%</td>
<td>(n=8) or 5%</td>
</tr>
<tr>
<td>Unspecified non-standardized assessment</td>
<td>(n=1) or 0.07%</td>
<td>(n=4) or 3%</td>
</tr>
</tbody>
</table>

5.4.2.2 Activity and participation

Generally, the questions regarding assessment of loss of function generated more information from the respondents than the questions regarding assessment of loss of activity and participation (n_s=143), and (n_f=146) versus (n_s=56) and (n_f=78), identified ways of assessments in total. For the Swedish participants, non-standardized assessment was the most common way of investigating loss of activity and participation (n_s=18), or 32%. The French participants however, stated different assessments of functions as their main assessment of activity and participation (n_f=18), or 49%. This assessment mainly targeted language and communication, but sometimes cognition, or other unspecified functions. Apart from tests already mentioned regarding assessment of function, supplementary tests were Grober and Buschke (n=1), EFCL (n=1), Pyramids and Palmtrees (n=1), and Kissing and Dancing (n=1), all further specified in Appendix 3. Sixteen of the Swedish assessment materials of activity and participation (29%), and fifteen of the French assessment materials of activity and participation (19%) were some sort of anamnesis. Seven of the Swedish assessment materials (13%) and thirteen of the French assessment materials (17%) were some sort of questionnaire to examine activity and participation. These questionnaires are summarized in Table 6. Two French respondents claimed to use self-developed material in order to examine activity and
participation. Finally, some respondents (n=8, 14%), (n=4, 5%) stated that they did not have any specific material to assess activity and participation. Four Swedish (7%) and six French (7%) respondents stated that they rarely or never examine activity and participation.

<table>
<thead>
<tr>
<th>Sweden</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>COAST (n=4)</td>
<td>Questionnaire from ECVB (n=6)</td>
</tr>
<tr>
<td>CETI (n=2)</td>
<td>Questionnaire from MEC (n=3)</td>
</tr>
<tr>
<td>SOFT (n=1)</td>
<td>Unspecified (n=2)</td>
</tr>
<tr>
<td></td>
<td>Self-evaluative (n=1)</td>
</tr>
<tr>
<td></td>
<td>For both the patient and the family (n=1)</td>
</tr>
</tbody>
</table>

5.4.2.3 Anamnesis from the informal network of the patient
The anamnesis from the informal network of the patient may target the manifest communication deficits of the individual following the injury, but it may also target the communicative ability of the patient before the injury (pre-morbid ability). For both countries, these types of assessments occur quite often (53-59 % of the respondents) as opposed to never (0-2 % of the respondents) (Figure 4). It seems to occur more commonly in France, where 37% and 32% stated that they “always” interview the informal network, while 21% and 32% of the Swedish respondents stated that they “rarely” do it. The difference is most noticeable concerning pre-morbid ability: in Sweden 15% replied “always” and 32% “rarely”, whereas in France 37% replied “always” and 9% “rarely”.
5.4.3. Which diagnoses are established after assessment?

For both countries, one respondent sometimes expressed several diagnoses. Swedish diagnoses (according to ICD-10) are depicted in Table 7. The most commonly stated diagnosis was “Dysphasia and aphasia” (\(n_s=17, 43\%\)), followed by “pragmatic language impairment” (\(n_s=12, 30\%\)) and unspecified language impairment (\(n_s=7, 18\%\)). In France, however (Table 8), the classifications “communication deficits” (\(n_f=13, 26\%\)) and “pragmatic deficits” (\(n_f=12, 24\%\)) are more common than “aphasia” (\(n_f=7, 18\%\)). Five French respondents (10%) stated that they label the deficits as “language deficits due to RH stroke”, and five respondents (10%) mentioned some sort of neuropsychological origin of the deficits in their classification. Furthermore, quite a few French respondents (\(n_f=18, 36\%\)) mentioned neuropsychological diagnoses, such as memory deficits and behavioural deficits. Two French respondents claimed that the deficits may or may not be associated with cognitive deficits, and one withheld that SLP diagnostics should be supplemented with assessment by a neuropsychologist.

Table 7. Diagnoses normally established on the patient group after assessment in Sweden

<table>
<thead>
<tr>
<th>Diagnose category</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>R47.0 Language and/or communication ((n=40))</td>
<td>R47.0 Dysfasi och afasi* ((n=17))</td>
</tr>
<tr>
<td></td>
<td>R47.0B Pragmatisk språkstörning** ((n=12))</td>
</tr>
<tr>
<td></td>
<td>R47.0D Ospecificerad språkstörning*** ((n=7))</td>
</tr>
<tr>
<td></td>
<td>R47.0C Annan specificerad språkstörning**** ((n=4))</td>
</tr>
<tr>
<td>Other ((n=10))</td>
<td>I rarely/never establish a diagnose ((n=7))</td>
</tr>
<tr>
<td></td>
<td>I do not know ((n=1))</td>
</tr>
<tr>
<td></td>
<td>R47.1 Dysartri och anartri******</td>
</tr>
</tbody>
</table>

Note: *="dysphasia and aphasia”
Note: **="pragmatic language impairment”
Note: ***="unspecified language impairment
Note: ****="otherwise specified language impairment”
Note: ******="dysarthria and anarthria”
Table 8. Diagnoses normally established on the patient group after assessment, in France

<table>
<thead>
<tr>
<th>Category</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language and communication deficits (n=57)</td>
<td>Communication deficits (n=13)</td>
</tr>
<tr>
<td></td>
<td>Pragmatic deficits (n=12)</td>
</tr>
<tr>
<td></td>
<td>Aphasia (n=7)</td>
</tr>
<tr>
<td></td>
<td>Language deficits due to RH stroke (n=5)</td>
</tr>
<tr>
<td></td>
<td>Difficulties with implicit language (n=5)</td>
</tr>
<tr>
<td></td>
<td>Lexic-semantic deficits (n=4)</td>
</tr>
<tr>
<td></td>
<td>Language deficits (n=4)</td>
</tr>
<tr>
<td></td>
<td>Non aphasic language deficits (n=2)</td>
</tr>
<tr>
<td></td>
<td>Deficits in elaborate language (n=2)</td>
</tr>
<tr>
<td></td>
<td>Loss of informativity (n=2)</td>
</tr>
<tr>
<td></td>
<td>Discourse deficits (n=1)</td>
</tr>
<tr>
<td>Neuropsychological deficits (n=18)</td>
<td>Deficits in executive functions (n=5)</td>
</tr>
<tr>
<td></td>
<td>Memory deficits (n=2)</td>
</tr>
<tr>
<td></td>
<td>Unilateral neglect (n=2)</td>
</tr>
<tr>
<td></td>
<td>Cognitive deficits (n=2)</td>
</tr>
<tr>
<td></td>
<td>Deficits in visual-spatial organisation (n=1)</td>
</tr>
<tr>
<td></td>
<td>Deficits in spatial-temporal organisation (n=1)</td>
</tr>
<tr>
<td></td>
<td>Attentional deficits (n=1)</td>
</tr>
<tr>
<td></td>
<td>Calculation and/or reasoning deficits (n=1)</td>
</tr>
<tr>
<td></td>
<td>Behavioural deficits (n=1)</td>
</tr>
<tr>
<td></td>
<td>Deficits in social cognition (n=1)</td>
</tr>
<tr>
<td>Speech deficits (n=12)</td>
<td>Anosognosia (n=1)</td>
</tr>
<tr>
<td></td>
<td>Dysarthria (n=7)</td>
</tr>
<tr>
<td></td>
<td>Dysprosody (n=4)</td>
</tr>
<tr>
<td></td>
<td>Decline in intelligibility (n=1)</td>
</tr>
<tr>
<td>Language/communication deficits with neuropsychological origin (n=5)</td>
<td>Linguistic/communicative deficits due to dysexecutive syndrome (n=3)</td>
</tr>
<tr>
<td></td>
<td>Non-aphasic language deficits within the frame of other neurological deficits (according to NGAP) (n=1)</td>
</tr>
<tr>
<td></td>
<td>Non-linguistic cognitive deficits affecting the ability to communicate (n=1)</td>
</tr>
<tr>
<td>Other (n=8)</td>
<td>It depends (n=4)</td>
</tr>
<tr>
<td></td>
<td>I don't establish diagnoses due to my work form (n=2)</td>
</tr>
<tr>
<td></td>
<td>Dysgraphia (n=1)</td>
</tr>
<tr>
<td></td>
<td>Visual deficits (n=1)</td>
</tr>
</tbody>
</table>

