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Community Implementation Behaviour
-
The Influence of Person-related Factors of Actors from the Community on the Support of Caring Relatives of People with Dementia

presented by
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Abstract

Caring, especially for people with dementia, can be physically and psychologically very burdensome. The municipal communities with their stakeholders and local authorities are one entity responsible for offering adequate support for caring relatives. Although caring relatives of people with dementia are a mainstay of the German and many other care systems, the availability of support services targeting caring relatives of people with dementia within the municipal community shows deficiencies and the implementation of support services needs to be optimised.

The first publication of the present dissertation provides an overview of the current research literature to the topic *community implementation behaviour* or more precisely, the *implementation of support services for caring relatives of people with dementia*. The literature review shows that there was no research done looking at the implementation *behaviour* of actors from the community supporting caring relatives of people with dementia. In contrast, there is some research on the implementation determinants in general. Therefore, implementation barriers and facilitators could be systematically identified from eight suitable (inter)national publications. In addition to communication, the participation of the target group and a responsible leader, the literature shows that actors from the community in particular are an important factor in the implementation process. However, little is known about the person-related factors associated with the actors' implementation behaviour next to structural determinants such as lack of money or human resources. The Theoretical Domains Framework (TDF) focuses exactly on the investigation of person-related determinants influencing the implementation behaviour of actors in healthcare. The aim of this dissertation project is to adapt the TDF for the gerontological context and to apply it to the context of the support for caring relatives of people with dementia in municipal communities. Based on literature, which also deals with the application of the TDF, and an additional consensus process with experts in gerontology as well as experts in community work the TDF domains were adapted to the context of the support of caring relatives of people with dementia. The second publication applies the modified TDF domains in the analysis of qualitative data from a cooperation project (the Town Hall Project) where caring relatives and actors from the community talked, among other things, about the support of caring relatives of people with dementia. The publication explores the following question: which domains are addressed by actors from the community in a public dialogue and what results are achieved with regard to the implementation of support services for caring relatives of people with dementia? The data analysis suggests that addressing the domains in a public dialogue positively influences the actors and their awareness in terms of improving support for the target group. Thus, initial indications of the relevance of exploring the domains emerge. It became clear that a more detailed examination of actors from the community and the domains is needed. Therefore, a quantitative Community Implementation Behaviour Questionnaire (CIBQ) was developed based on the domains and the existing TDF questionnaires. To ensure that the questionnaire was valid, the psychometric properties of the CIBQ were calculated. In the third publication, the content of the CIBQ and its psychometric properties are presented in detail. The model fit of the CIBQ shows satisfactory results in terms of internal consistency (CMIN/DF = 1.63; SRMR = 0.05; RMSEA = 0.07; CFI = 0.92) and construct validity (Cronbach's alpha 0.74–0.89; inter-item correlation 0.38–0.88). Furthermore, the content of this cross-sectional observational study was analysed and prepared in a fourth publication. A survey among 205 actors from 16 municipal communities across Germany shows a positive and significant ($p<.001$) association between the agreement with the CIBQ and the implementation behaviour of the actors from the community within the last two years. A higher score on the CIBQ indicates a higher chance that actors from the community have implemented support services for the target group in the last two years.

All in all, communities can use the CIBQ to examine the determinants of the implementation behaviour of their actors and can influence it according to the detected incongruities. Thus, the support of caring relatives of people with dementia can be improved. Furthermore, the tool might be applicable to other target groups in the community as caring relatives of people with dementia are only one example of several possible target groups.

List of the Publications of the Cumulative Dissertation

1st Publication

Wittek M, Kiefer A, Kramer B, Wiloth S (2022): Implementation of communal support services - Determinants of the implementation of measures for caring relatives of people with dementia. *Pflege & Gesellschaft.* 1, 67-81. (German).

2nd Publication

Wittek M, Voß H, Kiefer A, Wiloth S, Schmitt E (2022): Community support for caring relatives of people with dementia: qualitative analysis using the Theoretical Domains Framework. *J Public Health (Berl.).* https://doi.org/10.1007/s10389-022-01744-w. (English).

3rd Publication

Wittek M, Manke-Reimers F, Schmitt E (2022): Development and psychometric properties of the Community Implementation Behaviour Questionnaire (CIBQ) in the context of supporting caring relatives of people with dementia. *Int. J. Environ. Res. Public Health.* 19(23), 16198. https://doi.org/10.3390/ijerph192316198. (English).

