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ORIGINAL RESEARCH

The insights of health and welfare professionals on hurdles that impede economic evaluations of welfare interventions

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ABSTRACT

Background: Four hurdles associated with economic evaluations in welfare interventions were identified and discussed in a previous published literature review. These hurdles include (i) 'Ignoring the impact of condition-specific outcomes', (ii) 'Ignoring the impact of QoL externalities', (iii) 'Calculation of costs from a too narrow perspective' and (iv) 'The lack of well-described & standardized interventions'. This study aims to determine how healthcare providers and social workers experience and deal with these hurdles in practice and what solutions or new insights they would suggest.

Methods: Twenty-two professionals of welfare interventions carried out in Flanders, were interviewed about the four described hurdles using a semi-structured interview. A thematic framework was developed to enable the qualitative analysis. The analysis of the semi-structured interviews was facilitated through the use of the software program QRS NVivo 10.

Results: The interviews revealed a clear need to tackle these hurdles. The interviewees confirmed that further study of condition-specific outcomes in economic evaluations are needed, especially in the field of mental health and stress. The proposed dimensions for the condition-specific questionnaires varied however between the groups of interviewees (i.e. general practitioners vs social workers). With respect to QoL externalities, the interviewees confirmed that welfare interventions have an impact on the social environment of the patient (friends and family). There was however no consensus on how this impact of QoL externalities should be taken into account in welfare interventions. Professionals also suggested that besides health care costs, the impact of welfare interventions on work productivity, the patients' social life and other items should be incorporated. Standardization appears to be of limited added value for most of the interviewees because they need a certain degree of freedom to interpret the intervention. Furthermore, the target population of the interventions is diverse which requires a tailor-made approach.

Conclusion: This qualitative research demonstrated that these hurdles occur in practice. The proposed solutions for these hurdles can contribute to the improvement of the methodological quality of economic evaluations of welfare interventions.

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Welfare intervention; economic evaluation; broad societalperspective; policy; quality of life

1. Introduction

Welfare is a term that is not strictly defined but corresponds to a broad variety of societal sectors. Health-care services are an important part of welfare work, but welfare also involves several societal aspects such as general well-being interventions, sociocultural activities, senior care, facilities for minorities, social services, housing, addiction treatment, and social rehabilitation. This makes welfare work an interdisciplinary concept [1,2].

Welfare work aims, among other goals, to improve the quality of life (QoL) of citizens. A EUROSTAT report on behalf of the European Commission presented an 8 + 1 dimension framework for measuring QoL that goes beyond the measures and incorporates aspects as life satisfaction, well-being, and the general progress of a society. The dimensions of this framework are (1) material living conditions, (2) productive or main activity (including employment), (3) health, (4) education, (5) leisure and social interactions, (6) economic and physical safety, (7) governance and basic rights, (8) natural and living environment, and (9) overall life satisfaction [3].

Due to the role played by welfare in all of these multiple and distinct aspects of society, conducting an economic evaluation of welfare interventions is difficult. Little experience has thus been gained to date in the field of economic evaluation of welfare interventions [1].

However, if informed policy decisions are to be made, it is important to gain more insight in this field [2,4,5]. Four hurdles associated with economic evaluations of welfare interventions were thus identified and examined in a previously published literature review. Examples of and solutions to these hurdles were sought in economic evaluations of health-care interventions, due to the little experience available in the field of economic evaluations of welfare interventions. The results were extrapolated for welfare interventions. These hurdles include [6]:

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(1) 'Ignoring the impact of condition-specific outcomes'
Since welfare interventions respond to a broader range of societal aspects than does health care alone, the implementation of more condition-specific instruments (e.g. CORE-6D for common mental health problems, EORTC-8D for cancer, Parkinson's disease Quality of Life measure) [6–8] in economic evaluations of welfare interventions is required [4,5]. Generally, economic evaluations of welfare and health-care interventions have only focused on the general health-related quality-of-life (HRQoL) aspects, since they only make use of generic QoL instruments, such as the EQ-5D instrument [5,9,10]. In the EQ-5D instrument, HRQoL is divided in a visual analogue scale (VAS) and a multidimensional part, consisting of multiple aspects (i.e. mobility, self-care, usual activities, pain and discomfort, and anxiety and depression), which both reflect an individual's perspective [11]. One disadvantage of these generic QoL instruments is that they do not take into account condition-specific health aspects [12].

