Exploring the lived-experience of individuals with a visual impairment regarding their autonomy, using the example of the community pharmacy: A qualitative study

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Abstract

Background

Visual impairment represents a significant public health concern, affecting a substantial number of individuals on a global scale. It has a profound impact on the daily lives of these individuals, particularly in relation to the administration of their medications and their interactions with community pharmacists.

Objectives

The study aimed to **(1)** examine perceptions, challenges, and needs of individuals living with a visual impairment when engaging with community pharmacists, and **(2)** enhance pharmacist-patient communication, as well as ensure more accessible and inclusive healthcare for these individuals.

Methods

Semi-structured interviews were conducted with 19 French-speaking individuals with a visual impairment in Belgium. The participants were recruited on a voluntary basis and an interview guide was developped based on literature review. Interviews were carried out until theoretical data saturation, recorded, transcribed *verbatim*, and analyzed in a double-blind fashion using thematic and interpretative phenomenological analyses. Data were organized by NVivo software.

Results

Two dimensions were explored in the interviews: psychological and pharmaceutical. From a psychological perspective, the experience of individuals with a visual impairment appears to be linked to their family and social context. The relationship they have with their pharmacist is also important, more specifically the relational aspect and knowledge of visual impairment.

Conclusion

Visual impairment is a complex phenomenon that is influenced by a variety of factors. Consequently, adaptation systems are necessary at all levels of the society to provide individuals with a visual impairment with the best living conditions and care. The various elements identified in this qualitative study provide some interesting insights for developing recommendations.

Keywords

Visual impairment

Community pharmacy

Pharmaceutical care

Lived-experience

Qualitative research

1. Introduction

The World Health Organization (WHO) estimates that at least 2.2 billion people have a visual impairment (VI),[1] representing 27.7 % of the global population. Of these, at least one billion cases could have been avoided or are still untreated.[1] In Belgium specifically, the WHO recorded in 2020 that one person in a hundred had low vision and one person in a thousand was blind.[1] VI is expressed notably through insufficient or absent images perceived by the eye, and can be congenital or acquired as a result of an accident or a disease.[2] More than just an anatomical alteration, VI is a condition that profoundly impacts an individual's daily life, affecting not only physical functioning, but also emotional and social well-being. Low vision is often associated with a decreased quality of life, leading to a reduction in: leisure activities,[3,4] daily living activities,[5] mobility,[6] and an increased risk of depression.[7,8] Due to their disability, individuals living with a VI also have a unique relationship with their environment, including when it comes to taking their medications or interacting with their community pharmacist.

For people living with a VI, navigating healthcare systems presents unique challenges, especially concerning access to medications and comprehension of treatment instructions.[9] A study conducted by Alhusein *et al.*[10] reveals that these individuals encounter difficulties in identifying their medications, particularly when there are changes in their name, dosage form, or color. The impairment also affects their ability to read dosage labels, expiration dates, and information sheets.[11] It is challenging for these individuals to determine the color, size, shape, and distinguishing marks of a medication.[12,13] Additionally, older individuals with a VI often do not disclose their disability to their pharmacist.[10] As a result, pharmacy staff may rely solely on distinctive signs, such as a cane, to identify a person with specific needs. However, this strategy is neither suitable for all individuals with a VI nor for the varying type of VI.

Consequently, community pharmacists are key to patient care and medication management. They are pivotal point of contact for these individuals. The pharmacy is a place of reception and support,[14] and must therefore provide the best possible services to all its patients.[10] Alongside these mentioned adjustments, effective communication is an integral part of welcoming patients[15] to ensure optimal care. Moreover, the pharmacist must tailor the pharmaceutical care they provide to each of their patients. However, the nature of interactions between individuals with a VI and pharmacists remains under-researched.

Some studies have already investigated the impact of VI on the quality of life,16, 17, 18 but few have explored the subjective experiences of these individuals when taking their medications and during interactions with their community pharmacist. Indeed, receiving information in inaccessible formats, difficulties in communicating with healthcare providers, and the need for assistance during travel, particularly in healthcare facilities as community pharmacy, are major concerns for individuals with a VI. These observations are supported by Beverley *et al.*,[19] who state that only a limited proportion of healthcare and social services needs were being met, particularly those related to medication administration techniques, as well as the identification of medications and their dosages. This situation highlights the lack of studies investigating the specific pharmaceutical care needs of individuals living with a VI. Therefore, this study is among the first to pay attention to this.