5.5. Intervention

5.5.1. How often do SLPs intervene with the patient group?

How often the patient group is seen for treatment varied between the countries (Figure 5). A noticeable difference between French and Swedish data is the relative frequency of respondents stating that they see patients several times/week. This was the most common option for French respondents, while it was uncommon for Swedish respondents. The most common option for Swedish respondents was to fill out the Other-box, where nine respondents expressed variability in how often the patients are seen for treatment. Two respondents specified that this was due to the variation in severity of deficits, needs of the patients and family, as well as ability to participate in treatment. One Swedish respondent (3%) expressed seeing the patient group for treatment less frequently than seeing patients with aphasia for treatment. Ten of the Swedish respondents (29%) stated that they rarely or never see the patient group for treatment, and some specified the reasons why: due to heavy workload (n_s=2, 6%), due to the SLPs kind of employment (n_s=2, 6%) and due to spontaneous recovery of the patient (n_s=1, 3%).
Figure 5. How often patients with communication deficits due to stroke in the RH are seen for treatment, Swedish and French data.

The length of the contact with the SLP (Figure 6) also differed between the countries, with a tendency for longer contacts in France than in Sweden. Swedish SLPs most commonly stay in treatment contact with the patient for more than a week or more than a month (n_s=3 and n_s=6 respectively), although (n_s=7) stated that “it varies”. French SLPs however, most commonly stayed in treatment contact with the patients for more than a month (n_f=12) or more than a year (n_f=5). In addition, some French SLPs (n_f=2 and n_f=3) stated that they stay in treatment contact with the patients for more than two years, or for more than three years. This was stated by no one of the Swedish respondents. Four of the French respondents replied that it varies how long they stay in treatment contact with the patients, and (n_f=7) pragmatically stated that they stay in contact with them the time of their stay at their unit. Four of the Swedish respondents used the space to express that they do not offer treatment for the patient group.

Figure 6. Period of treatment contact with patients with communication deficits due to RHD stroke.
5.5.2. What aspects of the communication deficits are targeted in intervention?

*Pragmatics* was the most common aspect of communication targeted, by both Swedish respondents (ns=14, 45%) and French respondents (nf=28, 68%). Other aspects mentioned by respondents from both countries were *semantics* (ns=11, 35%) and (nf=5, 12%) and *language comprehension* (ns=5, 12%), and (nf=1, 3%). *Prosody* was mentioned by four Swedish participants (13%), and far more commonly by nineteen French participants (46%). In addition, seven Swedish respondents (23%) expressed reading and writing. Eighteen of the French respondents (44%) stated that they target “elaborate language”, (nf=8, 20%) “humour or absurd language”, (nf=4, 10%) verbal fluency, (nf=1, 2%) verbal reasoning, (nf=1, 2%) communication on a dysexecutive basis (nf=1, 2%), and (nf=2, 5%) communicative initiative and intention.

Other aspects than communication per se were mentioned as well, such as *attention/neglect* (nf=4, 13%) and (nf=3, 7%). Seventeen of the French respondents (17%) stated that they target different *neuropsychological functions*, such as memory (nf=3, 7%) or executive functions (nf=1, 2%). Similarly, twelve of the French respondents stated that they target *speech and voice* in one way or another (for example *dysarthria* (nf=3, 7%), *dysphonia* (nf=3, 7%) or breathing (nf=1, 2%). Another aspect targeted in both French (nf=4, 10%) and Swedish (nf=3, 10%) rehabilitation was *raised awareness/insight in the deficits*. Additional aspects, targeted by French SLPs were: *functionality* (nf=2, 5%), *apraxia* (nf=1, 2%), *conversational symbolism* (nf=1, 2%), *apathy* (nf=1, 2%) and oral motor function (nf=1, 2%). Finally, four of the Swedish respondents (13%) took the opportunity to state that they never, or rarely, offer treatment or simply that “it varies” (nf=7, 23%).

5.5.2.1 Prioritizations

When respondents were asked to specify what aspect they would choose to treat if they had to prioritize, eight (26%) of the Swedish respondents stated various aspects of communication, such as communicative interplay and communication with family and friends. Eight Swedish respondents (26%) stated *pragmatics*. Thirty-three of the French respondents (73%) stated *pragmatics* and five stated different aspects of communication such as *linguistic ability* and communicative initiative. Meanwhile, only two Swedish respondents (6%) and four French respondents (9%) stated *prosody*. One French respondent commented on this by stating that the prosodic deficits seemed minor in comparison to the other deficits. Furthermore, semantics were not mentioned at all by the French respondents, but by three of the Swedish respondents (10%).

Factors not directly related to communication, but considered worthy to prioritize, were different *cognitive aspects* (nf=2, 6%) (nf=4, 9%). Furthermore, one French respondent (2%) mentioned *dysarthria* while one of the Swedish respondents (3%) stated *insight in the deficits*. “*The patient’s safety*” (including *attention* and *swallowing*) was important for one Swedish respondent (3%). Four of the Swedish respondents (13%) considered it most important to focus on *information to the informal network of the patient*, and five (16%) maintained that focus should be on factors concerning *activity and participation*. Six of the French respondents (13%) and five of the Swedish (16%) simply replied that it depends: on the needs of the patients and relatives, on the deficits of the patient (“all patients are different”), and on the progress of the patient.

The motives for the prioritizations tended to vary, but respondents from both Sweden and France expressed that pragmatics and/or communication constituted the most
obvious deficit, although one Swedish respondent claimed that semantics was the most obvious deficit. One Swedish respondent stated that if pragmatics is targeted, it can improve the patient’s level of participation, and one that it could improve the patient’s quality of life. French respondents maintained the role of prosody and pragmatics for a well-functioning social life, although a French respondent expressed that it is difficult to obtain a modification in prosody.

5.5.3. Which are the means of intervention with the patient group?

Different types of interventions were identified, both training of function, compensatory strategies (including alternative and augmentative communication, AAC), and intervention targeting the informal and formal networks of the patient. Training of function most commonly occurred one-on-one with the patient (n_s=24, 72%) (n_f=42, 93%). A few respondents specified that the one-on-one training could occur with a third person, such as a relative or an intern. Group treatment was mentioned by four Swedish respondents (12%) and by eight French respondents (18%), and self-training by three Swedish respondents (9%) and no French respondents. Three Swedish (9%), as well as three French respondents (7%), stated that they use computer based training. However, six of the French respondents (13%) explicitly stated that they do not use computers in the training of function with the patient group, and one respondent specified that these patients need to practice how to communicate in “real life”, and not in front of a computer.

Other types of interventions mentioned were visits to the patient’s work site (n_s=1, 3%) and information about activities within the commune for brain injured (n_s=1, 3%). French respondents mentioned neuropsychological intervention by either a neuropsychologist or an SLP (n_f=7), occupational therapy (n_f=2, 4%), neuro-visual intervention by an orthoptist or an SLP (n_f=2, 4%), psychiatric intervention (by a psychiatrist or a psychologist) (n_f=1, 2%), intervention of the facial palsy (n_f=12%) and art therapy (n_f=1, 2%). One Swedish respondent (3%) stated training with the help of the informal network of the patient. Finally, four Swedish respondents (12%) and one French respondent (2%) here stated that they never/ rarely offer treatment. One Swedish respondent (3%) expressed that treatment of the patient group is often not prioritized due to lack of resources.

5.5.3.1 Materials and methods

Different types of treatment materials and methods were reported. These are summarized in Table 9. Generally, the French respondents stated more methods and materials than the Swedish respondents. The use of methods and materials specifically developed by or for SLPs or neuropsychologists, with the patient group seems to be more common in France than in Sweden. No neuropsychological materials or methods were reported by the Swedish respondents. Swedish respondents reported slightly more ecological material than French respondents. However, simulated ecological situations or ecological situations were used by six French respondents and by no Swedish respondent.
### Table 9. Materials and methods used in intervention of communication deficits in RHD patients.