(2) 'Ignoring the impact of QoL externalities'
A patient's or client's illness or condition does not only affect his or her own QoL but also has an influence on the QoL of people in the patient's environment (such as family and friends). For instance, previous studies have shown a negative financial impact and increased levels of burden among informal caregivers [13,14]. However, there are also positive influences on the environment – for instance, taking care of a person can be a source of happiness for informal caregivers [15,16]. As such, it is important to take into account the influence on the QoL of family, friends, and informal caregivers in the calculation of QoL [6,14].

(3) 'Calculation of costs from a too-narrow perspective'
As welfare interventions have cost consequences in a wide variety of sectors, a broad societal perspective must be taken in the economic evaluation of those interventions. Nevertheless, it will be a great challenge to capture and measure all the relevant costs related to a broader societal perspective [6]. The costs are mostly restricted to the health-care sector, but costs related to employment, housing, and crime are sometimes mentioned in health-care or welfare interventions that focus on costs beyond the health-care sector [17,18].

(4) 'The lack of well-described and standardized interventions'
There appears to be large variability between welfare interventions, as they are carried out by different health-care workers who use different approaches. By focusing on a detailed description and a more defined and methodologically standardized intervention, the variability between interventions will be minimized [2,5]. For instance, the use of a standardized protocol facilitates the uniform implementation of an intervention [19]. The objective of a standardized intervention is to have the ability to generalize results and findings and to determine the nature and context of the intervention [6,20]. However, there is a human factor related to welfare interventions that should be taken account of [21]. This hurdle is not only limited to economic evaluation of interventions but also applicable to other types of evaluations.

Usually, economic evaluations of welfare interventions are carried out after the welfare intervention itself has finished. The goals of this qualitative research were thus (1) to explain to professionals active in the welfare or health-care branch (health-care providers, social workers, managers of social and sheltered work environments, and general practitioners [GPs]) the importance of tackling the hurdles identified in literature (from an economic point of view) and asking how they can contribute to tackling already these hurdles on the level of the welfare intervention, and (2) to obtain suggestions from these professionals on how to tackle these hurdles in the future. It was not the purpose of this study to generate consensus between the interviewees. The added value of this research lies in supporting more and better economic evaluations of welfare interventions in the future.

2. Methods

A qualitative study was carried out using semistructured interviews. The target population for this qualitative research was based on professionals in three ongoing welfare interventions in Flanders, Belgium. These interventions included (1) an eHealth intervention for health promotion through an online tool performed in GP practices in Flanders. This intervention was carried out in a 'healthy' population of patients (i.e. patients who were not suffering from any chronic condition); (2) a community-based care intervention for more efficient home care for individuals with mental disorders, patients with dementia, homeless people, and patients with psychological disorders; (3) an intersectoral collaboration for health-care promotion in hard-to-reach groups, with the intervention being carried out in sheltered and social workplaces in Flanders. A thematic framework was developed to enable the qualitative analysis of these semistructured interviews.

2.1. Interviewees

Fifty-five professionals, all active in health care or welfare and associated with one of these three welfare interventions in Flanders, were contacted by e-mail to participate in this study. A total of 22 professionals (11 GPs and 11 social workers in diverse branches) (Table 1) responded positively to the e-mail and were interviewed regarding the four hurdles in a semi-structured way.

This target group consisted of Flemish GPs, a practice assistant of a Flemish GP, social workers in psychiatry, coordinators of social/sheltered workplaces, a coordinator of an initiative for individuals with personality issues, a team coordinator of an assisted living facility, a coordinator of an initiative for homeless individuals, a health-care coach, a coordinator of a community caring for disabled individuals, and an economist of an umbrella organization for social workplaces (Table 1).

Table 1. Classification of interviewees according to their function.

Interviewee	Professional function
Gp. 1–11	Flemish general practitioner*
Pa.	Practice assistant of Flemish general practitioner*
Cdt.	Coordinator
Cdt. 1–2	Coordinator of a social workplace***
Cdt. 3	Coordinator of an initiative for persons with personality issues**
Cdt. 4	Teamcoordinator of an assisted living facility***
Cdt. 5	Coordinator of a community for care for disabled persons***
Cdt. 6	Coordinator initiative for homeless persons**
HcC.	Health-care coach**
Ec.	Economist umbrella organization social workplaces***
Sw. 1–2	Social worker psychiatry**

*Interviewees related to the eHealth intervention; **interviewees related to the community-based care intervention; and ***interviewees related to the health-care promotion in 'hard-to-reach' groups' intervention.