This qualitative study delves into the lived-experience of individuals living with a VI, examining their perceptions, challenges, and needs when engaging with community pharmacists. By understanding these experiences, the objective is to identify strategies to improve pharmacist-patient communication and make healthcare more accessible and inclusive for these individuals.

2. Methods

2.1. Study design

The method consisted of semi-structured interviews with participants with a VI living in Belgium. An interview guide composed of six main topics was developped based on a review of the existing literature from other countries (Appendix A, Interview guide).

The interview guide included main and follow-up open-ended questions so that the participants could freely develop their ideas. The main questions were identical throughout the study. The vocabulary and grammatical structures employed in each question were simple and accessible.

2.2. Selection criteria

The study population comprised French-speaking participants with a VI aged of 18 or over. The participants had to have already established contact with a community pharmacist and be taking a number of chronic medications. The study excluded participants living in institutions.

Participants were recruited on a voluntary basis by sending email to associations for individuals with a VI. Those wishing to participate were invited to contact the researchers by email or telephone.

2.3. Data collection

Semi-structured interviews were conducted at the participants' homes by TM and SR between September and November 2023. The interviews lasted an average of (39 14) minutes. A dictaphone was used to record interviews and facilitate transcription. Prior to commencing the interview, TM requested the participant's agreement to record the interview. Throughout the interview, questions were asked topic by topic and follow-up questions were asked only when were deemed necessary to enrich the discourse.

2.4. Data analysis

Each interview was transcribed *verbatim* into a separate Word document by SR. This transcription process was carried out shortly after the interview to ensure that main points made were retained. TM and SR conducted a double-blind analysis based on two different qualitative methods, using an abductive (deductive-inductive) approach: TM conducted thematic analysis[20] (TA) and SR interpretative phenomenological analysis[21] (IPA). This phase was performed as the same time as the data collection phase with NVivo® 14 software. This iterative process was repeated until theoretical data saturation, which was reached after 17 interviews. Two additional interviews were conducted to confirm saturation.

A Cronbach's α coefficient was calculated using IBM® SPSS 29 Advanced software to check the reliability of the analyses between TM and SR. The interpretation of this coefficient was based on the criteria defined by George & Mallery, specifying that the reliability between analyses is acceptable for an α coefficient greater than 0.7.[22]

2.5. Trustworthiness

This qualitative study was reported following the SRQR checklist,[23] and the trustworthiness was assessed according to the criteria defined by Korstjens *et al*.[24] The **credibility** of the research was promoted by three distinct strategies: prolonged engagement, persistent observation, and triangulation. The **transferability** was ensured by providing a thick description of the study context. The **dependability** was promoted through a strict adherence to the TA and IPA. Additionally, the Cronbach's alpha coefficient was 0.938, indicating that the analyses between TM and SR were highly reliable.

Ethics approval

The study protocol was approved on June 12, 2023 by the Ethics Committee of the Faculty of Psychology and Education of University of Mons (file number: *UMONS-2023.06.07-MT-006*). All participants provided informed consent. Finally, during transcription, all data were pseudonymized according to following convention: the letters IPa, standing for “Interview Patient”, linked to a numerical identifier.

3. Results

The semi-structured interviews allowed for a comprehensive exploration of individuals’ experiences with a VI, to promote their inclusion in Belgian pharmacies. Table 1 presents the sociodemographic data of the 19 people with a VI who participated in the study. The participants were 73.7 % men and 26.3 % women living in the five provinces of Wallonia and the Brussels-Capital region. The mean age of the participants was (54 14) years. All categories of VI described by the WHO were represented in the sample, with the exception of mild VI.

Table 1. Sociodemographic data of the study sample.

