Radboud University

Master thesis 2022

The effects of perceived expertise on the evaluations of persuasive messages in healthcare communication by standard accented vs. non-standard accented Dutch speakers

Word count: 8448

Radboud University Nijmegen, The Netherlands

Study degree: Master International Business Communication (IBC)

Student: Yuri Segers

Student number: s1063082

Supervisor: Emily Felker

Second assessor: Laura Speed

Date and place of submission: 's-Hertogenbosch, 16-5-2022

Abstract

The use of non-standard accented speakers in commercial persuasive contexts has already been investigated extensively. However, the influence of non-standard accentedness in non-commercial persuasive settings remained underexplored. Therefore, the current study investigated this matter by analysing how perceived expertise affected the evaluations of a non-standard accented speaker (Brabant) vs. standard accented speaker (Randstad) in persuasive healthcare communication. Assessing the impact of perceived expertise on the evaluations of non-standard accented speech in a healthcare context was relevant due to the ongoing coronavirus pandemic since, throughout this pandemic, there have been several non-standard accented virologists (cf. experts) trying to convince society to follow the restrictions and guidelines. The findings revealed that, overall, the Brabant speaker was not deemed more or less persuasive than the Randstad speaker; however, for both accents, high expertise showed a stronger level of persuasiveness than low expertise. This suggests that in the case of persuasive healthcare communication, listeners primarily rely on the speakers' degree of expertise rather than the type of accent involved. In contrast, concerning attitudinal evaluations, the Brabant speaker was downgraded on all dimensions (competence, status and dynamism), regardless of perceived expertise. Finally, both speakers were evaluated similarly on comprehensibility, except for when expertise was high. In the high expertise condition, the Brabant speaker was regarded as less comprehensible than the Randstad speaker. This potentially implies that listeners become more critical of non-standard accented speech when the speaker has a profession in which standard pronunciation might be the norm.

Introduction

Despite being relatively small in size, there is a multitude of accents spoken across the Netherlands such as 'Brabants' and 'Limburgs' in the South and 'Gronings' and 'Fries' in the North. Essentially, every province has a distinctive accent and within each province, there are regional differences. To illustrate, a person from Rotterdam, a city in the province of Zuid-Holland, often possesses a different accent than someone from Breda, located only 45 kilometres away in Noord-Brabant. Additionally, although broadly sharing similar speech characteristics, an individual from Breda may speak slightly different compared to a person from Eindhoven, which is also in Noord-Brabant. However, generally, the majority of the population speaks standard-accented Dutch or the so-called "Randstad accent" (CBS, 2021).

The Randstad accent is linked to the highly urbanised area in the west of The Netherlands (e.g. Amsterdam, Rotterdam) and is considered the most prestigious (Grondelaers et al., 2010; Heijmer & Vonk, 2002; Pinget et al., 2014). Regional accents, on the other hand, are regularly perceived as having less status than the Randstad accent (Hendriks & Van Meurs, 2021; Heijmer & Vonk, 2002; Pinget et al., 2014). Nonetheless, it is noteworthy that research in the field of accentedness can sometimes yield mixed results. For instance, regionally-accented speakers may, occasionally, be regarded as more social, likeable, generous and warm compared to their standard-accented counterparts (Grondelaers et al., 2010; Heijmer and Vonk, 2002; Hogg et al., 1984; Schoel and Stahlberg, 2012).

The use of accents has already been investigated in various settings, for example, in radio and TV commercials, as well as other types of persuasive communication concerning products and services (Hendriks & Van Meurs, 2021; Martín-Santana et al., 2015; Morales, Scott & Yorkston, 2012). However, the role of accents in non-commercial persuasive contexts such as healthcare communication remains underexplored. Additionally, little knowledge exists on the effects of speaker expertise on the evaluations of accentedness. Therefore, the present study will address this matter by analysing the influence of speaker expertise on the evaluations of persuasive messages in healthcare communication involving a Randstad accent (standard) and a Brabant accent (non-standard).

Literature review

The definition of accentedness

An accent can be described as a specific way of speaking that is commonly associated with certain groups of people from different regional, social or ethnic backgrounds, based on variations in terms of phonology and intonation (Lippi-Green, 1997). To clarify, inhabitants of one region may speak with a 'standard accent' that is distinguishable from that of people from another region, speaking with a 'non-standard accent'. Mostly, a standard accent is spoken by native speakers of any language or the majority within a country and is often associated with high socioeconomic status, power and media usage in a given community (Giles and Billings, 2004, p. 192). In contrast, a non-standard accent is frequently associated with foreigners, minorities, people from a certain regional background or groups with low socioeconomic status (Fuertes et al., 2012, p. 121). According to Mai and Hoffman (2014), practically everyone has an accent. However, these scholars (2014) argue that a person can be viewed as 'accentless' when his or her accent is widely accepted as 'standard'. Additionally, in their *"Accents in Business Communication (ABC) Model"*, Mai and Hoffman (2014) make a distinction between foreign and regional accents. Regarding foreign accents, the speaker's mother tongue is primarily responsible for variations in speech, whereas, with regional accents, the differences derive from regionally-specific speech features within a country.

Social categorisation and the Social Identity Theory

An accent, or more specifically, "one's manner of pronunciation" (Giles, 1970), is highly representative of a speaker's social identity and can transfer a substantial degree of social information (Edwards, 1999; Lippi-Green, 1997). Furthermore, since accents can be quite noticeable during social interactions, they often play a crucial role in the process of 'social categorisation' (Deprez-Sims & Morris, 2010). Essentially, social categorisation can be defined as assigning individuals to social categories, for example, nationality, ethnicity or socioeconomic status (Deprez-Sims & Morris, 2010). Thus, accents can become actively linked to economic, regional and social divisions between groups, which, in turn, can trigger social categorisation (Campbell-Kibler, 2007).

Another important phenomenon in the context of accentedness is the Social Identity Theory (SIT) (Tajfel, Billig, & Bundy, 1971), which is tightly related to social categorisation and refers to one's awareness of being part of a social category or group (Hogg & Abrams, 1988). According to Hogg and Abrams (1988), a social group comprises a set of people who

share a similar social identity or consider themselves as belonging to the same social category. Correspondingly, the SIT posits that people tend to distinguish between the 'ingroup' and 'outgroup' or more simply put, 'us' and 'them'. To illustrate, people with similar characteristics are viewed as the 'ingroup', while individuals who are perceived as dissimilar are regarded as the 'outgroup' (Tajfel, Billig, & Bundy, 1971; Deprez-Sims & Morris, 2013).

Concerning accentedness, Mai and Hoffman (2014) state that the SIT is at play when the presence of an accent causes people to be assigned to a specific group. This process might activate unfavourable judgements if the speaker has a different accent than that of the listener, suggesting that the speaker belongs to the outgroup (Gluszek & Dovidio, 2010; Mai & Hoffman, 2014). However, in the field of accentedness, a nuanced perspective of the SIT is required since outgroup members are not always evaluated more negatively. For instance, Śliwa and Johansson (2014), investigating how non-native English listeners evaluated non-native and native English accents in international business, revealed that because non-native English listeners adhered to the 'native speaker ideal', they rated native English speakers as having more status (e.g. ambition, intelligence) than themselves. Additionally, despite sharing ingroup membership (e.g. regional background), listeners may downgrade strongly-accented individuals based on a feeling of indirect shame (Schmader & Lickel, 2006). Finally, a study by Nejjari et al. (2012) in which native English speakers listened to Dutch-accented English (non-standard) revealed that being familiar with an accent may also cause negative evaluations. In their study, native listeners who were familiar with Dutch-accented English were more judgemental towards Dutch accents than unfamiliar listeners, possibly since familiar listeners may link a stronger accent to a low educational and/or professional background and consequently, lower socioeconomic status. However, familiar listeners experienced fewer problems understanding Dutch-accented English compared to unfamiliar listeners.

The influence of accentedness on attitudes and perceived comprehensibility

Accents can greatly affect attitudinal evaluations of speakers concerning several dimensions such as competence, status and dynamism. Competence involves the degree to which a speaker is perceived as reliable, intelligent, hardworking, educated and competent (Hendriks et al., 2014, 2016; Hendriks & Van Meurs, 2021). Status is concerned with how influential, trustworthy, confident and powerful a speaker sounds (Hendriks & Van Meurs, 2021). The dimension of dynamism mainly focusses on the extent to which a speaker is viewed as modern, hip, trendy and lively (Grondelaers et al., 2019; Hendriks & Van Meurs, 2021).

When observing earlier studies, it can be concluded that standard-accented speakers are mostly regarded more positively than non-standard accented counterparts on the aforementioned attitudinal dimensions. For instance, an experiment by Grondelaers et al. (2010), in which Dutch participants listened to Randstad (standard) or regionally-accented Dutch (non-standard), found that although regional Dutch accents were evaluated more positively than Randstad accents regarding solidarity (e.g. social attractiveness) and likeability (e.g. friendliness), they were often downgraded on competence and status. Congruent with Gondelaers et al. (2010), a study by Heijmer & Vonk (2002) showed that speakers with a Randstad accent were considered as being more competent than regionally-accented speakers, whereas the latter obtained higher scores on 'social' dimensions. This concurs with Hendriks and Van Meurs (2021), revealing that a Randstad accent was evaluated more favourably on competence, status and dynamism compared to a regional Brabant accent. Finally, congruent with the above-mentioned studies, a meta-study by Fuertes et al. (2012) and an experiment by Roessel et al. (2019), showed that standard accents were viewed as superior on competence, status and dynamism compared to non-standard accents. Generally, downgrading non-standard accented speakers stems from the notion of Standard Language Ideology, which refers to "a bias toward an abstracted, idealized, homogeneous spoken language which is imposed and maintained by dominant bloc institutions and which names as its model the written language, but which is drawn primarily from the spoken language of the upper-middle class" (Lippi-Green, 1997, p.64). Overall, this implies that standard-accented speakers are often viewed as more successful, educated and intelligent than non-standard accented speakers.