4th Publication

Wittek M, Manke-Reimers F, Schmitt E (2023): Communities' implementation behaviour regarding caring relatives of people with dementia – a quantitative study among German communities. *ZfGG.* [in Press]. (English).

Overview of the Present Dissertation

The present work is an individual publication-based dissertation that was conducted at the Institute of Gerontology, Faculty of Behavioural and Cultural Studies, Heidelberg University. The objective of the dissertation was to examine the implementation behaviour of actors from the community in the context of the support for caring relatives of people with dementia. In particular, the adaption of a framework as well as the development of a tool to measure the respective implementation behaviour was of special interest.

Chapter 1 provides information about the theoretical and empirical background. It consists of facts and figures about caring relatives and people with dementia as well as of regulations and the meaning of the elderly care. A general introduction into implementation science and implementation determinants follows. Before the chapter closes with a more specific explanation of the Theoretical Domains Framework as a tool in implementation science, the first publication about the state of the literature on this subject is outlined. In Chapter 2, the aim of the dissertation and the research questions are introduced before the material and methods used in the dissertation are explained in Chapter 3. More precisely, Chapter 3 starts with presenting the adaption of the pre-existing Theoretical Domains Framework. Afterwards, the newly developed Community Implementation Behaviour Questionnaire and its process of formation is described. The section continues with the recruiting procedure and the description of the sample of the study participants. Chapter 4 presents the methodology, the data analytics procedures and the results of the qualitative and the quantitative part of the dissertation project. At this point, the second, the third and the fourth publications are presented. Chapter 5 summarises the results of the dissertation project, discusses them, presents strengths and limitations and derives implications for the future practice and research.

Abbreviations

AIC	Akaike Information Criterion
CFA	Confirmatory Factor Analysis
CFIR	Consolidated Framework for Implementation Research
CIBQ	Community Implementation Behaviour Questionnaire
DIBQ	Determinants of Implementation Behaviour Questionnaire
EFA	Exploratory Factor Analysis
GBD	Global Burden of Disease, Injuries, and Risk Factors Study
TDF	Theoretical Domains Framework
WHO	World Health Organisation

Chapter 1

Theoretical and Empirical Background

1. Theoretical and Empirical Background

1.1 Caring Relatives and People with Dementia

1.1.1 Prevalence and Incidence of Dementia

According to the World Alzheimer Report and the World Health Organisation (WHO) about 55 million people worldwide currently live with dementia [40, 121]. Based on the WHO Global Status Report 2021, the German Alzheimer Society estimated about 1.8 million people with dementia lived in Germany in the end of 2021 [27, 121]. In accordance with estimations of the Dementia Forecasting Collaborators, there will be about 152.8 million people with dementia worldwide in 2050 and for Germany, they projected about 2.8 million people with dementia in 2050 [88]. The Dementia Forecasting Collaborators predicted this prevalence mainly by including the three modifiable dementia risk factors addressed in the Global Burden of Disease, Injuries, and Risk Factors Study (GBD) 2019: high body-mass index, high fasting plasma glucose, and smoking [88]. In their calculations, they assume that the absolute number of people with dementia will increase [88, 90] caused by declining fertility and rising life expectancy [41, 78, 88]. Livingston et al. (2020) concluded that up to 40% of dementia prevalence could be prevented by interventions addressing modifiable risk factors [75].

The two biggest (not modifiable) risk factors for dementia are ageing and genes. While it is possible for young people to develop or suffer from dementia, the risk increases with age [27]. Ageing is a risk factor because dementia can take a long time to develop and older people are more likely to suffer from risky health issues like high blood pressure. For example, at ages 65-69, two and at age of over 90 about 33 out of every 100 people have dementia. Further risk factors can be e.g. gender and sex as women more often have dementia than men [27]. Those named risk factors are examples of risks that cannot be avoided. Additionally, there are risk factors e.g. lifestyle (smoking/ alcohol abuse) that can be influenced.

All in all, the relevance of people with dementia becomes clear by reflecting those numbers and is reinforced by raising annual costs to society from US$818 billion in 2015 to an estimated US$2 trillion in 2030 [119].