Patients	**Province**	**Gender**	**Age**	**Category of VI***	**Cause of VI**	**Onset of VI**
Pa1	Brabant-Walloon	M	43	Absolute blindness	Road accident	At 32
Pa2	Hainaut	M	73	Absolute blindness	Diabetic retinopathy	At 65
Pa3	Brabant-Walloon	W	26	Severe VI	Retinal tumour	At birth
Pa4	Hainaut	M	47	Absolute blindness	Norrie's syndrome	At birth
Pa5	Luxembourg	M	67	Profound VI	Usher syndrome type 2	At 35
Pa6	Luxembourg	M	64	Profound VI	Ocular herpes	At 57

Patients	**Province**	**Gender**	**Age**	**Category of VI∗**	**Cause of VI**	**Onset of VI**
Pa7	Hainaut	M	56	Severe VI	Congenital glaucoma	At birth
Pa8	Luxembourg	M	64	Moderate VI	Stargardt disease	At 49
Pa9	Brussels-Capital	M	44	Severe VI	Congenital glaucoma	At 7
Pa10	Namur	M	73	Absolute blindness	Retinitis pigmentosa	At 58
Pa11	Namur	M	38	Severe blindness	Road accident	At 27
Pa12	Hainaut	M	45	Absolute blindness	Premature birth	At birth
Pa13	Brabant-Walloon	W	77	Severe VI	Unexplained	At birth
Pa14	Hainaut	W	49	Severe VI	Uveitis	At 39
Pa15	Hainaut	M	58	Moderate VI	Diabetic retinopathy	At 40
Pa16	Hainaut	W	52	Absolute blindness	Retinal detachment	At 35
Pa17	Liege	W	53	Moderate VI	Congenital glaucoma	At birth
Pa18	Liege	M	32	Severe VI	Optic neuritis	At 23
Pa19	Hainaut	M	60	Severe blindness	Cerebrovascular accident	At 50

M: man, VI: visual impairment, W: woman. ∗ The participants were classified according to their visual impairment (VI) category, based on the World Health Organization classification, which relies on the visual acuity (VA) of the better eye: Category 0, **mild VI** (VA between 5/10 and 3/10); Category I, **moderate VI** (VA between 3/10 and 1/10); Category II, **severe VI** (VA between 1/10 and 1/20); Category III, **profound VI** (VA between 1/20 and 1/50); Category IV, **severe blindness** (VA between 1/50 and light perception); Category V, **absolute blindness** (no light perception). Categories I, II, and III correspond to low vision, while categories IV and V correspond to legal blindness.

Two distinct dimensions were explored in the interviews: **psychological** and **pharmaceutical**. Themes and sub-themes were identified through a triangulation of the analyses of TM and SR (Table 2). Two schematizations illustrate the themes, accompanied by relevant *verbatim* excerpts (these excerpts were translated in English as they were selected).

Table 2. Main themes and sub-themes from the post-triangulation analysis.