In addition to attitudes, non-standard accents may also be evaluated unfavourably in terms of comprehensibility, referring to the degree to which a speaker is experienced as understandable. Multiple studies have demonstrated that non-standard accents are regularly perceived as less comprehensible than standard accents (Hendriks & Van Meurs, 2021; Hendriks, Van Meurs & Hogervorst, 2016; Nejjari et al, 2012; Derwin & Munro, 1997; Munro & Derwin, 1995), meaning that listeners often find it harder to process non-standard accented speech. Thus, these findings suggest that non-standard pronunciation can potentially cause a speaker's message to be misunderstood or not understood whatsoever (Koster & Koet, 1993).

Persuasiveness of accents

In the present study's context, it is vital to gain insights into the effectiveness of accents in persuasion. As indicated earlier, the use of accents has already been investigated in several, mainly commercial, persuasive settings. For example, an experiment by DeSchields, Kara and Kaynak (1996) revealed that a standard-accented salesperson yielded a more positive impact on consumer purchase intention and source credibility compared to counterparts with a non-standard accent. This concurs with Reinares-Lara et al. (2016), showing that a non-standard accent was subject to unfavourable evaluations regarding source credibility, expertise and trustworthiness. Correspondingly, Lalwani et al. (2005) found that speakers with a standard accent were considered to have a higher degree of trustworthiness and credibility than regionally-accented speakers. Additionally, these scholars (2005) demonstrated that the standard accent generated more positive attitudes towards the commercial and purchase intention than the non-standard accent. Similarly, Hendriks et al. (2015) showed that consumers were less eager to purchase a product when the commercial utilised a non-standard accent. Finally, an experiment by Hendriks and Van Meurs (2021) showed that a regional Brabant accent resulted in more negative attitudes towards products in a vlog than a standard accent, regardless of whether the context was commercial or non-commercial. Overall, it is conceivable that the involvement of a non-standard accent in persuasion can have serious consequences because non-standard accents often stimulate more negative evaluations than standard accents. However, to date, these implications have mainly been demonstrated in commercial persuasive contexts, while data in non-commercial settings (e.g. healthcare communication) is scarce.

Source expertise and persuasion

As demonstrated by Reinares-Lara et al. (2016), a non-standard accent can negatively affect the perceived expertise of a speaker. However, this was primarily an effect of accent on perceived expertise, and not of the latter on the evaluations of accentedness. Conversely, the present study will investigate how perceived expertise influences perceptions of a standard vs. regional accent in non-commercial persuasive communication. Before doing so, it is important to gain insights into the impact of source expertise on persuasive messages.

Source expertise can be defined as "a communicator's level of skill or knowledge that is perceived by individuals" (Yuan et al., 2019, p. 272). The degree to which a communicator's expertise affects persuasion outcomes has already been investigated extensively. For instance, Clark et al. (2012) demonstrated that expert sources present a stronger likelihood of being perceived as valid, compelling, or in other words "correct" than

non-expert sources. Additionally, based on early scholars, persuasive messages promoted by experts are more likely to be regarded as valid or correct than messages advocated by sources that lack expertise (Hovland, Janis, & Kelley, 1953; Hovland & Weiss, 1951; Kelman & Hovland, 1953). Finally, investigations in psychology (Maddux & Rogers, 1980; Wood & Kallgren, 1988) and advertising (Braunsberger & Munch, 1998) showed that message recipients are likely to have more favourable attitudes towards expert sources than non-expert sources. Thus, this indicates that message recipients may be more prone to carefully attend to, and, in turn, be persuaded by a message of an expert compared to a non-expert.

On top of the previously illustrated effects of expertise, several experimental studies yielded interesting results by manipulating perceived expertise and message type. For example, Tobin and Raymundo (2009), who manipulated a source's level of expertise (high vs. low) as well as argument quality (strong vs. weak) in written persuasive communication about psychological and physical well-being of university students, revealed that high expertise stimulated greater attention to the message than low expertise. Particularly strong arguments appeared to be more persuasive than weak arguments when the source was depicted as having much expertise, whereas the weak arguments still presented some degree of persuasiveness. In contrast, when the source was described as having a low level of expertise, argument quality did not influence the perceived level of persuasiveness. Similarly, Clark et al. (2012), analysing the influence of source expertise on written persuasive messages concerning health and food sciences that were either counter-attitudinal (disagreeable) or pro-attitudinal (agreeable), showed that when messages were counter-attitudinal, argument quality strongly affected persuasion when the source was high but not low in expertise. To clarify, counter-attitudinal means that there are many discrepancies between the persuasive message and the pre-message attitudes, whereas, with pro-attitudinal, the discrepancy is low. However, when messages were pro-attitudinal, argument quality impacted persuasion in the low expertise manipulation but not when expertise was high.

All in all, this suggests that experts are more capable of changing one's attitude than non-experts, especially since in the aforementioned experiments, argument quality appeared to be more effective when the source was high in expertise. Additionally, in Clark et al. (2012), this occurred when messages were conflicting with participants' attitudes, which reinforces the notion that experts are more persuasive than non-experts. However, these investigations primarily analysed the impact of perceived expertise on non-commercial

persuasive settings in the written modality, potentially implying that research in spoken contexts is still lacking.

The present study

As illustrated above, previous literature offered concrete evidence of perceived expertise positively affecting persuasion-related outcomes and attitudes in written non-commercial persuasive settings, while non-standard accentedness often harms persuasiveness and attitudinal evaluations. However, little is known about the influence of perceived expertise on listeners' evaluations of standard vs. non-standard accented speakers regarding persuasiveness and attitudinal evaluations, as well as the impact of accents in non-commercial persuasive communication. Therefore, the present study will analyse this matter in a healthcare communication context.

Concerning the healthcare context, the effect of non-standard accentedness has mainly been investigated in healthcare settings that did not involve persuasion or a regional accent from within a country. For instance, a study by Lorelei, Baquiran and Nicoladis (2020), assessing the impact of a doctor's foreign accent on perceptions of competence showed that a doctor who spoke English with a Chinese accent was rated more negatively than a standard-accented Canadian doctor by all participants (Chinese Canadians vs. Caucasian Canadians). The recordings contained a simulation of a physician presenting a report with either good or bad news about cholesterol levels or cancer. Interestingly, the Chinese Canadian participants also downgraded the Chinese-accented speaker on competence, despite having the same ethnic background. Since both speakers were doctors, this investigation is to some extent related to the context of expertise. Therefore, the results may potentially be translatable to the effects of perceived expertise on the evaluations of regional Dutch accents in persuasive healthcare communication. Overall, although the aforementioned study did not directly manipulate expertise, the findings imply that expertise does not necessarily prevent non-standard accented individuals from being downgraded on certain traits.

In today's society, investigating expertise together with regional Dutch accentedness in persuasive healthcare communication is relevant due to the ongoing Corona-pandemic since, throughout this pandemic, there have been numerous non-standard accented experts regularly speaking publicly about the epidemiological situation in the Netherlands. For instance, virologist Marion Koopmans of the Erasmus UMC in Rotterdam who possesses a Limburgian accent, and Andreas Voss, professor of infection prevention at the Canisius Wilhelmina Hospital in Nijmegen who speaks German-accented Dutch. Both Koopmans and

8

Voss frequently aimed to raise awareness among the public concerning the urgency of the situation, as well as the importance of following the guidelines and restrictions, which may be regarded as a form of persuasion. Additionally, both are members of the "Outbreak Management Team" (RIVM, n.d), an advisory body that contributes to the Dutch government's Corona policy. In their role, they are often required to "persuade" the government into either imposing or loosening Corona-related measures. On the one hand, their non-standard accents may limit persuasiveness and negatively affect attitudinal evaluations, but on the other, their expertise might compensate for it. For this reason, previous findings of non-standard accents being evaluated more negatively than standard accents may not be fully translatable to the context of expertise in non-commercial persuasive healthcare communication. Perhaps, non-standard accentedness is less of an issue when the speaker is an expert compared to a non-expert.

As mentioned earlier, empirical knowledge on this topic is scarce. Hence, the current study will focus on how perceived expertise (high vs. low) influences evaluations of a Randstad (standard) vs. Brabant accent (non-standard) in persuasive healthcare communication. The grounds for selecting perceived expertise is because earlier investigations already analysed the influence of perceived expertise in non-commercial persuasive settings, which underpins its importance in this context (Tobin & Raymundo, 2009; Clark et al., 2012; Yuan et al., 2019). Additionally, high vs. low expertise will be assessed since previous studies yielded significant results with these two levels (Tobin & Raymundo, 2009; Clark et al., 2012; Yuan et al., 2019), increasing the likelihood of perceived expertise influencing evaluations of accented speakers. The reason for including a Randstad accent is because it is viewed as standard-accented Dutch (Heijmer & Vonk, 2002; Pinget et al., 2014), while the Brabant accent proved to be easily recognisable (Grondelaers et al., 2010). To effectively study this topic, the following research question and hypotheses were formulated:

- **RQ:** *What is the impact of perceived expertise on evaluations of a Randstad vs. a Brabant accent concerning attitudinal evaluations, persuasiveness and perceived comprehensibility?*
- **H1:** *The Brabant accent will be evaluated more negatively than the Randstad accent, regardless of perceived expertise.*
- **H2:** *The effect of accent will be smaller in the high expertise condition than in the low expertise condition.*

Method

In a verbal-guise experiment (the same text recorded by different speakers), Dutch listeners evaluated a recording of persuasive healthcare communication by either a speaker with a Randstad accent (standard) who was presented as an expert or non-expert, or a speaker with a Brabant accent (non-standard) who was presented as an expert or non-expert. The verbal-guise technique was employed because the speakers needed to be from the Randstad and Brabant regions to ensure authenticity. An alternative would have been the matched-guise method (same speaker and text but different speech varieties); however, this could have potentially jeopardised the authenticity of at least one of the accents.