2.2. Data collection

An interview guide was developed based on the hurdles identified in a literature review [6] and was approved by an ethics committee. From November 2014 to June 2015, the semistructured interviews were carried out. Before each interview started, an explanation of the goal of the interview was given, and anonymity and confidentiality were guaranteed. Afterward, the interviewees were asked about their insights regarding and possible solutions to the four hurdles identified in the literature review. All the interviews were conducted in Dutch and were recorded to facilitate the processing of the data.

2.3. Data analysis

The five stages of the thematic framework analysis [22] were used to analyze the semistructured interviews. These stages are (1) familiarization, (2) identifying a framework, (3) indexing, (4) charting, and (5) mapping and interpreting. A thematic framework was chosen because the interview guide was based on the hurdles previously identified and described in the literature review [6]. The framework was built around the theme 'Hurdles that impede economic evaluations of welfare interventions' and was divided in four subthemes referring to the four hurdles: 'Condition-specific outcomes,' 'QoL externalities,' 'Costs,' and 'Standardization.' Subsequently, all the raw data derived from the semistructured interviews were coded and given a node. For example, 'Emotional well-being is related to the correct balance between a person's different abilities….' was given the node 'emotional well-being.' A distinction between the nodes was made based on the meaning of the data. Each node thus captures all the information about a specific topic. Afterward, all the nodes were assigned to their corresponding subthemes [22,23]. Analysis of the semistructured interviews was facilitated by the QRS NVivo 10 software.

2.4. Content interview guide

2.4.1. Hurdle 1: ignoring the impact of condition-specific outcomes

The first step before developing tailor-made condition-specific instruments, applicable to economic evaluations of welfare interventions, is to gain more insight into which condition-specific elements are relevant in this field. Condition-specific outcomes are in this paper defined as outcomes related to certain conditions (and which contribute to a QoL score), but which are not captured in generic QoL instruments. A 'ceiling effect' can be avoided by using condition-specific outcome measures instead of generic QoL instruments in condition-specific situations [6,24]. This ceiling effect of generic QoL instruments is a barrier to economic evaluations because it generates a distorted perception of the results [24].

All interviewees were asked about condition-specific elements that affect the QoL of their target population. Hence, impaired quality of sleep and impaired dignity (i.e. among, individuals with obesity) were given as general examples of condition-specific elements which can influence QoL.

2.4.2. Hurdle 2: ignoring the impact of QoL externalities

The QoL of the environment (relatives, friends) is affected by the patient's illness or condition [6]. Therefore, the interviewees were asked which different aspects of QoL do the welfare intervention they are involved have an influence on. For economic evaluations of welfare interventions, it is important to obtain an accurate and realistic QoL value. This QoL value includes the QoL value of the patient, as well as the QoL value of the environment. Neglecting the impact of the QoL of the environment distorts the QoL value obtained, because welfare interventions involve a wide variety of individuals [6].

2.4.3. Hurdle 3: calculation of costs from a too narrow perspective

During the semistructured interviews, the interviewees were asked which sectors of society (other than the health-care sector) the intervention has an impact on, in terms of related costs. The influence of costs related to employment, crime, and housing were given as examples. The reach of the cost perspective is an important aspect in differentiating economic evaluations of welfare interventions from economic evaluations of health and preventive interventions. The cost perspective for economic evaluations of welfare interventions has to involve as many societal sectors as possible [25].

2.4.4. Hurdle 4: the lack of well-described and standardized interventions

All interviewees were asked for their opinion on standardization of the intervention they were involved in. They were additionally asked if they were interested in participating in a workshop to standardize the intervention, as standardized interventions are of importance in facilitating the economic evaluation of these interventions.

3. Results

3.1. Hurdle 1: ignoring the impact of condition-specific outcomes

The same questions were asked of all interviewees; however, the GPs and GP's practice assistant focused more on disease-specific QoL elements, while the social workers focused more on general QoL elements (Figure 1).

Figure 1. Results reported by GPs and Social Workers.