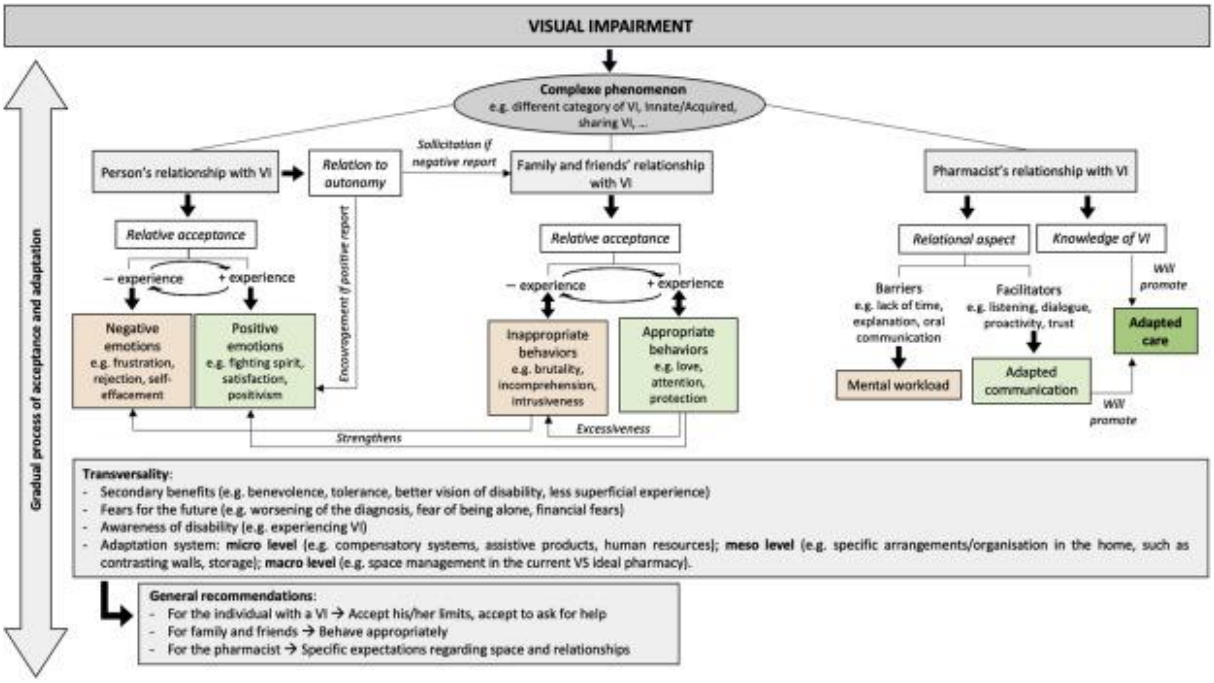
Dimensions *(n = 2)*	**Themes *(n = 7)***	**Sub-themes *(n = 15)***
Psychological	The person's relationship with VI	Relative acceptance∗ of VI leading to negative feelings
		Relative acceptance∗ of VI leading to positive feelings
		Relationship to autonomy
	The family and friends' relationship with VI	Relative acceptance∗ of VI leading to negative behaviors
		Relative acceptance∗ of VI leading to positive behaviors
	The pharmacist's relationship with VI	Relationships with the pharmacist
		Pharmacists' knowledge of VI
Pharmaceutical	Obtaining medications for individuals with a VI	I always go to a different pharmacy
		I always go to the same pharmacy
		Accessibility of pharmacy for individuals with a VI
		Management of space by individuals with a VI
		Relational aspect

Dimensions *(n = 2)*	**Themes *(n = 7)***	**Sub-themes *(n = 15)***
	Obtaining medication information for individuals with a VI	Advice dispensing to individuals with a VI
		Formats used to provide advice
	Medication management for individuals with a VI	Tips implemented by participants themselves
	Specific expectations of individuals with a VI	–

VI: visual impairment. ∗ The term "relative acceptance" was used to illustrate the variable nature of visual impairment.

3.1. Psychological dimension

VI is a complex phenomenon that is influenced by a variety of factors. There are various categories of VI and multiple pathologies that can cause it. It can be innate or acquired at a later stage in a person's life. Furthermore, environmental factors, such as family and social context, play a significant role in the lived-experience and acceptance of VI. Consequently, VI was explored in three different ways during the interviews (Fig. 1) and the term "relative acceptance" was used to illustrate its variable nature.



Transversality:
- Secondary benefits (e.g. benevolence, tolerance, better vision of disability, less superficial experience)
- Fears for the future (e.g. worsening of the diagnosis, fear of being alone, financial fears)
- Awareness of disability (e.g. experiencing VI)
- Adaptation system: **micro level** (e.g. compensatory systems, assistive products, human resources); **meso level** (e.g. specific arrangements/organisation in the home, such as contrasting walls, storage); **macro level** (e.g. space management in the current VS ideal pharmacy).

General recommendations:
- For the individual with a VI → Accept his/her limits, accept to ask for help
- For family and friends → Behave appropriately
- For the pharmacist → Specific expectations regarding space and relationships

Fig. 1. Schematization of exploring the lived-experience of visual impairment. VI: visual impairment, +: positive, : negative.

Theme 1 The person's relationship with visual impairment. This relationship is characterized by a relative acceptance, which depends on the individual's experience. This experience can be described as either a “positive experience” or a “negative experience”, depending on the emotions experienced by individual. Participants often reported negative emotions, such as frustration, rejection, or self-effacement. Conversely, others had positive emotions, such as a fighting spirit, self-satisfaction, or positivism.