1.1.2 Symptoms and Clinical Picture of Dementia

In line with the WHO's concept, the German Federal Institute for Drugs and Medical Devices defines dementia within the ICD-10-classification as follows:

> "Dementia (F00-F03) is a syndrome resulting from a usually chronic or progressive disease of the brain with disturbance of many higher cortical functions, including memory, thinking, orientation, comprehension, calculation, learning ability, language and judgement. Consciousness is not clouded. The cognitive impairments are usually accompanied by changes in emotional control, social behaviour or motivation, occasionally these occur sooner. This syndrome occurs in Alzheimer's disease, cerebrovascular disorders and other conditions that primarily or secondarily affect the brain."[1] [8]

There are different types and causes of dementia, which can be divided into primary and secondary dementia. Primary dementia can be subdivided into a degenerative and a non-degenerative type [30, 113]. The degenerative diseases include Alzheimer's disease, vascular dementia, mixed dementia, the frontotemporal dementia, the dementia in Parkinson's disease, and the Lewy Body Dementia [30, 113]. The non-degenerative disease implies a direct lesion of the brain as it can be caused by e.g. a stroke or cerebral bleeding [113]. Pre-existing diseases that are mostly independent of the brain (e.g. metabolic diseases or vitamin deficiencies) or chronic intoxication by medication or alcohol can cause secondary dementia [14]. Partly, those underlying diseases are treatable or even curable and the dementia symptoms can be confined when they are discovered at an early stage [14]. There are different grades of severity of dementia and different definitions of those grades. The following presents the grades of severity according to Hofmann [53]:

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[1] Literally translated from the German definition.

1. Mild dementia = “Complicated tasks can no longer be carried out, daily life noticeably impaired, but self-sufficiency still possible”[2] [53].
2. Moderate dementia = “Only simple activities are possible, severely limited self-sufficiency, prompting/external impulse required”[3] [53].
3. Severe dementia = “Completely dependent on care, personal hygiene no longer possible”[4] [53].

However, symptoms and grades of severity are quite individual [70].

The grades of dementia can be assessed by conducting different types of screenings e.g. the Mini-Mental-Status-Test [37], DemTect [66], and Barthel-Index [76].

1.1.3 Caring Relatives

About 4.1 million people in Germany are classified as in need of care according to the German Code of Social Law XI [108]. The majority (3.3 million) of them live at home [108] and half (about 2.1 million) of the care receivers are solely cared for by relatives at home [108]. This large proportion of people in need of care who live at home and are cared for by their families and friends makes the relevance and necessity of caring relatives obvious within the German care system. Regarding the solely demographic effect, as described in the Seventh Report on the Elderly, a report of the German Federal Government, family help- and care-resources as well as the extra-familial social engagement, are declining in absolute numbers [29] while the number of people in need of care will presumably increase by about half by 2050 [99]. This is partly because the need for care of the so-called baby boomer generation is implicitly assumed [65, 97]. In contrast, according to the Fifth German Survey on Volunteering (FWS 2019), the number of volunteers has increased in percentage terms in all age groups since 1999 [106].

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[2] Literally translated from the German definition: „Komplizierte Aufgaben können nicht mehr ausgeführt werden, tägliches Leben (sog. instrumentelle ADL, IADL) erkennbar beeinträchtigt, Selbstversorgung aber noch möglich“.

[3] Literally translated from the German definition: „Nur noch einfache Tätigkeiten möglich, stark eingeschränkte Selbstversorgung, Aufforderung/Fremdantrieb erforderlich“.

[4] Literally translated from the German definition: „Vollständig von Betreuung abhängig, Körperpflege nicht mehr möglich“.

However, the absolute number of volunteers is lower than the number of people in need. The change in family care and support due to various reasons such as the continuously changing quantitative relationship between carers and supporters, the job-related mobility, the increasing occupational activity of women, etc. [29]. At the same time, the increasing need of care meets a declining labour supply because of the demographic change and the accompanied declining number of people of working age [99].

Caring for people with dementia can be particularly physically and psychologically burdensome because of the symptoms associated with the disease [39]. Thus, carers often suffer from negative effects of care on their health and daily life [70, 98] whereby numerous studies have indicated that support services can improve the well-being and quality of life of this target group [100].

1.2 Elderly Care

1.2.1 Legal Requirements and Regulations in Elderly Care

Assistance for the elderly is one of the voluntary self-administrative tasks which the municipal communities and districts[5] need to fulfil next to their mandatory tasks [38]. It is part of the so called “Daseinsvorsorge” (services of general interest) that the municipal communities are charged with in the Article 28(2) of the German Constitution.