Materials

Independent variables

The current study incorporated two independent variables, both containing two levels: 1. Perceived expertise (high vs. low); 2. Accentedness (Randstad vs. Brabant).

Perceived expertise (high vs. low)

Perceived expertise was operationalised by including a text before the recordings to indicate the speakers' level of expertise. In the expert condition (adapted from Yuan et al., 2019), the speaker was described as *"Dr. Rob van Hout, een hoog aangeschreven neurowetenschapper bij een gerenommeerd universitair medisch centrum in Nederland met meer dan 10 jaar ervaring in het ontwikkelen van medicijnen voor het centrale zenuwstelsel"*. This can be translated to English as *"Dr. Rob Van Hout, A highly regarded neuroscientist at a renowned university medical centre in The Netherlands with 10 years of experience in developing medicine for the central nervous system".* The non-expert condition was manipulated by depicting the speaker as *"Mr. Rob van Hout, leraar geschiedenis op een middelbare school in het midden van Nederland",* which means *"Mr. Rob van Hout, a high school history teacher in the middle of the Netherlands"* (adapted from Clark et al., 2012; Tobin & Raymundo, 2009).

Degree of accentedness (Randstad vs. Brabant)

Degree of accentedness was operationalised by organising a pre-test (see *Appendix D***: Pre-test**) with three speakers for the regional Brabant accent and two for the Randstad accent, intended to select the best materials and to ensure recognition of the accents. To exclude gender biases or possible confounds, all speakers were male and of similar age. The recordings were edited through Audacity (audio editing software), aimed to create speech fragments of similar length and speech rate. Ultimately, the two most comparable recordings (with similar scores), one per accent, were included.

Stimuli

In the actual experiment, the participants listened to a persuasive message about a fictional medicine that improves concentration. The persuasive message was spoken by a speaker with a Randstad accent or with a Brabant accent. Prior to both recordings, the speaker was presented as having either high or low expertise (through text). The grounds for including a fictional medicine was to reduce the possibility of the participants having any preconceptions about the topic, with the goal of ensuring that the evaluations were mainly derived from perceived expertise and accentedness. Regarding the improvement of concentration, it was assumed that the respondents would have a rather neutral stance towards this matter since it does not concern a severe or deadly disease. The text, which was particularly developed for this study, can be found in *Appendix C***: Stimuli**.

Subjects

A total of 137 Dutch respondents (age: *M* = 23.84, *SD* = 4.61, range = 18-62; gender: 63.5% female, 35% male, 1.5% other) took part in the experiment. Concerning regional background, the majority of respondents were from Noord-Brabant (26%) or the Randstad (19%), while 12% were from Noord-Holland and 12% from Zuid-Holland. For the remaining regions, 9% were from Utrecht (province) and 8% from Limburg, whereas 14% came from other regions (e.g. Groningen, Friesland, Flevoland, Overijssel, Gelderland, Drenthe or Zeeland). Finally, 35% reported having a HBO bachelor as their highest level of education, 31% WO bachelor, 29% WO master, 4% MBO and 1% PhD.

Distributions across expertise and accentedness conditions

A one-way ANOVA showed a non-significant difference regarding the average age (F (2, 134) = .824, p = .441) of the respondents across the four experimental conditions. A Chi-square analysis showed non-significant differences between gender ($\chi2$ (4) = 1.764, p = .779),

educational background ($\chi 2$ (8) = 2.179, *p* = .975) and regional background ($\chi 2$ (22) = 16.194, *p* = .806) of the respondents across the four experimental conditions. This means that age, gender, educational background and regional background were distributed evenly across the four experimental conditions.

Design

The present study employed a 2x2 between-subjects experimental design, which means that the participants were randomly assigned to one of the four conditions (1. Randstad accent, expert; 2. Randstad accent, non-expert; 3. Brabant accent, expert; 4. Brabant accent, non-expert). For each condition, a minimum of 30 participants was required.

Instruments

This study measured the effect of perceived expertise and accentedness on a total of six dependent variables (DVs). The present study's analytical model can be found in *Appendix A*: **The analytical model of the present study**.

Attitude towards the speaker, comprising of the DVs *competence*, *status* and *dynamism* was introduced by the statement 'the speaker sounds' and was measured with 13 seven-point Likert scale items anchored by 'completely disagree – completely agree'. *Competence* was measured with the following five items: 'reliable', 'intelligent', 'hardworking', 'educated' and 'competent' (based on Hendriks & Van Meurs, 2021). The reliability of the items measuring competence was good (α = .89). *Status* was measured with the following four items: 'influential', 'credible', 'self-confident' and 'has a powerful voice' (adapted from Hendriks & Van Meurs, 2021). Initially, this variable included the item 'trustworthy', meaning 'betrouwbaar' in Dutch. However, the item 'reliable' of the variable *competence* has the same translation in Dutch and therefore, 'trustworthy' was replaced by 'credible' which means 'geloofwaardig'. The reliability of the items measuring status was acceptable (α = .78). *Dynamism* was measured with the following four items: 'modern', 'hip', 'trendy' and 'lively' (based on Hendriks et al., 2021; Grondelaers et al., 2019). The reliability of the items measuring dynamism was good (α = .89).

Persuasiveness, consisting of the DVs *attitude towards the medicine* and *attitude towards the message* was introduced by the statement 'I believe this medicine/message is' and was measured with 6 seven-point Likert scale items anchored by 'completely disagree – completely agree'. *Attitude towards the medicine* was measured with the following three

items: 'effective', 'interesting', and 'good' (adapted from Hendriks & Van Meurs, 2021; Hendriks et al., 2015; Villegas, 2002). The reliability of the items measuring attitude towards the medicine was good ($\alpha = .81$). *Attitude towards the message* was measured with the following three items: 'informative', 'accurate' and 'convincing' (adapted from Hendriks & Van Meurs, 2021; Hendriks et al., 2015). The reliability of the items measuring attitude towards the message was acceptable ($\alpha = .77$).

Additionally, to assess *behavioural intention*, the respondents were presented with the following statement: 'I would recommend this medicine to anyone with severe concentration problems', followed by a binary measure with 'yes or no'.

The final DV, *perceived comprehensibility*, involved the extent to which the speakers were experienced as understandable and was measured with a seven-point Likert scale introduced by 'the speaker is easy to understand', anchored by 'completely disagree – completely agree'; 'the speaker is difficult to understand', anchored by 'completely disagree – completely agree'; 'the speaker is clearly understandable', anchored by 'completely disagree – completely agree' (based on Hendriks et al., 2018; Munro et al., 2006). After reverse coding the second statement, the reliability of the items measuring comprehensibility was good ($\alpha = .84$).

Procedure

The experiment took place via Qualtrics, which is a cloud-based platform to develop, conduct and process online surveys. The survey commenced with an introductory text in which the respondents were invited to participate in the survey, as well as received information concerning privacy matters and the proposed incentive (a Bol.com voucher). Additionally, the participants were not informed about the study's actual purpose and the speakers' origin, intended to counter potential biases. Instead, they were told that they would be listening to a speaker in a healthcare context. The average completion time of the survey was 5.12 minutes. The introductory text can be found in *Appendix B*: **Introductory text for the survey**; the survey can be found in *Appendix E*:

Before listening to the recordings, the respondents were presented with demographic questions about their age, gender, and regional and educational background, followed by a random assignment to one of the four experimental conditions. After reading the short text concerning speaker expertise and listening to the recordings, the respondents were exposed to the seven-point Likert scale questions measuring the dependent variables. Subsequent to

concluding the survey, the study's aim was briefly explained, the respondents were thanked for their involvement and were asked to provide their contact details if they wanted to have a chance of winning the proposed incentive.

Statistical treatment

To analyse the results, two-way ANOVAs with perceived expertise and degree of accentedness as factors were performed, aimed to see how the aforementioned independent variables influenced the dependent variables, as well as a possible interaction effect.

Results

In this section, the results of the experiment will be presented, complemented by tables for the descriptive statistics of the two-way ANOVAs.

Persuasiveness

A two-way ANOVA with perceived expertise and degree of accentedness as factors showed a significant main effect of expertise on attitude towards the medicine (F (1, 133) = 14.83, p = <.001, n^2 = .100), but no significant main effect of degree accentedness on attitude towards the medicine (F (1, 133) = .66, p = .419, n^2 = .005). The interaction effect between perceived expertise and degree of accentedness was not statistically significant (F (1, 133) = .04, p = .846, n^2 = .000). Irrespective of accent, presenting the speaker as having high expertise (M = 4.82, SD = .98) yielded more positive attitudes towards the medicine compared to when the speaker was presented as having low expertise (M = 4.14, SD = 1.10). The descriptive statistics for attitude towards the medicine can be found in *Table 1*.