“I'm dependent on everything and everyone, and that's hard because sometimes, I yell at the people who are there to help me, I yell at them because it frustrates me terribly” IPa11 (38 years)

“I fight every day. I cleaned the house today. I cook. I cleaned the tiles, I put the washing out to dry” IPa6 (64 years)

The experience of VI also encompasses the relationship with autonomy. The majority of participants reported experiencing difficulties with the loss of autonomy, relying on external assistance.

Theme 2 The family and friends' relationship with visual impairment. This relationship is also characterized by a relative acceptance, determined by the person's experience. This experience can be described as either a “positive experience” or a “negative experience”, depending on the behaviors that the individual may have. Some participants reported brutal or intrusive behavior from their family and friends, and that they did not always feel understood. Conversely, other participants indicated that their family and friends demonstrated loving, caring, and protective behaviors, which they perceived as adaptations to the VI. Nevertheless, participants indicated that excessive adapted behaviors could potentially become inadapted. For instance, an excessive protection could become intrusive. Furthermore, the manner in which those in the immediate vicinity experience the VI can influence the way in which the individual themselves experience their VI. An understanding, loving, and caring environment encourages people to deal positively with their VI, and a negative environment leads people to deal negatively with their VI.

“It's quite simple. When someone says to me ‘Look, look, look’ and I can say ‘Yes, but I can't see what you're showing me’. ‘Make an effort […]’. Even if I try, it's not enough. Pff … my brother has never understood VI” IPa9 (44 years)

“Sabrina (borrowed name) brings me my little chocolates, my little black mice, my little sweets that I'm raving about. My son makes an appointment to see the dentist, but he makes it for himself and me together. He knows he'll have to wait. These are everyday gestures that show the love you have” IPa7 (56 years)

Theme 3 The pharmacist's relationship with visual impairment. This relationship comprises two essential aspects: the relational aspect and the knowledge of VI. Participants identified barriers and facilitators to good collaboration with community pharmacist. The main barriers identified included lack of time, explanations, and oral communication. Conversely, the facilitators included listening, dialogue, proactivity, and a trusting relationship.

"I think the pharmacist no longer has time to talk to the patient. That's what is happening. He used to know the whole family, he used to give advice … well, now it is all just slaughter" IPa2 (73 years)

"What is also very pleasant is when the pharmacist realizes that there is a stock shortage and he is proactive, so he will anticipate or say 'Maybe, I will ask a colleague" IPa14 (49 years)

3.2. Pharmaceutical dimension

Three phases are essential to ensure the safe use of medications for individuals living with a VI (Fig. 2). Although there are various avenues through which people can access medications and information about them, all those interviewed for this study reported visiting a pharmacy. Consequently, the pharmacy, the role of the pharmacist, and the medications were investigated in interviews.