All GPs and the GP's practice assistant confirmed that more condition-specific outcomes are needed in economic evaluations of welfare interventions, and especially in those related to mental health and stress. 'How am I feeling?' (referring to a holistic impression of contentment in terms of mental and physical health), mental health, stress, time pressure, energy level, and burnout were important condition-specific outcomes mentioned by the interviewees. Also, the senses of shame and self-esteem were mentioned. Likewise, problems and concerns related to sexuality, such as potency and prostatic dysfunction, were described.

However, the proposed dimensions for the condition-specific outcomes varied between the groups of interviewees (between the GPs compared with the social workers). The GPs focused more on health-related condition-specific outcomes (mental health, physical health, or a combination of these two), whereas the social workers gave a broader interpretation to the 'condition-specific' concept.

> I think there are few people who feel good about themselves. If you knew, I think, out of 100 people who come here, I think there are not so many of them…. (Pa) (How am I feeling?)

> The mental health indicator is important because these days, people are afraid to be sick; they need to learn how to make time for themselves again…. (Gp. 7) (Mental Health)

> I think stress has an influence…. (Gp. 2) (Stress)

> The first thing people complain about when they are ill is their energy – namely, that they don't have enough energy to do things…. (Gp. 4) (Energy Level)

> A general measure, something like 'How am I feeling?' on a scale from 0 to 10. What actually is the general contentment?…. (Gp. 10) (How am I feeling?)

The target population of social workers is diverse. However, stress, safety, desolation, emotional well-being, dignity, stigma, a sense of shame, empowerment, and the availability of a support network are the most important indicators for condition-specific outcomes in welfare interventions mentioned by the interviewed social workers. Self-sustainability was a more controversial indicator for condition-specific instruments, according to the interviewees in the social worker group.

> Emotional well-being is related to the correct balance between a person's different abilities…. (Sw. 1) (Emotional Well-being)

> Self-determination – that will improve their QoL, I think…. (HcC.) (Empowerment)

> The fact that we offer psychiatric help is for some clients threatening and stigmatizing…. (Cdt. 3) (Stigma)

Several approaches and methods were mentioned by the interviewees about how these condition-specific elements should be taken into account. Some of the social workers were already utilizing questionnaires to query the QoL of their clients. Other suggestions to obtain condition-specific elements were through governmental websites, an online logbook, personal contact, or personal coaching.

> In our communities, we are already working with questionnaires for disabled individuals. They fill in a personal outcome scale (POS) to give an impression of their quality of life…. (Cdt. 5)

3.2. Hurdle 2: ignoring the impact of QoL externalities

With respect to QoL externalities, all interviewees confirmed unanimously that a condition or illness also has an impact on the person's environment: that is, the QoL of friends, family, and informal caregivers will be affected. However, several methods were mentioned by the interviewees regarding how this impact on QoL externalities should be taken into account in future economic evaluations of welfare interventions. According to the interviewees, the major concern regarding this hurdle is that the influence on the environment of the patient depends on the patient's current context. However, the current context is a time-dependent parameter, especially in the case of the social workers' clients. Therefore, the influence on the QoL of the environment of the patient cannot be generalized. The suggested methodology for obtaining this information can thus include questionnaires, personal contact (health-care coach), personal coaches, online logbooks with daily rating scales, workshops, and so on.

As with Hurdle 1, a distinction can be made according to the results reported by the GPS and the social workers for Hurdle 2.

However, this distinction is a result of differing assumptions between the GPs and the social workers. The GPs' answers were already based on the possible impact of the welfare intervention. In contrast, the social workers based their answers on the baseline situation of their target population (before they were assigned to a welfare intervention). That is, the social workers did not take into account the possible impact of the intervention when verbalizing their answers.

The GPs and practice assistant were involved in an eHealth intervention to promote a healthier lifestyle through an online tool in Flemish general practices. The content of this eHealth intervention has been described elsewhere [26]. They indicated that there was mainly a positive influence of the intervention on the environment of the patient. The patients have the ability to stimulate, through their participation in the welfare intervention, their environment to adopt a better and healthier lifestyle, according to the GPs and the practice assistant. They also mentioned that, by making a better and healthier lifestyle more social, other people will be positively affected.