<table>
<thead>
<tr>
<th>Type of material/method</th>
<th>Sweden</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specific SLP/neuropsychological material/method</strong></td>
<td>PACE (n=1)</td>
<td>PACE (n=2)</td>
</tr>
<tr>
<td></td>
<td>Lexia (n=1)</td>
<td>MIT (n=2)</td>
</tr>
<tr>
<td></td>
<td>Color Cards (n=2)</td>
<td>Gieip (n=1)</td>
</tr>
<tr>
<td></td>
<td>MacSnack (n=1)</td>
<td>Logix (n=1)</td>
</tr>
<tr>
<td></td>
<td>DTTC in case of apraxia of speech (n=1)</td>
<td>Speed (n=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rééduquer les Dysarthries (n=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Go/no-Go (n=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ordre d’Idées (n=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300 Exercices d’Inference (=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CRIUGM-38 (n=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Material from Ortho Édition (n=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Material from Éditions Solal (n=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Travailler les Fonctions Executives (n=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PRL (n=1)</td>
</tr>
<tr>
<td><strong>Linguistic material/method</strong></td>
<td>Inference exercises (n=1)</td>
<td>Exercises of implicit language (n=7)</td>
</tr>
<tr>
<td></td>
<td>Linguistic picture material (n=4)</td>
<td>Exercises of elaborated language (n=6)</td>
</tr>
<tr>
<td></td>
<td>Linguistic text material (n=2)</td>
<td>Text discourse exercises (n=4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lexico-semantic exercises (n=2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Syntax exercises (n=2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verbal fluency exercises (n=1)</td>
</tr>
<tr>
<td><strong>Other pedagogical material/method</strong></td>
<td>Conversation training (n=6)</td>
<td>Texts (n=8)</td>
</tr>
<tr>
<td></td>
<td>Simple short texts (n=4)</td>
<td>Drama exercises (n=6)</td>
</tr>
<tr>
<td></td>
<td>Reading ruler (n=1)</td>
<td>Picture stories (n=5)</td>
</tr>
<tr>
<td></td>
<td>Texts with adjusted character size (n=1)</td>
<td>Games (n=5)</td>
</tr>
<tr>
<td></td>
<td>Reading frame (n=1)</td>
<td>Pictures (n=4)</td>
</tr>
<tr>
<td></td>
<td>Drama exercises (n=1)</td>
<td>Visual support (n=4)</td>
</tr>
<tr>
<td></td>
<td>The SLP as a model for communication (n=1)</td>
<td>Written/oral material unspecified (n=4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Repetition/imitation (n=3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Computerized material (n=2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recording the patient (camera and/or microphone) and analyzing the communicative behavior (n=3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rhythms, music and singing (n=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Meta-discussion about the deficits (n=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short stories (n=1)</td>
</tr>
<tr>
<td><strong>Other neuropsychological material</strong></td>
<td></td>
<td>Exercises of logics/mathematics (n=5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Memory exercises (n=2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exercises of executive functions (n=2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Visual-spatial exercise’s (n=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cards with social abilities (n=1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Material based on the principles of Kim’s game (n=1)</td>
</tr>
<tr>
<td><strong>Ecological material</strong></td>
<td>Newspapers and magazines (n=2)</td>
<td>Pen and paper (n=3)</td>
</tr>
<tr>
<td></td>
<td>Books (n=2)</td>
<td>Maps (n=2)</td>
</tr>
<tr>
<td></td>
<td>Pen and paper (n=2)</td>
<td>Unspecified ecological material (n=1)</td>
</tr>
<tr>
<td></td>
<td>Picture puzzles (n=1)</td>
<td>Articles from Gorafi (n=1)</td>
</tr>
<tr>
<td></td>
<td>Maps (n=1)</td>
<td>Comic strips without words (n=1)</td>
</tr>
<tr>
<td></td>
<td>Manuscripts (n=1)</td>
<td>Surf pad (n=1)</td>
</tr>
<tr>
<td></td>
<td>Photos (n=1)</td>
<td>Photos (n=1)</td>
</tr>
<tr>
<td></td>
<td>Internet (n=1)</td>
<td>Time schedule/agenda (n=1)</td>
</tr>
<tr>
<td></td>
<td>Crosswords (n=1)</td>
<td>Videos (n=1)</td>
</tr>
<tr>
<td></td>
<td>Spelling program on the computer (n=1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Telephone (n=1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Computer (n=1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surf pad (n=2)</td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>No specific material (n=4)</td>
<td>Self-developed material (n=6)</td>
</tr>
<tr>
<td></td>
<td>Self-developed material (n=2)</td>
<td>Simulated ecological or ecological situations (n=6)</td>
</tr>
<tr>
<td></td>
<td>Same material as the material used with patients with aphasia (n=1)</td>
<td>Personal method (n=2)</td>
</tr>
<tr>
<td></td>
<td>The patient’s communication aid (n=1)</td>
<td>No specific material (n=2)</td>
</tr>
<tr>
<td></td>
<td>It depends on the patient’s symptoms (n=1)</td>
<td>It depends on the patient’s symptoms (n=2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Praat (n=1)</td>
</tr>
</tbody>
</table>

31
5.5.3.2 Prescription of communication aids

The prescription of communication aids was rather infrequent in both countries (figure 7), although it more commonly occurred in Sweden than in France (21% versus 7%). Different types of communication aids were identified. High-technological communication aids were LightWriter™, Widgit Go, Voice amplifier and Speech synthesis (Sweden) and Makaton™ (France). Low-technological were Reading aid, Communication board and Eye-pointing frame (Sweden), and alphabet, agenda for memory support, communication sheet, visual support to regulate turn-taking and an emotion-sheet (France). Two Swedish SLPs stated that they only prescribe communication aids for patients with dysarthria, and one clarified only prescribing communication aids if the deficits were severe. The responder who prescribed Widgit Go reported not being satisfied with it. One Swedish respondent claimed to prescribe communication aids previously, when working at a unit where the duration of the rehabilitation was longer. A few (n=3) of the French respondents stated that they did not know what Augmentative and Alternative Communication - AAC (Communication Améliorée et Alternative - CAA in French) was. Three of the French respondents claimed that they had never had a patient who needed communication aids. One French respondent claimed not to prescribe communication aids if the troubles were only pragmatic. In case of prescription of communication aids for patients with communication deficits, one French respondent specified that it was in order to help the patient understand expressions and to remember communication rules.

![Figure 7](image_url)

*Figure 7. Replies to the question “do you prescribe communication aids to patients with communication deficits after RHD due to stroke?”*

5.5.3.3 Intervention directed towards the informal network of the patient

Intervention directed towards the informal network of the patient was frequently reported, with barely any differences between the two countries. More responses were found in the Always/Often-group (65 and 64%) than in the Rarely/Never-group (35 and 36%) (figure 8). This kind of intervention could take different forms, and was given most commonly in form of oral information, but also written. Communication advice was given by 26 (76%) of the Swedish respondents and 36 (84%) of the French respondents, whereas concrete communication training was given by seven of the Swedish respondents (21%) (option not available in the French version of the survey). Therapeutic counselling was offered by eight (24%) of the Swedish respondents and by twelve (28%) of the French respondents.
One Swedish respondent stated to often provide intervention towards family members and other persons close to the patient in collaboration with the rest of the team. One Swedish respondent stated that (s)he offered to follow-up with the close persons of the patient, and one that (s)he offered an extra meeting with the close persons without the patient being present. One French respondent also stated to interview the close persons without the patient being present, and another French respondent highlighted the importance of simply listen to the family members and other persons close to the patient, and to try to understand their needs.

Figure 8. How often Swedish and French SLPs counsel relatives/other close persons about the communicative deficits of the patient

5.5.3.4 Counselling of the formal network of the patient

Counselling of the formal network about the communication deficits of the patient rather occurs “always” or “often” (48% and 61%) than “rarely” or “never” (33 % and 30%) (Figure 9). Replies in the Other-box from Swedish respondents supplied information on how the information was provided to the other health care professionals: at a team conference (n=2), in written form (n=1) or in the medical chart (n=2). Two Swedish respondents specified that they did not have to inform the other staff since they had enough experience. Three French respondents used the space of the Other-box to clarify that there were no other professionals to inform on their work site.