Table 1: Means, standard deviations and sample sizes for attitude towards the medicine on a scale of 1 (most negative) to 7 (most positive)
(** = p <.001)

Expertise**	Accentedness	*M*	*SD*	*n*
High	Randstad speaker	4.92	.86	36
	Brabant speaker	4.74	1.09	38
	Total	4.82	.98	74
Low	Randstad speaker	4.19	1.16	31
	Brabant speaker	4.08	1.04	32
	Total	4.14	1.10	63
Total	Randstad speaker	4.58	1.07	67
	Brabant speaker	4.44	1.11	70

A two-way ANOVA with perceived expertise and degree of accentedness as factors showed a significant main effect of expertise on attitude towards the message (F (1, 133) = 6.65, p = .011, n^2 = .048), but no significant main effect of degree accentedness on attitude towards the message (F (1, 133) = 1.50, p = .223, n^2 = .011). The interaction effect between perceived expertise and degree of accentedness was also non-significant (F (1, 133) = .62, p = .431, n^2 = .005). Irrespective of accent, presenting the speaker as having high expertise (M =

4.76, SD = 1.07) led to more positive attitudes towards the message than when the speaker was presented as having low expertise (M = 4.27, SD = 1.16). The descriptive statistics for attitude towards the message can be found in *Table 2*.

Table 2: Means, standard deviations and sample sizes for attitude towards the message on a scale of 1 (most negative) to 7 (most positive)
(* = p <.050)

Expertise*	Accentedness	*M*	*SD*	*n*
High	Randstad speaker	4.95	1.11	36
	Brabant speaker	4.57	1.02	38
	Total	4.76	1.07	74
Low	Randstad speaker	4.31	1.26	31
	Brabant speaker	4.23	1.07	32
	Total	4.27	1.16	63
Total	Randstad speaker	4.66	1.21	67
	Brabant speaker	4.41	1.05	70

Regarding the binary measure, a Chi-square analysis showed that only perceived expertise had a significant impact ($\chi2$ (3) = 14.228, p = .003). Of the 73 participants who were exposed to the high expertise condition, a total of 34 answered 'yes' to whether they would recommend the medicine to anyone with severe concentration problems, whereas in the low expertise condition, 11 answered 'yes'. Concerning the 59 participants who were exposed to the low expertise condition, a total of 48 answered 'no', while in the high expertise condition, 39 answered 'no'. Overall, this suggests that participants who listened to an expert were more likely to recommend the medicine to others compared to participants who listened to a non-expert.

Competence

A two-way ANOVA with perceived expertise and degree of accentedness as factors showed a significant main effect of degree of accentedness on competence (F (1, 133) = 6.10, p = .015, n^2 = .044), but no significant main effect of perceived expertise on competence (F (1, 133) = 3.38, p = .068, n^2 = .025). The interaction effect between perceived expertise and degree of accentedness was also non-significant (F (1, 133) = .01, p = .935, n^2 = .000). Irrespective of expertise, the speaker with the Randstad accent (M = 4.69, SD = 1.12) was perceived as

having more competence compared to the Brabant-accented speaker ($M = 4.21$, $SD = 1.19$). The descriptive statistics for competence can be found in *Table 3*.

Table 3: Means, standard deviations and sample sizes for competence on a scale of 1 (most negative) to 7 (most positive)

(* = p <.050)

Expertise	Accentedness*	*M*	*SD*	*n*
High	Randstad speaker	4.55	1.17	36
	Brabant speaker	4.38	1.09	38
	Total	4.61	1.15	74
Low	Randstad speaker	4.50	1.05	31
	Brabant speaker	4.00	1.28	32
	Total	4.24	1.19	63
Total	Randstad speaker	4.69	1.12	67
	Brabant speaker	4.21	1.19	70

Status

A two-way ANOVA with perceived expertise and degree of accentedness as factors showed a significant main effect of degree of accentedness on status ($F (1, 133) = 14.73$, $p = <.001$, $n^2 = .100$), but no significant main effect of perceived expertise on status ($F (1, 133) = 1.38$, $p = .242$, $n^2 = .010$). The interaction effect between perceived expertise and degree of accentedness also showed non-significant effects ($F (1, 133) = .04$, $p = .853$, $n^2 = .000$). Irrespective of expertise, the Randstad-accented speaker ($M = 4.67$, $SD = 1.12$) was regarded as having a higher status than the speaker with the Brabant accent ($M = 3.93$, $SD = 1.14$). The descriptive statistics for status can be found in *Table 4*.

Table 4: Means, standard deviations and sample sizes for status on a scale of 1 (most negative) to 7 (most positive)

(** = p <.001)

Expertise	Accentedness**	*M*	*SD*	*n*
High	Randstad speaker	4.76	1.15	36
	Brabant speaker	4.05	1.05	38
	Total	4.39	1.15	74
Low	Randstad speaker	4.56	1.11	31
	Brabant speaker	3.78	1.24	32
	Total	4.17	1.23	63
Total	Randstad speaker	4.67	1.12	67
	Brabant speaker	3.93	1.14	70

Dynamism

A two-way ANOVA with perceived expertise and degree of accentedness as factors showed a significant main effect of degree of accentedness on dynamism (F (1, 133) = 25.74, p = <.001, n^2 = .162), but no significant main effect of perceived expertise on dynamism (F (1, 133) = 1.28, p = .261, n^2 = .009). The interaction effect between perceived expertise and degree of accentedness was also non-significant (F (1, 133) = .29, p = .591, n^2 = .002). Irrespective of expertise, the speaker with the Randstad accent (M = 4.26, SD = 1.21) was perceived as having more dynamism compared to the speaker with the Brabant accent (M = 3.21, SD = 1.19). The descriptive statistics for dynamism can be found in *Table 5*.

Table 5: Means, standard deviations and sample sizes for dynamism on a scale of 1 (most negative) to 7 (most positive)

(** = p <.001)

Expertise	Accentedness**	*M*	*SD*	*n*
High	Randstad speaker	4.42	1.31	36
	Brabant speaker	3.27	1.09	38
	Total	3.83	1.33	74
Low	Randstad speaker	4.08	1.07	31
	Brabant speaker	3.15	1.30	32
	Total	3.61	1.27	63
Total	Randstad speaker	4.26	1.21	67
	Brabant speaker	3.21	1.19	70

Comprehensibility

A two-way ANOVA with perceived expertise and degree of accentedness as factors showed non-significant main effects of perceived expertise (F (1, 133) = .05, p = .829, n^2 = .000) and degree of accentedness on comprehensibility (F (1, 133) = 2.57, p = .111, n^2 = .019). However, the interaction effect between perceived expertise and degree of accentedness showed a significant result (F (1, 133) = 4.31, p = .040, n^2 = .031). The descriptive statistics for comprehensibility can be found in *Table 6*.

Table 6: Means, standard deviations and sample sizes for comprehensibility on a scale of 1 (most negative) to 7 (most positive)

Expertise	Accentedness	*M*	*SD*	*n*
High	Randstad speaker	5.81	.98	36
	Brabant speaker	5.11	1.12	38
	Total	5.45	1.10	74
Low	Randstad speaker	5.45	1.28	31
	Brabant speaker	5.54	1.06	32
	Total	5.50	1.17	63
Total	Randstad speaker	5.64	1.13	67
	Brabant speaker	5.30	1.11	70

To disentangle the significant interaction, separate ANOVAs were conducted for high and low expertise. The separate one-way ANOVA for high expertise with degree of accentedness as a between-subjects factor showed a significant effect of accentedness on comprehensibility (F (1, 72) = 8.22, p = .005, n^2 = .102). When the speakers were depicted as having high expertise, the Randstad accent (M = 5.81, SD = .98) was experienced as more comprehensible than the Brabant accent (M = 5.11, SD = 1.12). For the low expertise condition, the effect of degree of accentedness on comprehensibility was not statistically significant (F (1, 61) = 0.09, p = .762, n^2 = .002). The profile plot for the interaction effect can be found in *Figure 1*.

Figure 1: Profile plot for the interaction effect of comprehensibility
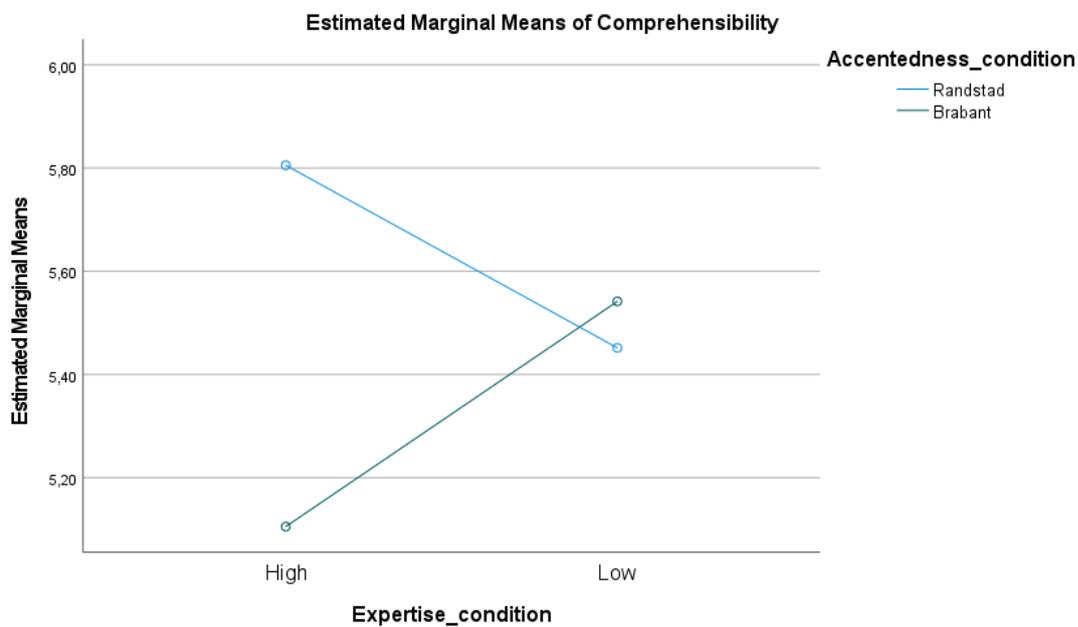
Conclusion and discussion

The purpose of the current study was to explore the influence of perceived expertise on non-commercial persuasive healthcare communication by a regionally-accented Dutch speaker (Brabant) and a standard-accented Dutch speaker (Randstad). The primary motivation to analyse this matter was that during the coronavirus pandemic, there have been several non-standard accented experts speaking publicly about COVID-19. While doing so, they often attempted to convince society of the situation's urgency and the necessity to follow the restrictions and guidelines. Additionally, the influence of non-standard accentedness had mainly been investigated in a healthcare context that did not involve a persuasiveness component, a direct manipulation of perceived expertise or a regional accent (see Lorelei, Baquiran & Nicoladis, 2020). Essentially, this study tried to reveal whether experts' non-standard accentedness puts limits on persuasiveness, or if their level of expertise might compensate for it.