> I think is everything related to physical activity. I think you can only stand a physical activity routine if you make it social. And it is the social factor that brings the positive effect to the people… (GP3)

The influence of the clients' condition on their environment is rather negative, according to the social workers. They based their answers on the baseline situation of the client and did not take into account the impact of the welfare intervention – unlike the GPs and practice assistant. The QoL of the environment of the client was negatively influenced, according to the social workers, due to feelings of shame, desperation, frustration, loss of control, fear, mental strain, concerns, and the effects of conditional behavior because of the condition of their relative or friend.

> An emotional influence definitely has a huge impact. Because the family of the client notices that they cannot always act in an efficient way.… (Cdt. 3)

> This morning I spoke to the daughter of a client on the phone; her father has dementia and is very stubborn. 'I can't handle this anymore' she said 'The nurse comes every day, but he does not want to be washed by her, so he is dirty. I don't recognize my father like that.…' (HcC)

In terms of measuring the influence on QoL externalities, one respondent mentioned the importance of taking into account the influence of the welfare intervention on formal caregivers. These are trained to deal with these situations, but they are still affected by the condition or illness of their patients, according to some of the interviewees.

3.3. Hurdle 3: calculation of costs from a too narrow perspective

All the interviewees (social workers and GPs) confirmed that their interventions had a positive effect on the employment and work productivity of their target population.

The social workers in particular confirmed the positive effect on crime, justice, and housing. They suggested that the welfare interventions had a positive effect on the criminal activities (shoplifting, juvenile crime, illegal drug abuse, etc.) of their clients, and consequently on the related crime costs. Furthermore, there is also a positive influence on judicial costs. Social workers perceive their target population as discontent, ignorant, and frustrated, which sometimes leads to legal proceedings.

> A lot of our clients are discontent and so they start judicial procedures.… (Cdt. 3)

However, the interviewees suggested also other items that should be taken into account concerning the economic evaluation of welfare interventions. First, they suggested that there was a positive effect on road safety, as better health and well-being makes individuals more relaxed, helping to avoid accidents. Second, a more structured lifestyle (e.g. being in sheltered or social workplaces) can help people avoid alcohol or drug abuse, according to the interviewees. Third, being involved in a health-care or welfare intervention can lead, according to the interviewees, to a more developed social life, including social engagement, culture, and sport. The target population will thus be less bored and will make better use of their time, according to both the social workers and GPs. Fourth, the interviewees suggested that the education of the individual's children would be influenced, which would in turn have some long-term consequences for the related costs.

> If they are healthier and they are feeling themselves more healthily, they will be less ill. So I think that, in terms of employment, there will be less absenteeism. They will gain more enjoyment from their work and will feel more comfortable in their own skin. This has a positive influence on all aspects.… (GP6)

> If I give you the example of the work mix where our clients come to our facility, they say 'I contribute to the society – I don't earn a wage, but I do contribute to the society. I do something that produces money.' That is a huge surplus value. On the one hand, to feel good about themselves, while on the other hand to suffer less from adverse effects or boredom, which sometimes leads to inappropriate behavior.… (Cdt. 5)

In addition, the long-term consequences on health-care costs – which were not directly related to the condition of the client or patient – were mentioned by interviewees. Being involved in health-care or welfare interventions has a positive influence on health and general well-being. When people are feeling better about themselves, they function better, which leads to them taking better care of themselves (dental care, avoiding the development of chronic diseases, etc.), but also leads to better mental health.

According to most interviewees, improved health status or improved general well-being affects all domains of society.

> In any case, I think it has an effect on physical healthcare. Because when people feel more comfortable in their own skin, they have more self-respect and will take better care of themselves. In the long-term, you notice that people develop fewer chronic diseases.… (Cdt. 3)

3.4. Hurdle 4: the lack of well-described and standardized interventions

The standardization of welfare interventions appears to be of limited added value for the interviewees. They saw it as a limitation for themselves, but also thought it would be a limitation for the client or patient. Although they realize that standardization is an important aspect of the economic evaluation of welfare interventions, both social workers and GPs stressed the importance of tailor-made approaches.

The social workers stated that standardization of their interventions was impossible. The target population of their interventions is very diverse (physical disabled individuals, mentally disabled individuals, homeless people, individuals with mental disorders, individuals with addiction problems, etc.), which makes it indispensable to have a tailor-made approach for every person. In their opinion, some aspects of management (such as methods and formal procedures) can be standardized to create a framework, but the accomplishment of the intervention on the client-level must be personalized.