Figure 9. How often Swedish and French SLPs counsel the formal network about the communication deficits of the patient.
5.6. **Subjective experiences of the work with the patient group**

When respondents, in different questions, were asked to express their subjective experiences of the work with the patient group, positive aspects were rarer compared to negative ones, especially among Swedish respondents. French respondents generally expressed more positive aspects than Swedish, and three French respondents even claimed that they do not see any negative aspects at all in the caretaking of the patient group. However, in France, one respondent concluded that the caretaking of these individuals is only in its beginning, and can therefore only get more developed. In any case, respondents from both countries expressed that the work with the patient group is very stimulating, but that it takes a lot of energy. The respondents found that they were able to contribute a lot to the patient group. Working with these patients provides a good insight in how their deficits affect communication, participation and self-image but the work demands for collaboration with other professionals; especially neuropsychologists and occupational therapists were mentioned.

5.6.1.1 **Factors related to organisation and profession**

In relation to praxis, work and organisation, respondents saw it as a problem that not all patients with RHD are screened for communication deficits, and that the patient group is not sufficiently referred to an SLP, with the risk of missing the subtle language deficits. One Swedish respondent pinpointed that the patients are often not offered contact with an SLP since they are experienced as “highly verbal” by other health care professionals. However, few French respondents also expressed that these patients are more and more frequently referred to an SLP. One Swedish SLP saw it as a challenge that the low number of patients disenables the creation of routines in the caretaking of the patient group, while a French respondent complained about these patients often not being treated in France, while they are very well treated across the Atlantic. However, a few Swedish respondents expressed that it was positive that assessment and treatment of the patient group took place at all.

Swedish respondents also had some thoughts regarding the collaboration with other health care professionals. They highlighted the importance of a proper collaboration with a neuropsychologist. Some maintained that there was some uncertainty regarding the role of the SLP role for the patient group. One respondent expressed that the communication with other health care professionals regarding the patient group is often insufficient.

Quite a few Swedish respondents mentioned the lack of resources for the caretaking of the patient group: there aren’t enough neuropsychologists, and SLPs hardly have time to assess language at all, due to time-consuming dysphagia assessments.

5.6.1.2 **Knowledge and competence**

With regards to practical knowledge, several French and Swedish respondents highlighted the fact that there were not enough knowledge and competence about the patient group among SLPs, the formal network, and the informal network of the patient. Swedish SLPs stated that the communication deficits are often mistaken for cognitive deficits, and therefore may be discovered too late. Furthermore, Swedish respondents emphasised that specifically SLPs lack certain knowledge and competence regarding the patient group. French respondents, on the other hand, expressed that SLPs know more and more about these deficits and their rehabilitation, and that it is positive that these
often invisible deficits are being acknowledged by SLPs and the formal, and informal networks of the patients.

As for theoretical knowledge about the patient group, the respondents believed that there was not enough information about the patient group during the primary SLP education. It was however acknowledged that the education at some universities were better than elsewhere. Swedish respondents claimed that this particular field of study needs to be developed, saw the present study as a good initiative, and suggested that a study of the subject should be done within the frame of Statens Beredning för medicinsk och social Utvärdering - SBU\(^\text{13}\) (www.sbu.se) to better highlight the great need. The need for elaborating evidence for assessment, as well as structured treatment was perceived as important but challenging by Swedish respondents. French respondents mentioned the lack of reference documents about the patient group.

5.6.1.3 Assessment
On a positive note, both French and Swedish SLPs expressed that the patient group actually do get assessed, and at least French SLPs explicitly expressed that the deficits and their impact on the patient’s life are being identified by professionals. One Swedish respondent stated that the informal network luckily often identify the deficits, although the formal network do not. SLPs from both countries experienced some negative aspects of the assessment. French respondents complained that there was no systematic assessment of the patient group, and both Swedish and French respondents expressed that it is difficult to properly identify the deficits. French respondents highlighted that the fact that the communicative profiles of the patients actually vary enormously.

Turning to the perceived efficiency of assessment (Figure 10), French and Swedish SLPs generally experienced their assessment to adequately capture the deficits of the patient, considering that 56% (Sweden) and 32% (France) of the replies fell under the category “to a high degree”. French SLPs tended to be less sure of the accuracy of their assessment, compared to Swedish SLPs: most Swedish responses fall under the category “to a high degree” (56%), and most French responses fall under the category “to a neither high nor low degree”. Very few SLPs experience that the assessment captures the deficits “completely” 2% (Sweden) and 3% (France).

\(^{13}\) Swedish institution for the evaluation of health care intervention.
5.6.1.4 Intervention
Both positive and negative aspects of the intervention of the patient group were covered. French respondents made more comments regarding the intervention of the patient group than the Swedish respondents. For example, French respondents stated that the fact that SLPs have competence to treat the deficits needs to be acknowledged by other health care professionals.

With regards to treatment of function, French respondents experienced that specific material to target the patient group in treatment was lacking. One French respondent experienced that SLPs have knowledge about the assessment of the patient group, but not on how to treat the identified deficits. Some of the French respondents saw it as positive that the treatment of the patient group was ecological, although more respondents perceived it as not ecological enough. French SLPs thought negatively of the fact that only the manifest communication deficits are treated when in reality they are only a minor part of a larger cognitive decline. Swedish respondents commented that treatment contacts are too short as of today. One Swedish respondent questioned the utility of treatment of pragmatic function, and wondered whether information to, and compensatory strategies for, the informal network may be a more efficient intervention.

With regards to other types of interventions than treatment of function, French respondents experienced it as positive to be able to offer support and communication advice to the informal network of the patient, whereas Swedish respondents saw it as challenging to create sufficient understanding of the communication deficits by the informal network. One French respondent simply felt good about being able to offer a place where the patient could express and discuss existential difficulties in relation to the stroke.

Respondents from both countries perceived it as difficult to work with the patient group due to anosognosia, lack of insight, inability to take the interlocutor’s perspective, disability to participate during treatment, or apathy. French respondents also
experienced it as challenging to make sure that the patients have realistic expectations on treatment. The fact that pragmatic deficits may be a sensitive issue to discuss with the patient was perceived as challenging by Swedish respondents.

Turning to intervention outcomes, French respondents experienced that treatment generalizes poorly to everyday life, and that deficits in pragmatics and prosody often remain even after treatment. Consequentially, knowing when to stop giving treatment and how to evaluate the outcome of treatment was perceived as difficult. On the other hand, some French respondents believed that the treatment of the patient group was rather efficient, and that it was carried out with proper and adequate material. Furthermore, French respondents stated that they saw an improvement of many of the deficits including language and communication, cognitive functions, social functioning and self-esteem. In addition, French respondents also believed that both the patient and the formal and the informal networks obtain a better understanding of the difficulties after intervention. On the same note, French SLPs tend to be surer than Swedish SLPs that the treatment provided is efficient (Figure 11). The latter most commonly thought that treatment was “only partially efficient” Furthermore, 7% of the French respondents thought that the treatment provided was very efficient, while this was true for none of the Swedish respondents. Finally, a relatively high number of respondents stated that they don’t know whether their treatment provided is efficient or not, particularly Swedish respondents.

![Figure 11. How Swedish and French SLPs perceive the outcome of the treatment of the patient group.](image-url)
6. Discussion

6.1. Summary

6.1.1. Aim
The aim of the present study was to draw an outline of how patients with language and communication deficits following stroke-induced RHD are taken care of in speech-language pathology in two European countries: France and Sweden. Furthermore, the study aimed to compare the caretaking in these two countries. The caretaking was examined from four different angles: general conditions for the caretaking of the patient group, assessment, intervention and subjective experiences of the work with the patient group.

6.1.2. General conditions for the caretaking of the patient group
The professional competence available for the caretaking of the patient group differed very little between the two countries, with the exception of the differences in the compositions of multi-professional teams: French teams tended to be more varied than the Swedish ones, and more commonly included a neuropsychologist. SLPs in France more frequently met the patient group than SLPs in Sweden. The most common place to meet the patient group in Sweden was in outpatient rehabilitation, while Physical Medicine and Rehabilitation was the most common place to meet them in France.