To effectively investigate this topic, the following research question was established: *what is the impact of perceived expertise on evaluations of a Randstad vs. a Brabant accent concerning attitudinal evaluations, persuasiveness and perceived comprehensibility?* Overall, the findings of this study showed that regardless of perceived expertise, the speaker with the Brabant accent (non-standard) was downgraded on all attitudinal evaluations (competence, status and dynamism) compared to the Randstad-accented speaker (standard). Particularly for status and dynamism, the differences between the two speakers were large.

Regarding *persuasiveness*, the speakers' level of expertise appeared to outweigh degree of accentedness. For both attitude towards the medicine and attitude towards the message, the influence of perceived expertise completely overshadowed the effects of accentedness. The findings showed that high perceived expertise yielded more positive attitudes towards the medicine and message than low expertise, irrespective of the speakers' accentedness. This suggests that experts are more persuasive than non-experts, even when they speak with a non-standard accent.

Concerning *perceived comprehensibility*, neither perceived expertise nor degree of accentedness had a significant impact. However, interestingly, the interaction effect revealed that in the high expertise condition, the Brabant speaker was deemed less comprehensible than the Randstad speaker.

Based on the answer to the research question, the first hypothesis: *the Brabant accent will be evaluated more negatively than the Randstad accent, regardless of perceived expertise* can only be supported in terms of attitudinal evaluations but not for persuasiveness and comprehensibility. For persuasiveness, the contrary occurred since high expertise ensured more favourable attitudes than low expertise for both degrees of accentedness. In the case of comprehensibility, the Brabant speaker was only experienced as less comprehensible than the Randstad speaker when the speakers were depicted as having high expertise but when perceived expertise was low, there was no significant difference.

When looking at the second hypothesis: *the effect of accent will be smaller in the high expertise condition than in the low expertise condition*, the findings presented evidence of both expertise conditions mitigating the effect of accent on persuasiveness since the Brabant speaker and Randstad speaker received similar scores on attitude towards the medicine and message. Thus, the influence of accent was small in both expertise conditions, meaning that the judgements primarily derived from perceived expertise rather than accentedness. In contrast, for the attitudinal evaluations, the impact of accent was strong in the high as well as low expertise conditions, which suggests that high expertise does not improve perceptions of competence, status and dynamism of a non-standard accented speaker. Finally, for comprehensibility, as opposed to expectations, the effect of accent was larger in the high expertise condition than in the low expertise condition. The next paragraphs will provide a thorough discussion of the previously mentioned findings.

Attitudinal evaluations (status, competence & dynamism)

Our study demonstrated that the findings of persuasiveness did not translate to attitudinal evaluations since, in both expertise conditions, the Brabant accent stimulated more negative attitudes than the Randstad accent. The Brabant speaker being downgraded on status and competence is compatible with multiple earlier investigations showing that a regionally-accented Dutch speaker caused more negative evaluations than a Randstad speaker on the aforementioned dimensions (e.g. Gondelaers et al., 2010; Heijmer & Vonk, 2002; Hendriks & Van Meurs, 2021). On top of status and competence, the study by Hendriks and Van Meurs (2021) also revealed that a Randstad accent was viewed as superior in terms of dynamism compared to a Brabant accent. Additionally, the Brabant speaker receiving more negative evaluations on status, competence and dynamism concurs with Fuertes et al. (2012) and Roessel et al. (2019) who showed that non-standard accented speakers often evoke more unfavourable judgements on these dimensions than standard-accented speakers.

Concerning perceived expertise, the current study showed that high expertise did not suppress the negative attitudinal evaluations of the Brabant speaker. More specifically, the Brabant speaker was equally downgraded in both expertise conditions, possibly suggesting that non-standard accented speakers often elicit more negative attitudes compared to standard accented counterparts, irrespective of profession. Since the present investigation was perhaps one of the first to measure the effects of perceived expertise on attitudinal evaluations of standard vs. non-standard accented speakers, it is relatively difficult to compare our findings to that of previous studies. Nonetheless, the Brabant speaker being downgraded in both expertise conditions is partly in agreement with Lorelei, Baquiran and Nicoladis (2020) who found that a non-standard accented doctor (cf. expert) was evaluated more negatively on competence than a standard-accented counterpart. However, this comparison needs to be made with caution because their study did not directly manipulate perceived expertise.

A potential explanation for our study not yielding a significant impact of perceived expertise on competence, status and dynamism might be because these attitudinal dimensions were concerned with the manner in which the speakers sounded. To clarify, the statements measuring the aforementioned dimensions were introduced by 'the speaker sounds' and hence, the respondents may have solely formed an impression based on the speakers' voice characteristics rather than professional background. Thus, presenting a non-standard accented speaker as either an expert or non-expert does not necessarily change listeners' perceptions of how a speaker sounds. All in all, this implies that individuals who speak with non-standard accents will regularly be subject to negative stigmas such as low socioeconomic status (see Fuertes et al., 2012, p. 121), regardless of their professional background.

Persuasiveness
Due to the coronavirus pandemic, it was relevant to establish whether experts' non-standard accentedness affects persuasiveness in a healthcare setting. Our study's findings reveal that a non-standard accent is not perceived as more or less persuasive than a standard accent, irrespective of whether the speakers are presented as an expert or non-expert. Non-standard accentedness not limiting persuasiveness in the present investigation is inconsistent with various other studies. For example, Hendriks and Van Meurs (2021) showed that a Brabant accent triggered more unfavourable attitudes towards products in a blog in both commercial and non-commercial contexts. The current study's outcome is also incongruent with Hendriks et al. (2015) who found that the involvement of a non-standard accent in commercials reduced consumer purchase intention. Additionally, other investigations assessing the influence of

non-standard accents on consumer purchase intention and attitudes towards commercials demonstrated that a non-standard accent often causes more negative judgements compared to a standard accent (e.g. DeSchields, Kara and Kaynak, 1996; Lalwani et al., 2005; Reinares-Lara et al., 2016).

A possible reason for degree of accentedness not affecting persuasiveness is that, unlike the above-mentioned investigations, the present study concerned a non-commercial persuasive healthcare setting, including a direct manipulation of expertise. As can be seen in *Appendix C*: **Stimuli**, the utterances of the speakers were about a fictional medicine designed to improve concentration. It appears that in such contexts, listeners mainly rely on whether the speaker has expertise relevant to the medicine rather than the type of accent involved. To be more specific, in the high expertise condition, the speakers were introduced as experienced and highly regarded neuroscientists, whereas in the low expertise condition, they were depicted as high school history teachers. Thus, in the high expertise condition, the speakers were qualified to promote this type of medicine while in the low expertise condition, they were not. Consequently, this may have diminished the impact of the speakers' accents on persuasiveness since the level of expertise seemed to be more relevant. To illustrate, an accent may have a stronger effect when it is the only information available; however, when other relevant information is included (e.g. speaker profession), that information takes precedence.

Perceived expertise positively affecting persuasiveness is in line with several previous investigations. For instance, early scholars showed that persuasive messages provided by experts were considered to be more convincing than persuasive messages by non-experts (e.g. Hovland, Janis, & Kelley, 1953; Hovland & Weiss, 1951; Kelman & Hovland, 1953). Other studies also demonstrated that message recipients tend to have more positive attitudes towards expert sources than non-expert sources (Maddux & Rogers, 1980; Wood & Kallgren, 1988; Braunsberger & Munch, 1998). Additionally, our findings are in alignment with experiments conducted by Tobin and Raymundo (2009) and Clark et al. (2012), showing that experts were more able to change attitudes than non-expert counterparts. In the case of Tobin and Raymundo (2009), messages with high argument quality promoted by experts were regarded as highly persuasive, whereas for non-expert sources, argument quality did not improve persuasiveness. Concerning Clark et al. (2012), it was shown that persuasive messages advocated by an expert were more compelling, valid and correct than when the source involved a non-expert. This even occurred when the content of the message was conflicting with the participants' pre-message attitudes. Overall, similar to the aforementioned studies,

our findings also present evidence of experts being more persuasive than non-experts. However, unlike the investigations discussed above, the current study revealed that in addition to the written modality, high perceived expertise can also be strongly influential in spoken contexts.

Perceived comprehensibility

As discussed in the literature review, non-standard accents are often experienced as less comprehensible than standard accents. However, the present study's outcome is to some extent in disagreement with various earlier investigations (e.g. Hendriks & Van Meurs, 2021; Hendriks, Van Meurs & Hogervorst, 2016; Nejjari et al, 2012; Derwin & Munro, 1997; Munro & Derwin, 1995) since there were no main differences between the Brabant speaker and Randstad speaker regarding perceived comprehensibility.