> Then you have to pull clients out of their context, and that is exactly what we do. We go to their home, that is our main business, together with the network, together with the context over there. And these factors will always, partially, determine the situation.… (Cdt. 4)

> In fact, it is about working with people. There is even a difference between you and me, if we were to carry out the intervention. Even that has an influence.… (Sw. 1)

Likewise, the GPs confirmed the importance of a tailor-made approach to patients. The success of a given approach in one patient is not guarantee of the same success in another. Furthermore, the GPs indicated that a standardized intervention is harder to accomplish, for a variety of reasons. First, due to their high workload and lack of time, GPs cannot focus on the main problem of the patient if they also have to think about all the aspects of a standardized intervention during the consultation. Second, they need a certain degree of freedom to interpret the intervention, but also to use their preferred method to implement or shorten the intervention. However, they agree with the idea of a well-developed intervention framework that grants authority to the GPs. Only one GP thought that complete standardization would be an added value and was willing to participate in a workshop to standardize welfare interventions.

> It is fine if you have the time for it, and by time I mean **time** (emphasis). If I only saw one patient every 30 minutes, then I could do it. But if I want to stick to 12 minutes per patient, then I just cannot do it…. (GP 5)

> I think it is difficult to put it (the intervention) in a standard formulation.

> It would be hard for me to approach someone if knew that 'I have to stick to that or I have to do it in that way. For me it would be an inhibition…' (Pa.)

4. Discussion

This study investigated whether the four hurdles to the economic evaluation of welfare interventions, previously determined in a literature review, correspond to practical experiences related to three welfare interventions carried out in Flanders. The interviewees were also asked for suggestions to tackle these hurdles in the future.

It is essential to take into account condition-specific outcomes in economic evaluations of welfare interventions, as a consequence of the influence on a broad societal perspective (Table 2). It is important not only to focus on HRQoL items when considering welfare interventions [6]. In particular, the results quoted by the interviewees showed that there is a need for more specific mental health-related condition-specific outcomes, such as stress, burnout, contentment, shame, general well-being, time pressure, self-esteem, empowerment, and self-determination. In addition, examples of dignity, sexual dysfunction, the availability of a support network, desolation, and shame were given, depending on the target population. Despite the broad scope of the 'condition-specific' concept, professionals mainly reported a lack of mental and well-being-related condition-specific elements as opposed to physical condition-specific elements. A study that examined QoL in individuals with intellectual disabilities and mental disorders has confirmed the influence of empowerment, self-determination, and emotional well-being on QoL [27].

Table 2. Results of condition-specific outcomes and their input for economic evaluation.

Condition-specific outcomes	Input for economic evaluations
Mental health Emotional well-being 'How am I feeling'	General well-being (QoL) → QALY
Time pressure Energy level Burnout Stress empowerment	Work productivity (cost) + General well-being (QoL)
Safety	Criminality (cost) + Social activities (cost/QoL) + General well-being (QoL)
Availability of a support network Desolation	
Self-confidence Shame Dignity Stigma Self-sustainability	Social activities (cost/QoL) + General well-being (QoL)
Sexual dysfunction	Physical health (QoL) + General well-being (QoL)

QoL: quality of life.

Mental health indicators are important to take into account. Burnout and stress are now common phenomena in every layer of society [28], and this has an important influence on mental health and QoL in general. Next to mental health, emotional well-being is an important parameter for condition-specific outcome measures, as confirmed by the results of this research and related reports in the literature [27]. There was no consensus among the interviewees on self-sustainability as a condition-specific outcome, especially in the target population of mentally disabled individuals. Some interviewees thought it was an important indicator, while others thought that it relieves stress, pressure, and expectations if someone else takes over the control of the situation in which the client or patient finds himself or herself.

It is important to take into account that different target populations have different sets of values and norms. For instance, individuals with the highest needs often scale their problems down, according to the social workers.

Since the influence of the above mentioned condition-specific outcomes on QoL depends on the current situation of the client or patient, these condition-specific outcomes are also time-dependent. Condition-specific outcomes thus need to be measured at different moments in time if they are to give a realistic view of the influence on QoL.