6.1.3. Assessment
In both France and Sweden, the patients were most commonly screened for communication deficits only if there were suspicions of such, even though this trend was a bit stronger in Sweden than in France. Assessment of loss of function was most commonly carried out by formal tests targeting different aspects of language and communication, although non-standardized assessment also took place, and was twice as common in Sweden than in France. Assessment of activity and participation was most commonly carried out by a non-standardized assessment in Sweden, but by formal assessment of loss of function in France. Anamnesis from the informal network was another important aspect of assessment, occurring in both countries, although slightly more commonly in France. In Sweden, diagnoses of language ability were most common, whereas in France diagnoses of pragmatics and communication were most common. Furthermore, French SLPs diagnosed the patients with various neuropsychological symptoms, whereas this was not done in Sweden.

6.1.4. Treatment
French SLPs intervene more often, and have longer treatment contacts with the patients than do Swedish SLPs. Treatment most commonly occurred one-on-one in both countries. The most common aspect targeted in treatment was pragmatics for both countries. While France had many respondents stating that they targeted prosody in treatment, Sweden had not, and when asked to prioritize, none of the countries stated prosody (pragmatics in France and pragmatics and communication in Sweden).
6.1.5. **Subjective experiences of the work with the patient group**

As for subjective experiences of the work with the patient group, French respondents stated more positive aspects than did Swedish respondents. A factor expressed by both countries was lack of knowledge about the patient group, which was experienced to result in a reduced quality of caretaking of the patient group. Swedish SLPs specifically expressed the lack of resources for the patient group, including lack of neuropsychologists despite their importance for the caretaking of the patient group. Furthermore, Swedish SLPs considered that more research needs to be done on the work with the patient group. A correct assessment was considered particularly difficult by both countries although French SLPs were less sure about the accuracy of their assessment. French respondents made more comments about intervention, both negative, such that less knowledge is available on treatment than on assessment, but mostly positive. They also judged the outcomes of the intervention as better than the Swedish respondents. Anosognosia, and other patient related factors, were considered as hindrances for the intervention. Respondents found positive aspects of the caretaking of the patient group: the work with the patient group is rewarding, and these often subtle deficits are acknowledged by the formal and informal network of the patient after all.

6.2. **Method**

6.2.1. **Material**

Certain clarifications concerning terminology could have been made. In fact, one respondent claimed to have answered the survey from the point of view that dysarthria was a communication deficit, while the author of the present study had wanted to exclude dysarthria and other speech disorders from the replies. While this problem was only explicitly stated by one respondent, there is still a risk that other respondents made the same assumption. Possibly, the term “cognitive communication disorders” could have been used thoroughly by the author to avoid misconceptions as to the nature of the communication deficits. However, all researchers do not agree on the labelling of the deficits as “cognitive communication disorders”. For example Joanette (2004a) wants the deficits to be included in the term of “aphasia”. Therefore, not specifically labelling the deficits in the study may also be an asset, because it does not limit respondent’s replies. This is particularly important considering the fact that a great part of the study was qualitative in its nature. After all, answers specifically concerning dysarthria could in most cases easily be excluded from the analysis.

It is possible that in the French version of the survey, the correct term for targeting the diagnoses established by French SLPs have not been used since the French replies were not easily translated into a diagnosis according to ICD-10 (although ICD-10 does exist in France). Basically all of the Swedish answers could be translated into a diagnosis according to ICD-10. Consequentially, a direct comparison between the two countries could not be made, although a comparison could be made on a conceptual level, revealing that diagnoses of language (“aphasia”) are more common in Sweden than in France, where diagnoses of communication and pragmatics are more common.

6.2.2. **Data analysis**

In qualitative research, subjectivity is as a serious issue, and in order to avoid this, triangulation of the results is preferable. Due to the fact that there was only one author of the study, the study could not be triangulated in an inter-researcher manner. Due to the fact of it being too time-consuming, the study could neither be triangulated by
having the research re-perform the qualitative content analysis on the raw data. This may affect the credibility of the results, despite the analysis being performed conscientiously.

6.3. Results

6.3.1. Responses

Response rates is a common issue in survey research, and for the present study, the responses rates varied with different question categories, with a progressive decrease of response rates throughout the survey. The reduction of the response rates may have several reasons. The response rates were similar for the two countries, implying that the decrease in response were due to how the survey was constructed. Due to the fact the decrease actually was progressive, one may conclude that it was because respondents experienced fatigued towards the end because the survey was too long. However, the response rates suddenly rose again on the last question category, contradicting this proposition. The fact that the questions on the three middle sections were normally open-ended in their nature (according to Ejlertsson (2014, p. 121) open questions tend to have a low response rate), and required more lengthy answers may have influenced response rates. In addition, there is a risk that some questions are perceived as unnecessary, or too similar to other questions. However, one may also speculate that the low response rates on questions targeting treatment as compared to the relatively high response rate on questions targeting assessment have a more significant meaning: it may be that few SLPs actually treat the patient group, whereas assessment is more common. This can be supported by the fact that many SLPs answering the treatment questions have used the provided spaces to indicate that they do not offer treatment for the patient group.

6.3.2. Respondents

Means were taken to avoid an in any way biased sample of respondents in the present study (a broad distribution of the survey), but due to practical reasons bias may have occurred in any case. For example, considering the fact that most SLPs in France work in private SLP cabinets (Ministère des Affaires Sociales, de la Santé et des Droits des femmes, 2011), and not in public hospitals, one might find it troublesome that most French SLPs answering the present study were actually working in “en salariat” (as an employee in a hospital). This was simply due to the difficulty reaching SLPs working in private cabinets, since they often do not list their e-mails, as hospitals do.

Respondents were similar regarding demographic aspects, such as mean age and gender, and regarding professional aspects such as mean years of having worked as an SLP, mean years of having worked with the patient group, how many SLPs on the work site also working with the patient group, and frequency of SLPs working in a multi-professional team concerning the patient group. This allows for a more reliable comparison between the two countries.

6.3.3. General conditions for the caretaking of the patient group

The results on other professionals also involved in the caretaking of the patient group seem to indicate a larger diversity in the composition of the multi-professional teams in France, as compared to Sweden. The access to a neuropsychologist on the work site was more common in France than in Sweden. Similarly, Swedish SLPs often complained about the lack of access to neuropsychologist on the work site. Since the deficits are
often closely related to cognition, it may be beneficial to have an expert in cognition, namely a neuropsychologist, in the team, to be able to discuss and exchange on the matter. Both French and Swedish respondents stated how important the collaboration with a neuropsychologist actually was.

French SLPs view of knowledge and competence about the patient group was generally more positive than the Swedish view. And while Swedish SLPs asks for evidence and guidelines for assessment and treatment, as well as more research on the subject, French SLPs simply ask for more reference documents about the patient group. This partially confirms the hypothesis that the French caretaking of the patient group is more elaborated, which may be due to the fact that there is more research on the subject written in the French language (particularly Joanette & Monetta, 2004), as well as a specific assessment material developed in French (Joanette et al., 2004). However, SLPs from both countries mentions the under-referral of the patient group to SLP care, due to lack of knowledge about the communication deficits among other health care professionals. The deficits are often taken for cognitive deficits, and thus the patients are not always referred to an SLP. This is highly problematic if it means that the communication deficits are not assessed and treated since research shows that the communication deficits may affect the patient’s ability to function in daily life (Moix & Côté, 2004). In addition, quite a few SLPs from both countries thought negatively of the fact that there is no systematic screening for communication deficits in patients who have suffered from RH stroke. Introducing this kind of systematic screening could be a step in the right direction towards a better SLP caretaking of the patient group, which in turn would lead to an improved quality of life for the patients.