A possible reason for the lack of differences might be because a reasonably large portion of participants (26%) came from the Brabant region and therefore, may have had fewer difficulties in understanding the Brabant-accented speaker because they were familiar with the accent. Additionally, the participants from other regions also might have had some familiarity with the Brabant accent. Generally, this may have caused the Brabant speaker to have the same level of comprehensibility as his Randstad-accented counterpart. This notion is congruent with Nejjari et al. (2012), showing that listeners who were familiar with a non-standard accent had fewer problems understanding the accent than unfamiliar listeners. Contrarily, in the same study (2012), familiar listeners were more judgemental than unfamiliar listeners in terms of status. This is consistent with the Brabant speaker receiving more negative attitudinal evaluations in the present study, despite a considerable number of participants sharing the same regional background. Nonetheless, surprisingly, our findings show that when both speakers were depicted as experts, the Brabant speaker was regarded as less comprehensible than the Randstad speaker, whereas, when expertise was low, there were no differences between the two.

A conceivable explanation for this may be that when perceived expertise was high, the participants became more critical of non-standard pronunciation. Furthermore, it is imaginable that presenting a speaker as an expert leads to higher expectations by listeners, potentially eliciting more negative judgements with respect to comprehensibility. To illustrate, when listening to an expert, one might expect a standard-accented speaker rather than a non-standard accented speaker. This concurs with the Standard Language Ideology, which, as mentioned in the literature review, can be described as "a bias toward an abstracted,

idealized, homogeneous spoken language which is imposed and maintained by dominant bloc institutions and which names as its model the written language, but which is drawn primarily from the spoken language of the upper-middle class" (Lippi-Green, 1997, p.64). When considering this definition, it can be assumed that an expert might be associated with the upper-middle class, and, in turn, with standard accented speech.

Concerning the current study, the listeners who were exposed to an expert speaking with a Brabant accent may have experienced a high degree of discrepancy between the speaker's profession and the accent involved, causing more negative assessments. Conversely, for the respondents who listened to a Randstad-accented expert, the discrepancy might have been lower, possibly ensuring more positive evaluations.

Limitations and future research

The primary limitation of the current study is that in the high expertise condition, the speakers were presented as neuroscientists with over 10 years of experience in developing medicine for the central nervous system. However, according to the pre-test, the speakers sounded like they were maximally in their early thirties, making it highly unlikely for them to have more than 10 years of experience in this field. As a result, this might have raised some scepticism among the participants in regards to whether the speakers were actually experts. Thus, if the speakers' age was more in alignment with the high expertise description, the findings may have been quite different. Therefore, for further research on this topic, it is recommended to use speakers who are at least in their forties to enhance the realism of the expertise manipulation.

A second limitation is that this investigation employed the verbal-guise technique (same text, different speakers) to improve the authenticity of the accents. However, the involvement of two different speakers may have created confounding variables. To illustrate, although the speakers generally received similar scores on the pre-test, their voice qualities may still have presented some differences. This might, to some extent, have affected the evaluations of the speech fragments. For this reason, future studies should incorporate the matched-guise technique (same text, one speaker, different speech varieties) to prevent possible confounds based on voice characteristics and to ensure that the evaluations mainly derive from differences in accentedness.

A third limitation is that both speakers did not practice the stimuli extensively, nor had any prior knowledge about or experience with either the content of the stimuli or the topic,

potentially causing their utterances to be relatively unnatural. Moreover, due to their lack of practice, knowledge and experience, the speech fragments may have sounded artificial. Consequently, this might, to some degree, have had an impact on the credibility of the message. Hence, future research should ensure that the speakers sufficiently study and practice the stimuli to develop more authentic, convincing and natural speech fragments.

A final limitation is that the present study only incorporated one regional speech variety, namely the Brabant accent. Furthermore, it might be the case that our findings are solely applicable to the Brabant accent and not generalisable to other regional Dutch accents. Therefore, for future research, it is advised to include multiple regional Dutch accents to improve generalisability.

Practical and theoretical implications

When recommending a medicine, non-standard accented experts should not be too concerned about being less persuasive than standard-accented counterparts since recipients appear to put more value on the level of expertise than the type of accent included. Thus, in this context, non-standard accents are as persuasive as standard accents. This outcome may be translatable to virologists who speak publicly about the corona-pandemic and thereby, try to convince citizens to take the measures and restrictions more seriously. However, despite having a high degree of expertise, non-standard accented speakers can still activate unfavourable stigmas such as being less educated, competent, hardworking, reliable, intelligent and lively.

Additionally, the present study's findings add some degree of nuance to previous theories that non-standard accents are mostly experienced as less comprehensible than standard accents. Moreover, the Brabant speaker generally seemed to have the same level of comprehensibility as the Randstad speaker, unless when both speakers were depicted as experts. Thus, our investigation contributes to the existing literature by showing that listeners may only downgrade a non-standard accented speaker on comprehensibility when the speaker has a profession in which standard pronunciation might be the norm. Finally, as previously mentioned, this study only employed one regional speech variety and therefore, this conclusion should be interpreted cautiously.

References

Bayard, D., Weatherall, A., Gallois, C., & Pittam, J. (2001). Pax Americana? Accent attitudinal evaluations in New Zealand, Australia and America. *Journal of Sociolinguistics, 5(1)*, 22-49. doi:10.1111/1467-9481.00136.

Braunsberger, K., & Munch, J. M. (1998). Source expertise versus experience effects in hospital advertising. *Journal of Services Marketing, 12*, 23-38. doi:10.1108/08876049810202348

Campbell-Kibler, K. (2007). Accent, (ING), and the social logic of listener perceptions. *American Speech, 82(1)*, 32-64.

Centraal Bureau voor Statistiek (CBS). (2021). Talen en dialecten in Nederland. Wat spreken we thuis en wat schrijven we op social media? https://www.cbs.nl/nl-nl/longread/statistische-trends/2021/talen-en-dialecten-in-nederland?onepage=true

Clark, J.K., Wegener, D.T., Habashi, M.M., & Evans, A.T. (2012). Source expertise and persuasion: The effects of perceived opposition or support on message scrutiny. *Personality and Social Psychology Bulletin, 38(1)*, 90-100.

Deprez-Sims, A and Morris, S. (2010). Accents in the workplace: Their effects during a job interview. *International Journal of Psychology, 45(6)*, 417-426. doi: 10.1080/00207594.2010.499950

Deprez-Sims, A and Morris, S. (2013). The effect of non-native accents on the evaluation of applicants during an employment interview: The development of a path model. *International Journal of Selection and Assessment, 21(4)*, 356-366.

Derwing, T.M., & Munro, M.J. (1997). Accent, intelligibility, and comprehensibility: Evidence from four L1s. *Studies in Second Language Acquisition, 20*, 1-16.

Edwards, J. (1999). Refining our understanding of language attitudes. *Journal of Language and Social Psychology, 18*, 101-110

Fuertes, J.N., Gottdiener, W.H., Martin, H., Gilbert, T.C., Giles, H. (2012). A meta-analysis of the effects of speakers' Accents on interpersonal evaluations. *European Journal of Social Psychology, 42(1)*, 120-133. doi: 10.1002/ejsp.862

Giles, H., & Billings, A.C. (2004). Assessing language attitudes: Speaker evaluation studies. *In: Davies, A., Elder, C. (Eds.), The handbook of applied linguistics. Blackwell, Malden, MA*, 87-209.

Gluszek, A., & Dovidio, J.F. (2010). The way they speak: A social psychological perspective on the Stigma of nonnative accents in communication. *Personality and Social Psychology Review, 14(2)*, 214-237. doi: 10.1177/1088868309359288.

Grondelaers, S., & van Hout, R. (2010). Is standard Dutch with a regional accent standard or not? Evidence from native speakers' attitudes. *Language Variation and Change, 22*, 221-239.

Grondelaers, S., van Hout, R., & Steegs, M. (2010). Evaluating regional accent variation in standard Dutch. *Journal of Language and Social Psychology, 29*, 101-116.

Grondelaers, S., van Hout, R., van Gent, P. (2019). Re-evaluating the prestige of regional accents in Netherlandic standard Dutch: The role of accent strength and speaker gender. *Journal of Language and Social Psychology, 38(2)*, 215-236. doi: 10.1177/ 0261927X18810730

Heijmer, T., & Vonk, R. (2002). Effecten van een regionaal accent op de beoordeling van de spreker [Effects of a regional accent on speaker evaluation]. *Nederlands Tijdschrift voor de Psychologie, 57*, 108-113.

Hendriks, B., & Van Meurs, F. (2021). Attitudes to regional and standard accents in commercial and non-commercial Contexts. *Lingua*. doi: 10.1016/j.lingua.2021.103229

Hendriks, B., Van Meurs, F., & Hogervorst, N. (2016). Effects of degree of accentedness in lecturers' Dutch-English pronunciation on Dutch students' attitudes and perceptions of comprehensibility. *Dutch Journal of Applied Linguistics, 5(1)*, 1-17. doi: 10.1075/dujal.5.1.01hen

Hendriks, B., van Meurs, F., & van der Meij, E. (2015). Does a foreign accent sell? The effect of foreign accents in radio commercials for congruent and non-congruent products. *Multilingual-Journal of Cross-Cultural and Interlanguage Communication, 34(1)*, 119- 130. doi: 10.1515/multi-2013-0048

Hendriks, B., van Meurs, F., Reimer, A. (2018). The evaluation of lecturers' nonnative-
        accented English: Dutch and German Students' evaluations of different degrees of
        Dutch-accented and German-accented English of lecturers in higher education.
        Journal of English for Academic Purposes, 34, 28-45.
        doi: 10.1016/j.jeap.2018.03.001

Hendriks, B., van Meurs, F., van Mulken, M., van Hoof, K. (2014). Pardon my French?
        Mother-tongue French Listeners' Evaluations of Dutch Accents in French and English.
        *In: van den Doel, R., Rupp, L.M. (Eds.), Pronunciation matters: Accents of English in
        the Netherlands and elsewhere. VU University Press, Amsterdam*, 159-173.