The friends and family of a person with a condition or illness experience a change in their QoL [1,6]; however, it is perceived to be difficult to take into account this impact on the QoL of family and friends, according to the GPs and social workers interviewed for this study. A general conclusion that can be made based on the results is that the impact on QoL of family and friends depends on the resilience and strength of the family member or friend. A study of monetizing the provision of informal care based on the method of well-being valuation confirms that the well-being of the informal caregivers is associated with their situation: a better subjective well-being is associated to the better health status of the informal caregiver [29].

As with Hurdle 1, these outcomes are also time dependent; it is therefore important to also measure them at different moments in time. The interviewees thus mentioned the idea of an online logbook to capture and take into account the representative influence on the QoL of family and friends.

A questionnaire can also be a good medium, because the questions can confirm that there are other individuals struggling with the same problems or concerns. Some of the social

workers were already working with questionnaires to examine the impact on the QoL of relatives of their clients. A questionnaire can even be an incentive to communicate about their problems and concerns, according to the interviewed social workers. Additionally, the SHARE survey – a survey of health, ageing and retirement – used a standard measure for subjective well-being assessment [29]. However, most interviewees prefer conversation to questionnaires for capturing the impact on QoL of friends and family, as it provides the opportunity for clients or patients to ventilate about their concerns.

Despite the difficulty of determining the influence on the QoL of informal caregivers, this is an elementary component differentiating between welfare and health-care interventions. The application of this information regarding the QoL of informal caregivers to measuring the economic impact of this hurdle is twofold. First, there should be a standard implementation of instruments that measure the impact on QoL of informal caregivers. Second, these QoL scores should be associated with health states. Bidwell et al. investigated the QoL scores, depression levels, and anxiety levels of informal caregivers of patients with heart failure and reported decreased QoL scores. These scores tended to become even worse than the average QoL scores in a healthy population [30].

With regard to the influence on the QoL of formal caregivers, one suggestion might be to assess burnout rates in this particular target group so as to obtain an idea of the impact of welfare interventions on their QoL [31].

Therefore, professionalization, intervision, supervision, (additional) training sessions, and the ability to maintain some distance from the work situation are important elements suggested by social workers for formal caregivers to maintain or improve their QoL. The literature demonstrates that specific support and training sessions can help manage burnout in formal caregivers [31].

Besides the health-care costs, the impact of welfare interventions on work productivity, the client's social life (e.g. culture, sport) and other items such as road safety were reported by the interviewees in providing an overall picture of the costs related to welfare interventions. Considering the health-care costs, indirect long-term costs should also be incorporated. In a recent study of the effects of public health policies in European welfare states, three major policy domains were considered: health care, social policy (e.g. education, social security, and housing), and public health policy (e.g. road traffic injuries, workplace regulations, food and nutrition, screening, etc.) [32]. These domains come show up in the results of this study.

Especially in case of welfare interventions, the costs linked to crime, aggression, substance abuse, and justice were mentioned. As a result of being involved in a welfare intervention, this target group will be less bored and will have more usefully manage their time, as reported by the social workers. They will also have more self-esteem and feel more useful because of their contribution to society [33]. A work health promotion intervention reported increased mental well-being and a decrease in sickness absences [34]. This qualitative research highlights the societal aspects affected by welfare interventions in terms of costs. Now a cost value needs to be put on these societal aspects. The human-capital approach, or the friction-cost method, can be used to calculate the costs related to labor productivity loss [35,36]. The cost implications of criminal activities are determined not only by judicial costs and victim costs but also by costs related to productivity loss due to incarceration [17,37]. The related cost data can be derived from administrative records, governmental sources, or clinical reports [6]. An Australian study investigated the relation between interventions for reducing road traffic injuries and driving under the influence of alcohol in a cost-effectiveness study [38], showing that almost 30% of the total burden associated with traffic injuries was attributable to driving under the influence of alcohol. Checkpoints for alcohol control in traffic are cost-effective if the costs of avoided injury treatments are included in the calculation [38]. It is more difficult to put a cost value on education and a more developed social life. However, the Economic and Social Research Council investigated the impact of education on various outcomes: a high education level was associated with better health, better well-being, and higher social trust. Education level is robust and relatively stable over time [39]. The education level can be measured in two ways: as years of schooling or with the International Standard Classification of Education instrument [40]. A review of the social impact of culture and sports reported strong evidence for sport and the improvement of prosocial behavior resulting in a reduction in antisocial behavior (recidivism, driving under the influence of alcohol, drug consumption, criminal activities, and others). Sport activities have also a positive impact on educational behavior and psychological outcomes. The impact of cultural activities on crime and education is rather on intermediate outcomes [41].