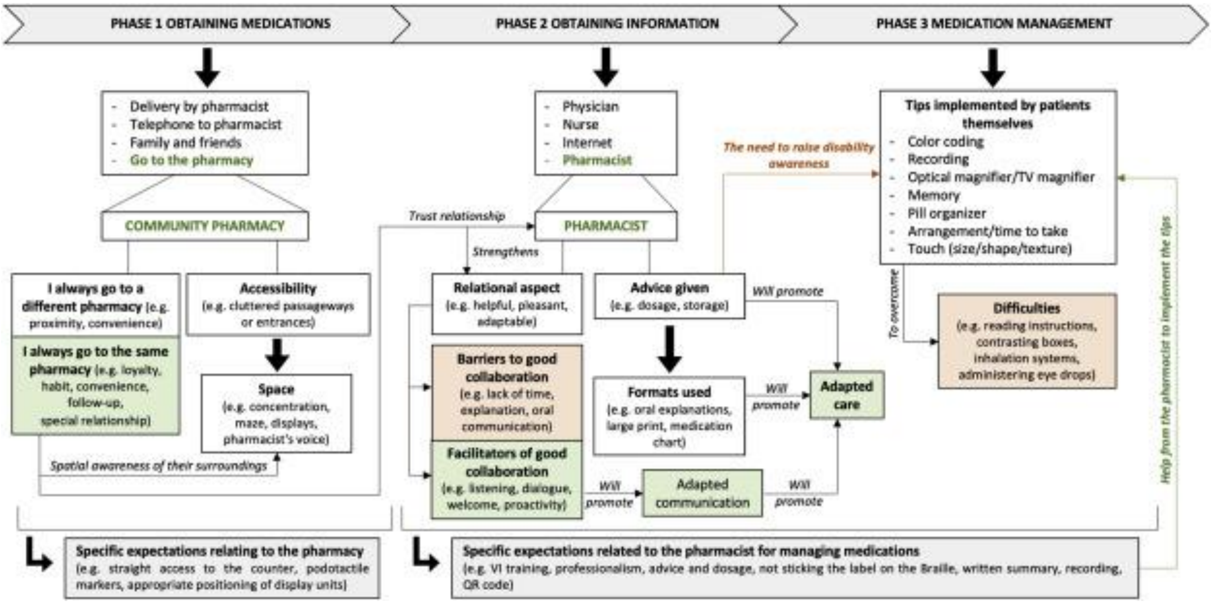


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Fig. 2. Schematization of the process of obtaining and managing medications by individuals living with a visual impairment. VI: visual impairment.

Theme 1 Obtaining medications for individuals with a visual impairment. In the majority of cases, participants indicated that they consistently went to the same pharmacy for established habits, follow-up care, and the development of a special relationship. This allows them to navigate the pharmacy with greater ease, due to their familiarity with the layout, and to cultivate a relationship of trust with their pharmacist, which reinforces the relational aspects. Other participants indicated a preference for a different pharmacy, citing proximity, and convenience as key factors. Additionally, they described access to the pharmacy as challenging, particularly due to cluttered passageways or entrances, which can impede their ability to navigate the space. Indeed, they reported requiring significant concentration to navigate the pharmacy and often found it to be a labyrinthine environment. Some participants also suggested that the pharmacist's voice could facilitate orientation within the pharmacy.

"I know there are two steps and then a little plateau and another step, and that is why I don't change either, you see" IPa2 (73 years)

"This morning, I went to the physiotherapist, and I said to myself 'Oh, I remember I was prescribed (medication name), I will go and get it now'. [...] I'm here, I'm going to see what is around" IPa3 (26 years)

"I concentrate on the passageway so as not to knock it over, to pass well in the middle of the passageway" IPa5 (67 years)

Theme 2 Obtaining medication information for individuals with a visual impairment. This theme encompasses a number of elements, with a particular focus on relational aspects that have already been addressed in the psychological dimension. In addition to the aforementioned relational and communication aspects, the format used to dispense information, and the advice provided by pharmacists are of paramount importance in ensuring the delivery of appropriate care. Participants reported that pharmacists give oral information and affix a small label to the box. On occasion, they also write the dosage in large print. Furthermore, they indicated that pharmacists do not frequently offer additional guidance beyond dosage and storage instructions. In particular, they highlighted the necessity for pharmacists to be made more aware of the issue of VI.

"They understood straight away that they had to write the dosage of the medication in large print" IPa9 (44 years)

"If it is a syrup, she explains to me how to take it and how it is done, if it is a tablespoon or a teaspoon, sometimes they explain it to me" IPa16 (52 years)

Theme 3 Medication management for individuals with a visual impairment. Participants devised strategies to facilitate the administration of their medications. Some participants indicated employ a color-coding system, or touch to identify their medications, while others rely on memory. Some participants also indicated utilise assistive devices, such as optical magnifiers, to enhance the visibility of written instructions.

“I had asked for colored capsules to differentiate between the two, because I have one medication which is cortisone and I have another which is a diuretic, so I asked for a red one for the more dangerous medication and a green one” IPa14 (49 years)

“Sometimes, I ask him if he will let me at the same time if I can record, if he doesn't mind me hearing the dosage of my medication” IPa16 (52 years)

Theme 4 Specific expectations of individuals with a visual impairment. Two levels of specific expectations were identified: the layout of the pharmacy and the relationship with the pharmacist. Some participants indicated that the provision of a straight path to the counter, or the installation of podotactile markers within the pharmacy would facilitate their movement around the pharmacy. Additionally, they articulated certain expectations that would assist them in the safe administration of their medications. For instance, they expressed a desire for pharmacists to provide them with appropriate advice, to refrain from affixing labels to Braille, and to offer a recording of essential information.