Hogg, M. A., & Abrams, D. (1988). Social identifications: A social psychology of intergroup
        relations and group processes. *London: Routledge*.

Hogg, M.A., Joyce, N., & Abrams, D. (1984). Diglossia in Switzerland? A social identity
        analysis of speaker evaluations. *Journal of Language and Social Psychology, 3(3)*,
        185-196. doi: 10.1177/0261927X8400300302.

Hovland, C. I., & Weiss, W. (1951). The influence of source credibility on communication
        effectiveness. *Public Opinion Quarterly, 15*, 635-650.

Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). Communication and persuasion:
        Psychological studies of opinion and change. *New Haven, CT: Yale University Press*.

Jesney, K. (2004). The use of global foreign accent rating in studies of L2 acquisition.
        https://pdfs.semanticscholar.org/3e4e/ aa880f359be90d48eb43df7574d98630926f.pdf.

Kelman, H. C., & Hovland, C. I. (1953). "Reinstatement" of the communicator in delayed
        measurement of opinion change. *Journal of Abnormal and Social Psychology, 48*,
        327-335.

Koster, C.J., & Koet, T. (1993). The evaluation of accent in the English of Dutchmen.
        Language Learning, 43(1), 69-92.

Lippi-Green, R. (1997). English with an accent. *New York: Routledge*.

Lorelei, C., Baquiran, C., Nicoladis, E. (2020). A doctor's foreign accent affects perceptions
        of competence. *Health Communication, 35(6)*, 726-730. doi:
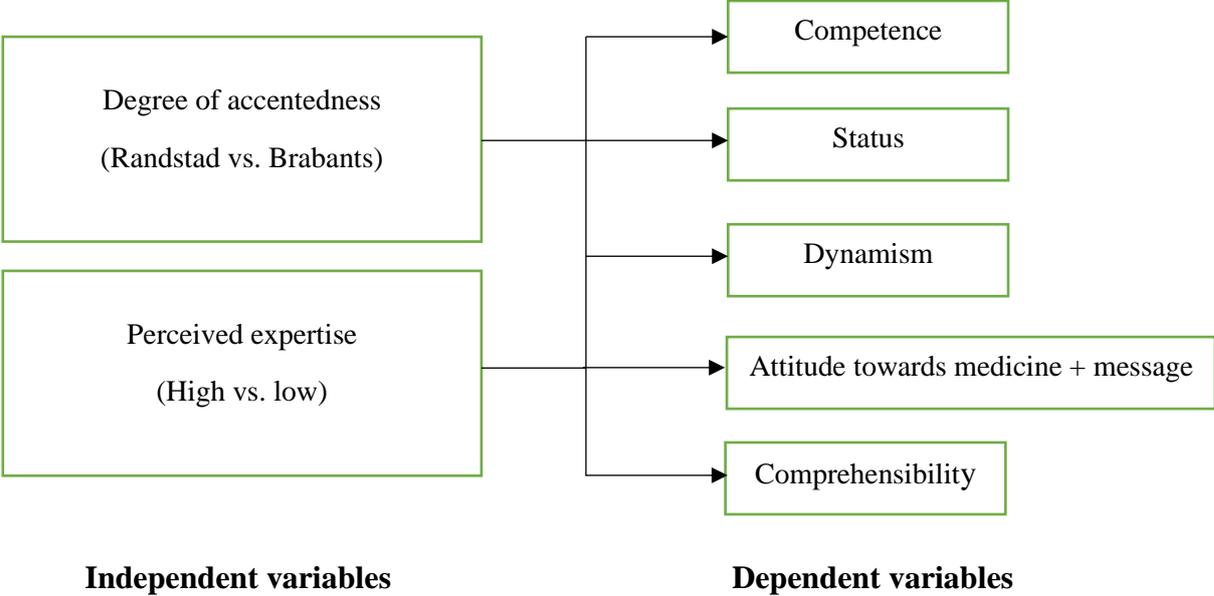   https://doi.org/10.1080/10410236.2019.1584779

Maddux, J. E., & Rogers, R. W. (1980). Effects of source expertness, physical attractiveness, and supporting arguments on persuasion: A case of brains over beauty. *Journal of Personality and Social Psychology, 39*, 235-244. doi:10.1037/0022-3514.39.2.235

Mai, R., & Hofmann, S. (2014). Accents in business communication: An integrative model and propositions for future research. *Society for Consumer Psychology, 24(1)*, 137-158. doi: 10.1016/j.jcps.2013.09.004

Martín-Santana, J. D., Muela-Molina, C., Reinares-Lara, E., & Rodríguez-Guerra, M. (2015). Effectiveness of radio spokesperson's gender, vocal pitch and accent and the use of music in radio advertising. *BRQ Business Research Quarterly, 18*, 143-160. doi: 10.1016/j.brq.2014.06.001

Morales, A. C., Scott, M. L., & Yorkston, E. A. (2012). The role of accent standardness in message preference and recall. *Journal of Advertising, 41(1)*, 33-46. doi: 10.2753/JOA0091-3367410103

Munro, M. J., Derwing, T. M., & Morton, S. L. (2006). The mutual intelligibility of L2 speech. *Studies in Second Language Acquisition, 28(1)*, 111-131. doi: 10.1017/s0272263106060049

Munro, M., & Derwing, T. (1995). Foreign accent, comprehensibility, and intelligibility in the speech of second language learners. *Language Learning, 45(1)*, 285-310. doi: 10.1111/j.1467- 1770.1995.tb00963.x

Nejjari, W., Gerritsen, M., Haagen, M. van der, & Korzilius, H. (2012). Responses to Dutch-accented English. *World Englishes, 31(2)*, 248-267. doi: 10.1111/j.1467-971X.2012.01754.x

Nejjari, W., Gerritsen. M., van Hout, R., Planken, B. (2020). Where does a 'foreign' accent matter? German, Spanish and Singaporean listeners' reactions to Dutch-accented English, and standard British and American English accents. *PLoS ONE, 15(4)*, 1-35. doi: 10.1371/journal.pone.0231089

Pinget, A.F., Rotteveel, M., & Van de Velde, H. (2014). Standaardnederlands met een accent—Herkenning en evaluatie van regionaal Gekleurd Standaardnederlands in Nederland [Identification and evaluation of regionally flavored standard Dutch in the Netherlands]. *Nederlandse Taalkunde, 19*, 3-45.

Reinares-Lara, E., Martín-Santana, J.D., Muela-Molina, C. (2016). The effects of accent, differentiation, and stigmatization on spokesperson credibility in radio advertising. *Journal of Global Marketing, 29(1)*, 15-28. doi: 10.1080/08911762.2015.1119919

Rijksinstituut voor Volksgezondheid en Milieu (RIVM). (n.d.). Outbreak Management Team (OMT). https://www.rivm.nl/coronavirus-covid-19/omt

Roessel, J., Schoel, C., Zimmermann, R., Stahlberg, D. (2017). Shedding new light on the evaluation of accented speakers: Basic mechanisms behind nonnative listeners' evaluations of nonnative accented job candidates. *Journal of Language and Social Psychology, 38(1)*, 3-12. doi: 10.1177/0261927X17747904

Schmader, T., & Lickel, B. (2006). Stigma and shame: Emotional responses to the stereotypic actions of one's ethnic ingroup. *In S. Levin, & C. van Laar (Eds.), Stigma and group inequality: Social psychological perspectives, Mahwah, NJ: Erlbaum*, 261-285.

Schoel, C., & Stahlberg, D. (2012). Spracheinstellungen aus Sozialpsychologischer Perspektive II: Dialekte [Language attitudes from a sociolinguistic perspective II: Dialects]. *In: Eichinger, L.M., Plewnia, A., Schoel, C.H., Stahlberg, D. (Eds.), Sprache und Einstellungen, Vol. 61. Narr Francke Attempto, Tübingen,* 205-226.

Śliwa, M & Johansson, M. (2014). How non-native English speaking staff are evaluated in linguistically diverse organizations: A sociolinguistic perspective. *Journal of International Business Studies, 45(9)*, 1133-1151.

Tajfel, H., Billig, M. G., & Bundy, R. P. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology, 1,* 149-178.

Tobin, S. J., & Raymundo, M. M. (2009). Persuasion by causal arguments: The motivating role of perceived causal expertise. *Social Cognition, 27,* 105-127.

Villegas, J. (2002). Discrete negative emotions generated in an interactive advertisement: An exploration of control as a medium effect doctoral dissertation. *University of Texas*.

Wood, W., & Kallgren, C. A. (1988). Communicator attributes and persuasion recipients' access to attitude-relevant information in memory. *Personality and Social Psychology Bulletin, 14*, 172-182. doi: 10.1177/0146167288141017

Yuan, S., Ma, W., & Besley, J.C. (2019). Should scientists talk about GMOs nicely? Exploring the effects of communication styles, source expertise, and preexisting Attitude. *Science Communication, 41(3)*, 267-290.

Appendix

Appendix A: The analytical model of the present study

Degree of accentedness (Randstad vs. Brabants)	→ Competence
	→ Status
Perceived expertise (High vs. low)	→ Dynamism
	→ Attitude towards medicine + message
	→ Comprehensibility

Independent variables   **Dependent variables**

Appendix B: Introductory text for the survey

Beste deelnemer,

Hierbij bent u uitgenodigd om deel te nemen aan het onderzoek naar de beoordeling van een spreker in een gezondheidszorgcontext. Dit onderzoek wordt uitgevoerd door een master student aan de Radboud Universiteit die momenteel werkt aan zijn master scriptie over het reeds genoemde onderwerp.