Standardization appears to be of limited added value, according to the social workers and GPs involved in the welfare interventions. Nevertheless, a well-developed framework for an intervention can, according to the interviewees, be an advantage, as long as the professionals can choose their own approach and retain their authority. The overall conclusion is that there is a need for a certain degree of freedom and flexibility to interpret the intervention. Welfare interventions have a wide variety of target populations, for which there is need for a tailor-made approach [42]. Yet for economic evaluations of welfare interventions, it is better to standardize the intervention to some extent in order to gain a more accurate assessment [6,13].

An additional issue related to the standardization of interventions, according to GPs, is the high workload of GPs and the associated lack of time. This impedes the accomplishment of a standardized intervention by GPs. However, working with practice assistants could be an appropriate solution to the time pressure problem.

According to the social workers, a tailor-made approach is needed because of the diversity of the target population, but also to take into account the human factor. In the literature review [6], only the presence of the human factor of the professional is described as a hurdle. This qualitative research has also clarified that the patient or client's human factor, and not only that of the professional, is important for the approach of the intervention.

Table 3. Arguments for and against the standardization of welfare interventions, with suggestions.

Agreement with standardization of welfare interventions	Disagreement with standardization of welfare interventions
• Importance for economic evaluations • Framework for the intervention with autonomy for the social worker or GP	• Patients or clients involved in welfare interventions need a tailor-made approach • 100% standardization is not possible
Suggestion → Search for methods to implement valuation techniques of 'the human factor' in welfare interventions	**Suggestion** → Standardization on the management level → Tailor-made approach on the patient level

We can conclude that, in general, standardized interventions facilitate the economic evaluation of these interventions. However, standardization is a bottleneck for welfare interventions. Therefore, some sort of consensus must be sought for economic evaluations of welfare interventions (Table 3). According to the results of this research, it is not realistic to expect 100% standardized welfare interventions in the future. However, the suggestions in Table 3 may contribute to the development of semi-standardized welfare interventions.

According to the data reported in this paper, 22 interviewees were sufficient to reach data saturation. However, the answers of the interviewees were slightly different due to individual nuances, which is a key aspect of welfare interventions [6].

To the best of our knowledge, this is the first study, in combination with the previous published literature study [6], to investigate the hurdles to economic evaluation of welfare interventions in the field.

The added value of this study is that the results of the literature review have been examined in practice. Put differently, a theoretical part of the objective has been linked to a practical part of the objective. Consequently, the results of the literature review can be confirmed. Moreover, qualitative research is often a relevant study design in the preparation and interpretation of welfare interventions due to the diversity of the target population and the human emphasis. In our view, more qualitative research is needed in this field in order to specify the manner of handling the hurdles to economic evaluation of welfare interventions.

5. Limitations

The most significant limitation of this study is that it is based on three specific welfare interventions carried out in Flanders, Belgium. Hence, the results presented here are not generalizable to other countries, or even to social workers or health-care providers involved in other welfare interventions. It does thus not outline the complete possible set of welfare interventions.

Likewise, the interviewees for the three selected welfare interventions are diverse. A large variability is noticeable in particular between the GPs involved in the eHealth intervention and the social workers. Although this makes the findings richer, the differences in results between the GPs and the social workers are likely due to the specific contexts of their patients and clients.

6. Conclusion

The diverse population of patients, informal and professional caregivers, family, and others influenced by welfare interventions, and the effect on the broader societal perspective, are two characteristics of welfare interventions that make it challenging to economically evaluate them. In case of welfare interventions, we have to keep a tailor-made approach in mind due to the varied target population. Generally, the use of condition-specific QoL instruments with patients or clients and informal caregivers during the welfare intervention, and the availability of various databases for collecting cost data, will facilitate economic evaluations of welfare interventions in the future. A good collaboration between various societal sectors would thus be a good start. This qualitative research in combination with the previously published literature review provides more insight into the hurdles that impede economic evaluations of welfare interventions.

Key issues

- Concerning welfare interventions a tailor-made approach is needed.
- The results of this research are not generalizable to other countries.
- There is still need for condition-specific questionnaires which are able to calculate utilities.

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Declaration of interest

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