6.3.4. Assessment

In Sweden, the most common diagnosis established on the patient group for Swedish SLPs was “aphasia and dysphasia”, although a distinction is often made between communication deficits seen after RHD and aphasia, at least on a manifest level (for example Saldert, 2008). In France however, the diagnosis “aphasia” was rare. One can only speculate in what this means: An uncertainty among Swedish SLPs as to what the deficits really mean? A lack of a proper system for diagnosis (ICD-10) where the patient group is properly covered? Considering the fact that French respondents did not answer the question according to diagnoses in ICD-10, the latter could be possible. Most probably, it is a combination of the above cited factors. Similarly, this is reflected in the fact that one of the most commonly stated tests in Sweden, to examine loss of communicative function of patients with communication deficits due to RHD stroke, was in fact a test designed for language deficits due to aphasia following LHD. This is not the case for France, where MEC (Joanette et al., 2004) was the most commonly used test. Although anamnesis from the informal network occurs more commonly in France than in Sweden, more Swedish SLPs mention anamnesis when asked about assessment of loss of function. This may in its turn reflect the lack of proper assessment material in Sweden. One may speculate if the lack of specific assessment material could be one of the reasons for the lack of proper terminology (reflected in the diagnosis system), for the communication deficits of RHD patients, in Sweden.
6.3.5. **Intervention**

According to the results of the present study, French SLPs meet the patient group more often than Swedish SLPs. One Swedish respondent theorized about the fact that meeting few of the patient group disenables the creation of routines for the caretaking of the patient group. Consequentially, one may speculate if the French therefore do have better routines for the caretaking of the patient group. On the other hand, French SLPs have access to specific assessment material of the patient group (*Protocole MEC*) which may in itself aid in the structuring of the treatment. Thus, could it be the other way around: French SLPs meet the patients more often because they already do have better routines for the caretaking of the patients?

More treatment material was stated in general by French respondents, which could possibly reflect the fact that French SLPs meet the patient group for treatment more often than do Swedish SLPs. The use of ecological treatment material was more common in Sweden, whereas the use of specific SLP and/or neuropsychological treatment material was more common in France. This probably reflects the fact that formal treatment material is lacking in Sweden.

French SLPs conducted intervention of cognitive functions, such as memory and attention, while this was not done in Sweden. Since the cognitive functions highly impact the communication deficits of the patients (Tompkins, 2012, p. 66), this may be the reason why more French SLPs than Swedish perceive the outcome of the treatment as efficient. Furthermore, this may also be the reason to why French SLPs generally expressed more positive opinions about their caretaking of the patient group: they actually feel like they have something to offer them. However, this poses the question of what the role of the SLP actually is. In fact, Swedish respondents expressed that it not always clear what the SLPs can do for the patient group. While communication deficits certainly are a task for an expert in language and communication – the SLP, how should one reason if the communication deficits could improve simply with training of cognitive functions that are not normally considered a task for the SLP? If that would be the case, would it really be necessary for an SLP to intervene with the patient group at all? Before jumping to any such conclusions, further research is needed on the origin of the communication deficits, and on their treatment (for example Joannette, 2004a), and until that, RHD patients, with subtle yet undeniable communication deficits, should be offered assessment and intervention by a professional with specific expertise in communication and its pathology.
7. References


Appendix 1) Questionnaire, Swedish version

Svenska logopeders arbete med patienter med kommunikationssvårigheter efter stroke i höger hemisfär

Hur arbetar du som yrkesverksam logoped med patienter med kommunikationssvårigheter efter stroke i höger hemisfär?


Vad innebär ditt deltagande?


Observera att det endast rör sig om patienter med kommunikationssvårigheter efter stroke i höger hemisfär, det vill säga den språkligt icke-dominanta hemisfären. Du behöver inte arbeta endast med den patientgruppen, och det finns inga övre eller undre gränser för hur ofta du träffar dessa patienter.


Hur presenteras studiens resultat?

Arbetet med studien fortgår under 2015 och resultat presenteras i början av 2016. Examensarbetet skrivs på engelska, men eftersom arbetet även undersöker fransk data kommer en fransk sammanfattning att finnas tillgänglig. Tillgång till detta kan fås genom kontakt med personen som genomför studien (se kontaktuppgifter nedan).
Stort tack för din medverkan!

Agnes Löfgren, logopedstudent vid Uppsala universitet
agnes.lofgren@gmail.com

Kommunikationssvårigheter efter stroke i höger hemisfär - allmänt

1. Hur länge har du arbetat med patienter med kommunikationssvårigheter efter stroke i höger hemisfär?

2. Hur många patienter med kommunikationssvårigheter efter stroke i höger hemisfär träffar du vanligtvis?
   En eller flera per dag
   En eller flera per vecka
   En eller flera per månad
   En eller flera per år
   Färre än en per år
   Annat (ange)

3. Var träffar du vanligtvis patienter med kommunikationssvårigheter efter stroke i höger hemisfär? (flera val är möjliga)
   Akutavdelning (sjukhus)
   Slutenvårdsrehab (sjukhus)
   Öppenvårdsrehab (sjukhus)
   Polikliniskt
   Hemsökningsavdelning (i hem eller på boende)
   Primärvård
   Folkhögskola
   Afasicenter
   Annat (ange)

4. Hur många logopeder på din arbetsplats, inklusive dig själv, arbetar med patienter med kommunikationssvårigheter efter stroke i höger hemisfär?

5. Ingår du i ett multiprofessionellt team kring patienter med stroke i höger hemisfär?
   Ja
   Nej

6. Vilka övriga professioner, på din arbetsplats, är vanligtvis inkopplade i utredning och behandling av patienter med stroke i höger hemisfär?
   Arbetsterapeut
   Fysioterapeut
   Kurator
   Läkare
   Neuropsykolog
   Psykolog
   Sjuksköterska
   Undersköterska
   Annan (ange)

Kommunikationssvårigheter efter stroke i höger hemisfär – utredning

7. På din arbetsplats: utreds/screenas samtliga patienter med stroke i höger hemisfär för kommunikationssvårigheter eller bara de patienter där faktiska misstankar om kommunikationssvårigheter finns?
   Om du har flera arbetsplatser, beskriv kortfattat skillnaden mellan arbetsplatserna under "Annat". Samtliga patienter med stroke i höger hemisfär utreds/screenas för kommunikationssvårigheter
   Patienter med stroke i höger hemisfär utreds/screenas för kommunikationssvårigheter endast om det finns misstankar om sådana
8. Vilka bedömningsmaterial/bedömningssätt av kommunikationsförmåga använder du vid logopedisk utredning av patienter med stroke i höger hemisfär med hänsyn till FUNKTION (de konkreta språkliga/kommunikativa nedsättningarna)?

9. Vilka bedömningsmaterial/bedömningssätt av kommunikationsförmåga använder du vid logopedisk utredning av patienter med stroke i höger hemisfär med hänsyn till AKTIVITET och DELAKTIGHET ( hur de konkreta språkliga/kommunikativa nedsättningarna påverkar patientens förmåga att till exempel delta i vardagens aktiviteter)?

10. I de fall patienten med kommunikationssvårigheter efter stroke i höger hemisfär har anhöriga/övriga personer i sin närhet: intervjuar du de anhöriga/övriga personerna om patientens kommunikationssvårigheter?

   - Alltid
   - Ofta
   - Sällan
   - Aldrig

11. I de fall patienten med kommunikationssvårigheter efter stroke i höger hemisfär har anhöriga/övriga personer i sin närhet: intervjuar du de anhöriga/övriga personerna om patientens kommunikationsförmåga innan dennes stroke (den så kallade 'premorbida förmågan')?

   - Alltid
   - Ofta
   - Sällan
   - Aldrig

12. I vilken grad tycker du att utredningen fångar de kommunikationssvårigheter som du upplever att patienten har?

   - Helt och hållet
   - I hög grad
   - I varken liten eller hög grad
   - I liten grad
   - Inte alls
   - Vet ej

13. Efter utredning, vilken diagnos sätter du vanligtvis på patienter med kommunikationssvårigheter efter stroke i höger hemisfär?

Kommunikationssvårigheter efter stroke i höger hemisfär – insatser

14. Generellt sett, hur ofta träffar du en viss patient med kommunikationssvårigheter efter stroke i höger hemisfär för behandling?

   - Varje dag
   - Flera dagar i veckan
   - En gång i veckan
   - Flera gånger i månaden
   - En gång i månaden
   - Flera gånger per år
   - En gång per år
   - Annat (ange)
15. Under hur lång tidsperiod uppskattar du att du har behandlingskontakt med en och samma patient med kommunikationssvårigheter efter stroke i höger hemisfär (inklusive behandlingsuppehåll)?