“Let's just say that, ideally, we would like to be able to follow a straight route to the counter” IPa12 (45 years)

“Pharmacists have a very bad habit of sticking their prescription labels over the Braille inscriptions. I think it's a big point that absolutely must be improved” IPa12 (45 years)

4. Discussion

This qualitative study highlighted the lived-experience of individuals with a VI in the context of visiting a community pharmacy. The presence of researchers in clinical psychology and clinical pharmacy allowed for the identification of aspects related to overall well-being in pharmacy, as well as communication with the pharmacist and the various adjustments necessary for optimal care.

A part of the results addresses the lived-experiences related to VI. The initial relationship affected is that of the individual with their VI itself. Living with a VI involves a continuous, lifelong process of adaptation and acceptance. It affects daily life and influences interactions with the surrounding environment. Upon receiving the diagnosis of VI, individuals often feel a profound sense of loss, as suggested by Charmaz's theory of "the loss of lasting change".[25] Individuals with a VI must constantly navigate between Merleau-Ponty's idea of the ideal “desired body” and the reality of the “body in the moment”.[26] This psychological state can frequently lead to feelings of depression. To cope with this emotional distress, some participants have turned to humor as a form of compensation.

Faced with unsuitable environments, the lived-experience of individuals with a VI also reflects a sense of powerlessness, which is fueled by a series of preconceived notions within the individual. These preconceived representations destabilize relationships and create a form of dependence between the person with a VI and the sighted person. In a cyclical manner, this perception contributes to reinforcing the discomfort related to the disability.[27]

There is also a sense of stigmatization. Individuals living with a VI tend to self-stigmatize or feel stigmatized by others. This perception contributes to the marginalization of these people. While the research participants define themselves as "disadvantaged identities trying to integrate by attempting not to be recognized as different" they adopt attitudes of not asking for help when facing difficulties. Unfortunately, this desire to live "normally" without seeking assistance further reinforces their isolation. However, the acceptance of disability involves expressing oneself freely. One participant emphasizes the importance of being able to communicate one's difficulties to those around them. This idea aligns with the views of Kowarski,[28] who also highlights the importance of explanation: "knowing how to present it to others" to facilitate possible adaptations.

The IPA analysis highlighted that the mobilization of a third party (e.g., social circle, pharmacist) remains essential. As previously mentioned, asking for help can be difficult for some individuals with a VI, but it remains indispensable for certain activities. Family has long been a cornerstone of the care system.[29] However, this assistance can have significant repercussions on the mental health of the family. The study by Strawbridge *et al*.[30] supports this finding by demonstrating a correlation between a person's VI and depression in their spouse, as well as a reduction in the spouse's physical capacity, well-being, and social relationships, leading to a decline in the quality of the marriage. Reinhardt and D'Allura[31] add that VI is the primary source of stress for the caregiver. Recommendations should also focus on the family system surrounding the person with a VI. The pharmacist can also play a role in providing support to individuals with VI. Pharmacist is even referred to as a "lay confessor". Duchein[32] highlights this role of the pharmacist as a confidant by stating: "The door of the pharmacist is undoubtedly one of the last that one can push open to share a bit about oneself as one does nowhere else, and this without an appointment, sometimes without embarrassment, often also without concern for time". However, communication with the pharmacist may be limited if there is discomfort on the part of one or both interlocutors. This phenomenon is explained based on intergroup contact theory, which suggests that individuals' comfort in relationships with those who differ from them is correlated with the number of positive contacts they have had with a member of an "out-group".[15] In this same perspective of contact with a particular population, individuals with a VI have specific needs related to their condition. As a result, the pharmacist aims to inform and advise their patients to promote the appropriate use of medications. As the last link in the care chain, the pharmacist's role is to prevent and resolve any issues related to medication use, such as interactions, or poor therapeutic adherence.[33]