Deelname aan dit onderzoek betekent dat u een online enquête zult invullen via Qualtrics. De vragen in de enquête zullen gaan over een korte opname van een spreker, die u zult beoordelen op basis van verschillende stellingen. Om deze reden is het belangrijk dat het geluid van het apparaat waarmee u deelneemt aan dit onderzoek AAN staat. Het invullen van de enquête zal maximaal 10 minuten in beslag nemen. Bovendien is het belangrijk om te weten dat u specifiek een spreker zult horen in een gezondheidszorgcontext.

De resultaten van het onderzoek zullen worden gebruikt voor mijn masterscriptie. Uiteraard zullen uw antwoorden volkomen anoniem blijven en zal er discreet met de resultaten worden omgegaan, de privacy richtlijnen van de Radboud Universiteit in acht nemend.

Uw deelname aan dit onderzoek is volledig vrijwillig. Dat betekent dat u uw deelname op elk moment kan beëindigen. Alle data die tot dat punt verzameld is, zal dan later worden vernietigd.

Om u te bedanken voor uw deelname maakt u kans op een bol.com cadeaukaart t.w.v. €20. Als u hier kans op wilt maken, laat dan uw email adres achter aan het einde van de enquête. Indien u verdere vragen heeft dan kunt u contact opnemen met Yuri Segers (yuri.segers@ru.nl).

Als u de hierop volgende enquête invult, betekent dat u bevestigt dat u:

- 18 jaar of ouder bent
- Vrijwillig deelneemt aan het onderzoek
- Akkoord gaat met de voorwaarden
- Alle informatie hierboven gelezen heeft

Met vriendelijke groet,

Yuri Segers

Appendix C: Stimuli (audio script)

"In de huidige tijd zijn er veel mensen die kampen met ernstige concentratieproblemen, wat meestal wordt veroorzaakt door verschillende factoren zoals relatieproblemen, depressie of stress. Wanneer mensen een groot gebrek hebben aan concentratie, hebben ze vaak moeite om zich langdurig te focussen op één onderwerp of bezigheid. Daarnaast kan het hebben van ernstige concentratieproblemen leiden tot symptomen zoals vergeetachtigheid en chaotisch zijn. Dit kan nadelige gevolgen hebben voor prestatiegerichte activiteiten, bijvoorbeeld op je studie of tijdens je baan. Gelukkig bestaan er medicijnen die kunnen helpen bij ernstige concentratieproblemen. In dit geval is de beste optie de concentratiestimulerende pil van het merk "Lotus". Deze pil zorgt ervoor dat de activiteit in de zogeheten "frontale kwab" wordt gestabiliseerd, waardoor het makkelijker wordt om je langdurig te focussen en je uiteindelijk beter presteert. Deze stabiliserende werking zorgt ervoor dat je brein externe impulsen minder bewust waarneemt, wat vaak resulteert in veel minder afleiding. Uiteraard, zoals bij ieder medicijn, werkt het niet voor iedereen. Maar, onderzoek heeft uitgewezen dat het in 88% van de gevallen effectief is. Daarnaast is de kans op bijwerkingen relatief klein. Nogmaals, deze concentratiestimulerende pil is een uitstekend middel als het gaat om het verbeteren van je concentratie. Om deze reden raad ik iedereen die kampt met ernstige concentratieproblemen dit medicijn aan".

Appendix D: Pre-test

A total of 12 participants listened to all five recordings (within-subjects), namely three recordings for the Brabant accent and two for the Randstad accent. Recognition of the standard-Dutch accented speakers was measured with a 7-point Likert scale introduced by 'this speaker sounds like someone with a Randstad accent', and anchored by 'completely disagree – completely agree' (adapted from Jesney, 2004). Recognition of the Brabant accented speakers was measured with a 7-point Liker scale introduced by 'this speaker has a strong regional Dutch accent', and anchored by 'completely disagree – completely agree' (adapted from Jesney, 2004).

Comprehensibility of the speakers was measured with a 7-point Likert scale introduced by 'I think the speaker is easy to understand', anchored by 'strongly disagree' – 'strongly agree' (based on Munro et al., 2006)

On top of accent recognition, the participants answered six questions about the speakers' voice characteristics, namely: pleasant voice, natural voice, loud voice, dynamism, speaker pace, and speaker age. Pleasant voice, natural voice, and loud voice were measured with a 7-point Likert scale introduced by 'this speaker has a', and anchored by 'completely disagree – completely agree' (based on Bayard., Weatherall., Gallois., & Pittam, 2001; Jesney, 2004). Dynamism was measured with a 7-point Likert scale introduced by 'this speaker sounds energetic', anchored by 'completely disagree – completely agree' (based on Nejjari et al. 2020). Speaker pace was measured with a 7-point Likert scale introduced by 'what is the speaker's pace', and anchored by 'slow – fast' (based on Jesney, 2004). Speaker age was measured through a multiple-choice menu introduced by 'how old do you think the speaker is', containing the options '15 – 20, 20 – 25, 25 – 30, 35 – or higher'.

A paired-samples t-test showed that the two speakers that were eventually included in the experiment did not significantly differ with regard to accent recognition ($p = .100$), age ($p = .339$), pleasant voice ($p = .339$), natural voice ($p = .740$) and loud voice ($p = .339$). In addition, none of the participants thought that the speakers belonged to the oldest age group. Finally, both speakers received the highest scores in terms of accent recognition (Randstad, $M = 5.50$; Brabant, $M = 6.25$) which was highly pivotal in the final decision.

Appendix E: Survey

Allereerst worden er enkele algemene vragen gesteld

Wat is je leeftijd (in jaren)?

Is Nederlands je moedertaal?

Ja

Nee

Hoe identificeer je jezelf?

Man

Vrouw

Zeg ik liever niet

Anders:

Wat is je hoogst genoten opleiding?

MBO

HBO

WO Bachelor

WO Master

PhD

Uit welke regio kom je?

Randstad (Amsterdam, Rotterdam, Den Haag, Utrecht)

Noord-Holland

Zuid-Holland

Noord-Brabant

Zeeland

Groningen

Friesland

Drenthe

Gelderland

Utrecht (provincie)

Flevoland

Limburg

Overijssel

Je zult nu een aantal stellingen over de spreker beantwoorden. Let op! Er is maar één antwoord per stelling mogelijk.

Persuasiveness

Hoe zou je dit medicijn beoordelen?

	Helemaal niet mee eens	Niet mee eens	Beetje oneens	Neutraal	Beetje mee eens	Mee eens	Helemaal mee eens
Ik geloof dat dit medicijn effectief is	○	○	○	○	○	○	○
Ik geloof dat dit medicijn interessant is	○	○	○	○	○	○	○
Ik geloof dat dit medicijn goed is	○	○	○	○	○	○	○

Hoe zou je de boodschap over dit medicijn beoordelen?

	Helemaal niet mee eens	Niet mee eens	Beetje oneens	Neutraal	Beetje mee eens	Mee eens	Helemaal mee eens
Ik geloof dat deze boodschap informatief is	○	○	○	○	○	○	○
Ik geloof dat deze boodschap juist is	○	○	○	○	○	○	○
Ik geloof dat deze boodschap overtuigend is	○	○	○	○	○	○	○

Ik zou dit medicijn aanraden aan iedereen met ernstige concentratieproblemen.

Ja

Nee

Competence

Hoe zou je de spreker beoordelen?

	Helemaal niet mee eens	Niet mee eens	Beetje oneens	Neutraal	Beetje mee eens	Mee eens	Helemaal mee eens
De spreker klinkt betrouwbaar	O	O	O	O	O	O	O
De spreker klinkt intelligent	O	O	O	O	O	O	O
De spreker klinkt hardwerkend	O	O	O	O	O	O	O
De spreker klinkt geleerd	O	O	O	O	O	O	O
De spreker klinkt bekwaam	O	O	O	O	O	O	O

Status

Hoe zou je de spreker beoordelen?

	Helemaal niet mee eens	Niet mee eens	Beetje oneens	Neutraal	Beetje mee eens	Mee eens	Helemaal mee eens
De spreker klinkt invloedrijk	O	O	O	O	O	O	O
De spreker klinkt geloofwaardig	O	O	O	O	O	O	O
De spreker klinkt zelfverzekerd	O	O	O	O	O	O	O
De spreker heeft een krachtige stem	O	O	O	O	O	O	O

Dynamism

Hoe zou je de spreker beoordelen?

	Helemaal niet mee eens	Niet mee eens	Beetje oneens	Neutraal	Beetje mee eens	Mee eens	Helemaal mee eens
De spreker klinkt modern	○	○	○	○	○	○	○
De spreker klinkt hip	○	○	○	○	○	○	○
De spreker klinkt trendy	○	○	○	○	○	○	○
De spreker klinkt levendig	○	○	○	○	○	○	○

Comprehensibility

Hoe zou je de begrijpelijkheid van de spreker beoordelen?

	Helemaal niet mee eens	Niet mee eens	Beetje oneens	Neutraal	Beetje mee eens	Mee eens	Helemaal mee eens
De spreker is makkelijk te begrijpen	○	○	○	○	○	○	○
De spreker is moeilijk te begrijpen	○	○	○	○	○	○	○
De spreker is duidelijk te verstaan	○	○	○	○	○	○	○

End

Hartelijk dank voor het meedoen aan dit onderzoek. Het doel van het onderzoek was om in kaart te brengen in hoeverre expertise van de spreker invloed heeft op de beoordeling van regionale accenten (Brabants vs. Standaard Nederlands). Als je kans wilt maken op een bol.com bon ter waarde van 20 euro dan kun je hieronder je e-mailadres achterlaten. Als je geen interesse hebt dan kun je verder klikken en is de vragenlijst voltooid! De codes voor SurveyCircle en SurveySwap zijn vindbaar op de volgende pagina.

Email adres

_____