16. Hur sker vanligtvis behandlingen av den nedsatta kommunikationsförmågan (till exempel enskilt, igrupp, självtränings vid dator etc.)?

17. Vilka olika aspekter av kommunikationen (t.ex pragmatik, lexikon, semantik, prosodi), hos patienter med kommunikationsstörningar efter stroke i höger hemisfär, brukar du vanligtvis behandla? Beskriv kortfattat hur det brukar gå till.

18. Om du måste prioritera, vilken aspekt av kommunikationen hos patienter med kommunikationsstörningar efter stroke i höger hemisfär tycker du är viktigast att behandla, och varför?

19. Vad för typ av material använder du vanligtvis vid behandlingen av patienter med kommunikationssvårigheter efter stroke i höger hemisfär? (fritt svar)

20. Vilka behandlingsprogram- eller principer använder du vanligtvis vid behandlingen av patienter med kommunikationssvårigheter efter stroke i höger hemisfär?

21. Hur upplever du vanligtvis resultatet av behandlingen av den nedsatta kommunikationsförmågan hos patienter med kommunikationssvårigheter efter stroke i höger hemisfär?
   - Mycket effektivt
   - Effektivt
   - Endast lite effektivt
   - Inte alls effektivt
   - Vet ej

22. Hur ofta ger du intervention i form av rådgivning till närstående/vänner/personal till patienter med kommunikationssvårigheter efter stroke i höger hemisfär?
   - Alltid
   - Ofta
   - Sällan
   - Aldrig

23. Vad ingår i den rådgivning till närstående/vänner/personal, till patienter med kommunikationssvårigheter efter stroke i höger hemisfär, du vanligtvis erbjuder? (Flera val är möjliga)
   - Skriftlig information
   - Muntlig information
   - Kommunikationsråd
   - Kommunikationsträning
   - Stödsamtal
   - Jag erbjuder inte rådgivning till närstående/vänner/personal till patientgruppen
   - Annat (ange)

24. Ger du råd till övrig personal på din arbetsplats om kommunikationen med patienter med kommunikationssvårigheter efter stroke i höger hemisfär?
   - Alltid
   - Ofta
   - Sällan
   - Aldrig
   - Annat (ange)


Kommunikationssvårigheter efter stroke i höger hemisfär – reflektioner

27. Enligt dig: vad finns det som är BRA i omhändertagandet av patienter med kommunikationssvårigheter efter stroke i höger hemisfär idag?

28. Enligt dig, vad finns det som är MINDRE BRA i omhändertagandet av patienter med kommunikationssvårigheter efter stroke i höger hemisfär idag?

29. Enligt dig: vad är den största utmaningen i omhändertagandet av patienter med kommunikationssvårigheter efter stroke i höger hemisfär idag?

30. Har du något mer du vill tillägga eller kommentera kring logopediska insatser till patienter med kommunikationssvårigheter efter stroke i höger hemisfär?

Avslutande del
Till sist vill vi ha några uppgifter, som är relevanta för studiens resultat, om dig och ditt yrkesutövande. Ditt deltagande i studien är fortfarande anonymt, och inga känsliga uppgifter kommer att publiceras i studiens rapport.

31. Din ålder

32. Ditt kön
Kvinna
Man
Annat
Vill inte uppgö

33. Studieort
Göteborg
Linköping
Lund
Stockholm
Umeå
Uppsala
Annat (ange)

34. År för logopedexamen

35. Antal år som yrkesverksam logoped

36. Vilket (eller vilka) landsting arbetar du inom?
Stockholms läns landsting
Landstinget i Uppsala län
Landstinget Sörländ
Region Östergötland
Region Jönköpings län
Region Kronoberg
Landstinget i Kalmar län
Region Gotland
Landstinget Blekinge
Region Skåne
Region Halland
Västra Götalandsregionen
Landstinget i Västmanland
Region Örebro län
Landstinget Västmanland
Landstinget Dalarna
Region Gävleborg
Landstinget Västernorrland
Region Jämtland Härjedalen
37. Jag arbetar inom:
Offentlig sektor
Privat sektor
Båda offentlig och privat sektor
Anat (ange)
Appendix 2) Questionnaire, French version

Comment travaillez-vous avec les patients atteints d’un AVC droit ?

Actuellement, il y a de nombreuses recherches conduites sur le travail orthophonique avec les patients aphastiques atteints d’une lésion cérébrale gauche. Pourtant il en manque sur le travail orthophonique avec les patients ayant des troubles de communication suite à un accident vasculaire cérébral (AVC) de l’hémisphère droit du cerveau. Selon plusieurs recherches sur le sujet (par exemple Moix & Côté, 2004 : Intervention orthophonique chez les cérébrolésés droits. Rééducation orthophonique 219), la prise en charge de ce dernier groupe devrait être développée. L’étude suivante est un mémoire de fin d’études en orthophonie, rédigée par une étudiante suédoise, surveillée par l’orthophoniste et chercheuse suédoise Monica Blom Johansson, à l’Université d’Uppsala, Suède.

L’objectif du mémoire est d’évaluer comment les orthophonistes suédoises et françaises prennent en charge les patients atteints d’un AVC de l’hémisphère droit. Par la suite, il examinera les différences ainsi que les similarités entre la prise en charge suédoise et la prise en charge française. De cette manière, nous espérons identifier les points forts et les points faibles de la prise en charge actuelle dans les deux pays, et ainsi permettre aux orthophonistes des deux pays de s’inspirer mutuellement.

Tout(e) orthophoniste actif(ve) qui travaille avec le groupe de patients en question peut répondre au questionnaire. Il s’agit de patients ayant des troubles de la communication après avoir subis un AVC de l’hémisphère droit, c’est-à-dire l’hémisphère non-dominant pour le langage. Cependant, il n’est pas obligatoire que vous travailliez uniquement avec ce groupe de patients.

Les orthophonistes qui ne travaillent pas avec ce groupe de patients peuvent également répondre au questionnaire. Les réponses de ceux-là nous donneront des informations importantes concernant quels orthophonistes qui prennent en charge ce groupe de patients. Si vous ne travaillez pas avec les patients atteints de troubles de communication, indiquez-le à la première question du questionnaire, et veuillez préciser pourquoi, si possible (par exemple que vous n’avez pas le temps de prendre en charge ce groupe de patients). Merci de préciser également la région dans laquelle vous travaillez à la dernière page du questionnaire.

Le questionnaire est composé de 37 questions qui visent à savoir comment vous, en tant qu’orthophoniste, travaillez avec ce groupe de patients. Il est composé de cinq parties : questions sur votre travail avec le groupe de patients en question, questions sur le bilan du groupe de patients en question, questions sur la prise en charge et la rééducation du groupe de patients en question, une partie avec quelques réflexions supplémentaires et finalement quelques questions, nécessaires pour l’analyse de l’étude, sur vous et votre pratique orthophonique.

Au total, il devrait vous prendre de 10 à 15 minutes de remplir le questionnaire, et votre participation est tout à fait facultative. Vous exprimez votre accord pour participer au projet en remplissant le questionnaire. En ce qui concerne votre confidentialité, vous participez au projet avec un anonymat complètement assuré. Si nous utilisions vos citations dans le mémoire, vous ne serez pas identifié. Nous vous invitons également à veiller à ne pas donner des informations qui pourraient identifier un(e) patient(e) particulier(e) dans vos réponses.


Un grand merci d’avance pour votre participation!
Les troubles de communication suite à un AVC de l'hémisphère droit

1. Pendant combien d'années avez-vous pris en charge les patients atteints de troubles de communication suite à un AVC de l'hémisphère droit ?

2. Combien de patients atteints des troubles de communication suite à un AVC droit rencontrez-vous ?
   - Un ou plus par jour
   - Un ou plus par semaine
   - Un ou plus par mois
   - Un ou plus par an
   - Autre (veuillez préciser)

3. Où rencontrez-vous les patients atteints de troubles de la communication suite à un AVC de l'hémisphère droit ?
   - Aux urgences
   - En unité d'êveil
   - En MPR (médecine physique et de réadaptation)
   - En clinique privé
   - En cabinet privé
   - Au domicile du patient
   - Autre (veuillez préciser)

4. En vous incluant, combien d'orthophonistes, sur votre lieu de travail, prennent en charge les patients atteints de troubles de communication suite à un AVC de l'hémisphère droit ?