The presence of various adaptive systems, whether organizational or architectural, facilitates the reclaiming of partial autonomy by individuals living with a VI. In general, the atmosphere of a place reflects an emotional state that is connected to the immediate resonances of the environment.[34] The tonal quality of the surrounding space is transmitted to the individual moving through it.[35] This link between architecture and psychological state advocated the idea that the environment affects thoughts and behaviors. It even influences sociability, an essential element for the pharmacist's optimal care for individuals with a VI. This concept falls within the field of environmental psychology as developed by Ittelson and Proshansky,[36] who studied space usage in psychiatric hospitals. It is worth noting that pharmacies are also places of care, reception, and support. In this respect, the same concepts of a "healing hospital" can be applied.[37] The community pharmacy must therefore provide the best services to all its patients.[10]

The results highlighted cross-cutting findings. One of them is secondary benefits, which refers to the adoption or development of new behaviors, such as kindness and tolerance. Another one concerns about the future. The fear of a worsening diagnosis or the fear of being left alone, for example, were recurring anxieties among participants. In another but equally important context, disability awareness was a major point raised by the study participants. According to them, raising awareness about disabilities is the best solution for improving their daily lives and their access to medical care. As described above, this awareness could lead to the implementation of various adaptation systems, both architectural and in terms of communication with individuals with a VI.

Finally, it is important to note that these entire results is embedded in a process of gradual acceptance and adaptation. All elements of this study interact with each other within a temporal progression. VI is a complex phenomenon that requires a unique period of adaptation and acceptance for everyone. VI is a disability, making it both a universal and singular phenomenon. Each person with a VI has their own lived-experience and personal timeline.

4.1. Strengths and weaknesses

A recruitment bias was identified as an issue, as the most motivated and involved persons were more likely to participate in the study. Additionally, only SR was tasked with transcribing the interviews, resulted in a more laborious data analysis phase for TM. However, the use of two different qualitative methods independently (TA and IPA) to analyze data was a significant strength of the methodology. While the psychological dimension was more thoroughly delineated by SR (IPA) and the pharmaceutical dimension was more thoroughly delineated by TM (TA), these two methods enabled the identification of themes that were generally identical, as well as the completion of themes to achieve the most comprehensive schematization possible. The double-blind analysis of the data, including the comparison of the databases, avoided any bias in interpretation or data selection, and ensured consistency in the analysis. Furthermore, Cronbach's alpha exceeded 0.7, indicating the reliability of the analyses conducted by TM and SR.

5. Conclusion

This qualitative study provided information regarding the feelings of individuals living with a visual impairment and the behaviors of their family and friends, who sometimes play the role of informal carers. Furthermore, the study emphasized potential solutions to improve patient-pharmacist communication, and strategies employed by individuals with a visual impairment to manage their medications were identified. Adaptive systems, both organisational and architectural, are of importance in enabling individuals with a visual impairment to regain partial independence. The study emphasized the significance of establishing supportive environments within pharmacies to enhance person well-being and social interaction. The promotion of awareness regarding disabilities and the implementation of various adaptive systems are identified as pivotal solutions for enhancing daily life and facilitating access to pharmaceutical care for individuals living with a visual impairment. Recommendations are therefore essential to ensure the most appropriate care. The proposals for adaptations raised in this article offer valuable insights, but further research is needed to be conducted to deepen the findings.

CRediT authorship contribution statement

Théodora Merenda: Writing – original draft, Visualization, Supervision, Methodology, Investigation, Formal analysis, Conceptualization. **Sarah Rharib:** Investigation, Formal analysis. **Pauline Delannoy:** Writing – review & editing, Visualization, Validation, Formal analysis. **Jennifer Denis:** Writing – original draft, Visualization, Validation, Methodology, Formal analysis. **Stéphanie Patris:** Writing – review & editing, Validation, Conceptualization.

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Conflicts of interest

The authors have no conflicts of interest to declare.

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Appendix A. Supplementary data

The following is/are the supplementary data to this article:Download: Download Word document (35KB)

Multimedia component 1.

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