5. Travaillez-vous dans une équipe pluridisciplinaire concernant les patients atteints des troubles de communication suite à un AVC de l'hémisphère droit ?
   - Oui
   - Non

6. Sur votre lieu de travail : quelles sont les autres professions qui prennent en charge les patients atteints d’un AVC droit ?
   - Aide-soignant(e)
   - Ergothérapeute
   - Infirmier(ère)
   - Kinésithérapeute
   - Médecin
   - Neuropsychologue
   - Psychologue
   - Autre (veuillez préciser)

Les troubles de communication suite à un AVC de l’hémisphère droit : le bilan

7. Sur votre lieu de travail, est-ce que tous les patients atteints d’un AVC droit voient un(e) orthophoniste, pour faire le point sur leur langage, ou cela se fait-il uniquement dans le cas où il y a des soupçons de troubles de communication ? (Dans le cas où vous avez plusieurs lieux de travail, merci de le préciser, sous « autre ».)
   - Tous les patients atteints d’un AVC droit voient un(e) orthophoniste pour faire le point sur leur langage
   - Uniquement les patients pour lesquels il y a des soupçons de troubles voient un(e) orthophoniste pour faire le point sur leur langage
   - Autre (veuillez préciser)

8. Quels matériaux et/ou méthodes utilisez-vous pour évaluer les troubles de communication, chez les patients atteints de troubles de communication suite à un AVC de l’hémisphère droit, au niveau fonctionnel (les troubles de communication concrets) ?

9. Quels matériaux et/ou méthodes utilisez-vous pour évaluer les troubles de la communication, chez les patients atteints de troubles de la communication suite à un AVC de l’hémisphère droit, au niveau écologique (pragmatique) (comment les troubles de
communication impactent les capacités du patient de participer dans ses activités quotidiennes ?

10. Dans le cas où le patient, atteint de troubles de la communication suite à un AVC de l’hémisphère droit, a de la famille ou d’autres personnes « proches » : poursuivez-vous un entretien avec la famille ou les autres personnes « proches » concernant les troubles de communication du patient ?
   Toujours
   Souvent
   Rarement
   Jamais

11. Dans le cas où le patient atteint de troubles de la communication suite à un AVC de l’hémisphère droit a de la famille ou d’autres personnes « proches » : poursuivez-vous un entretien avec la famille ou les autres personnes « proches » concernant la communication du patient avant son accident (communication pré-morbide) ?
   Toujours
   Souvent
   Rarement
   Jamais

12. A quel point pensez-vous que le bilan orthophonique, que vous avez effectué, reflète les véritables troubles de la communication que vous observez chez le patient ?
   Complètement
   A un haut degré
   A un degré moyen
   A un degré moindre
   Pas du tout
   Je ne sais pas

13. Une fois le bilan terminé, quelle(s) est/sont, normalement, la ou les diagnostic(s) que vous établissez ?

Troubles de communication suite à un AVC de l’hémisphère droit : la prise en charge/la reéducation

14. En général, à quelle fréquence rencontrez-vous les patients atteints des troubles de la communication suite à un AVC de l’hémisphère droit ?
   Chaque jour
   Plusieurs fois par semaine
   Une fois par semaine
   Plusieurs fois par mois
   Une fois par mois
   Plusieurs fois par an
   Une fois par an
   Autre (veuillez préciser)

15. Généralement, pendant combien de temps restez-vous en contact avec les patients atteints de troubles de communication suite à un AVC de l’hémisphère droit (fenêtres thérapeutiques incluses) ?

16. Comment se déroule normalement la rééducation de la communication (par exemple en individuel, en groupe, devant l’ordinateur) ?

17. Quels sont normalement les aspects de la communication du patient (par exemple pragmatique, prosodie) que vous rééduquez ? Merci de décrire brièvement comment vous rééduquez ces aspects-là.

18. Si vous devriez prioriser, quel aspect de la communication du patient (par exemple pragmatique, prosodie) trouvez-vous le plus important de rééduquer ?
19. Quels types de matériel utilisez-vous en rééduquant les troubles de la communication liés à un AVC de l'hémisphère droit ?

20. Quelles méthodes de rééducation utilisez-vous avec les patients atteints des troubles de communication suite à un AVC de l'hémisphère droit ?

21. Comment estimez-vous le résultat de la rééducation des troubles de communication des patients ?
   Très efficace
   Efficace
   Peu efficace
   Pas du tout efficace
   Je ne sais pas

22. A quelle fréquence proposez-vous une intervention auprès des proches/amis/personnel des patients atteints des troubles de communication suite à un AVC de l'hémisphère droit ?
   Toujours
   Souvent
   Rarement
   Jamais

23. En quoi consiste l'intervention auprès des proches/amis/personnel des patients atteints des troubles de communication suite à un AVC de l'hémisphère droit ?
   Information écrite
   Information orale
   Conseils de communication
   Soutien thérapeutique
   Je ne propose pas une intervention auprès des proches/amis/personnel de ces patients
   Autre (veuillez préciser) :

24. Proposez-vous des conseils au personnel sur votre lieu de travail concernant la communication des patients atteints des troubles de communication suite à un AVC de l'hémisphère droit ?
   Toujours
   Souvent
   Rarement
   Jamais
   Autre (veuillez préciser)

25. Proposez-vous des outils de CAA aux patients atteints des troubles de communication suite à un AVC de l'hémisphère droit ? Mettez oui ou non, s’il vous plaît. Si oui : merci de les préciser.

26. Proposez-vous d’autres prises en charge aux patients atteints de troubles de communication suite à un AVC de l’hémisphère droit ? Si oui, merci de préciser.

Troubles de communication suite à un AVC de l'hémisphère droit : réflexions concluantes

27. Selon vous : quels sont les aspects POSITIFS de la prise en charge actuelle des patients atteints des troubles de communication suite à un AVC de l'hémisphère droit ?
28. Selon vous : quels sont les aspects NEGATIFS de la prise en charge actuelle des patients atteints des troubles de communication suite à un AVC de l'hémisphère droit ?
29. Selon vous : quel est le plus grand défi par rapport à la prise en charge des patients atteints des troubles de communication suite à un AVC de l'hémisphère droit ?
30. Auriez-vous des remarques par rapport à la prise en charge des patients atteints des troubles de communication suite à un AVC de l'hémisphère droit ?

Informations sur vous et votre pratique
31. Année de naissance

32. Genre
Femme
Homme
Autre
Je ne souhaite pas le renseigner

33. Où avez-vous fait vos études d’orthophoniste ?
Amiens
Besançon
Bordeaux
Caen
Lille
Limoges
Lyon
Marseille
Montpellier
Nantes
Nice
Paris
Poitiers
Rouen
Strasbourg
Toulouse
Tours
Vandoeuvre-les-Nancy
Autre (veuillez préciser)

34. En quelle année avez-vous obtenu votre diplôme d’orthophoniste ?

35. Pendant combien d’années avez-vous travaillé en tant qu’orthophoniste ?

36. Dans quelle région travaillez-vous ?
Île-de-France
Champagne-Ardenne
Picardie
Haute-Normandie
Centre-Val de Loire
Basse-Normandie
Bourgogne
Nord-Pas-de-Calais
Lorraine
Alsace
Franche-Comté
Pays de la Loire
Bretagne
Poitou-Charentes
Aquitaine
Midi-Pyrénées
Limousin
Rhône-Alpes
Auvergne
Languedoc-Roussillon
Provence-Alpes-Côte d’Azur
Corse
Guadeloupe
Martinique
Guyane
La Réunion
Mayotte

37. Travaillez-vous actuellement en libéral ou en salariat ?
En libéral
En salariat
En exercice mixte
Appendix 3) Tests

French Language and communication


Cognition


Dysarthria

**Swedish**

*Language and communication*


BeSS - Bedömning av Subtila Språkstörningar (Brunnegård & Laakso, 1998)

*BNT* - *The Boston Naming Test* (original version: Kaplan et al., 1983, Swedish version: Tallberg, 2005)


**Dysarthria**

**Cognition**


**Questionnaires targeting activity and participation**