Although regulations on the care of the elderly are formulated in different books of law *SGB V (Statutory Health Insurance), SGB IX (Rehabilitation and Participation of Persons with Disabilities), SGB XI (Social Long-Term Care Insurance) and SGB XII (Social Assistance)*[6] , §71 SGB XII is the most relevant paragraph for elderly care:

> “Old people shall be granted assistance for the elderly in addition to the benefits under the other provisions of this book and the benefits of integration assistance under Part 2 of Book Nine. Assistance for the elderly is intended to help prevent, overcome or

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[5] “Landkreise”.

[6] Literally translated from the German definition: SGB V (Gesetzliche Krankenversicherung), SGB IX (Rehabilitation und Teilhabe von Menschen mit Behinderungen), SGB XI (Soziale Pflegeversicherung) und SGB XII (Sozialhilfe)

> alleviate difficulties caused by old age and to give old people the opportunity to participate in life in the community in a self-determined way and to strengthen their ability to help themselves.” (Part 1, §71 SGB XII Altenhilfe)[7]

This article on assistance for the elderly by municipal communities defines which eldercare measures are possible and under which circumstances these measures need to be provided [55, 102]. Assisting the elderly is a compulsory task of the municipal communities in the area of essential public services [10]. However, § 71 SGB XII allows the municipal communities a great amount of latitude [10]. In contrast to child and youth welfare (SGB VIII), there is no separate law on assistance for the elderly and for example the way and extent of supporting caring relatives of people with dementia in the German communities are not prescribed by law at all (§71 SGB XII Altenhilfe). In addition to the weak regulations, the financial resources of the municipal communities of the different federal states also influence the extent of assistance to the elderly [49]. According to eldercare, there are different fields of action where elderly people can be supported *1) open elderly care, 2) ambulatory elderly care (outpatient), 3) partial-stationary elderly care, 4) stationary elderly care (inpatient)* whereby open elderly care is regulated by SGB XII and the other three mainly by SGB XI [10].

In the sense of the security concept of health care, the design of health care provision should take place with the involvement of the municipal communities as important actors [103]. Even though municipal communities have had comparatively little responsibility and little influence in the provision of health care, they are often a key contact for local citizens. This is why more co-determination and planning rights are desirable for the future [38]. Therefore, besides the *Altenhilfe*, this is another aspect where the needs of the municipal communities becomes clear [16].

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[7] Literally translated from the German law: “ Alten Menschen soll außer den Leistungen nach den übrigen Bestimmungen dieses Buches sowie den Leistungen der Eingliederungshilfe nach Teil 2 des Neunten Buches Altenhilfe gewährt werden. Die Altenhilfe soll dazu beitragen, Schwierigkeiten, die durch das Alter entstehen, zu verhüten, zu überwinden oder zu mildern und alten Menschen die Möglichkeit zu erhalten, selbstbestimmt am Leben in der Gemeinschaft teilzunehmen und ihre Fähigkeit zur Selbsthilfe zu stärken.“ (§71 SGB XII Altenhilfe)

In addition to national regulations and laws to support caring relatives of people with dementia, there is also the WHO *global action plan on the public health response to dementia 2017-2025* targeting to improve the life of people with dementia and their carers as well as to reduce the influence of the disease on the society and the state [120]. Considering the seven fields of action within the global dementia action plan (dementia as a public health priority; dementia awareness and friendliness; dementia risk reduction; dementia diagnosis, treatment, care and support; support for dementia carers; information systems for dementia; dementia research and innovation) and the WHO implementation guideline of a strategy for dementia [122], the aims and measures of the German dementia strategy were set and published [13]:

1. Develop and establish structures for the social participation of people with dementia in their place of living.
2. Support people with dementia and their relatives.
3. Further develop medical and nursing care for people with dementia.
4. Promote excellent research on dementia.

1.2.2 Formal and Informal Care

In order to ensure a needs-driven care of people with dementia, a (individual) combination of formal or rather professional and informal care is usually indispensable [7, 29, 101], especially since the majority of people with dementia are cared for at home [11, 19, 109]. Furthermore, the inclusion of formal care can reduce the risk of caring relatives being overburdened and thus can prevent institutionalisation of people with dementia [35, 67]. Achieving this goal, support services for caring relatives of people with dementia need to fit the living conditions as well as the needs and requirements of the target group [9, 67, 81].

Those who provide support can be divided into three main categories: 1) public agencies such as the municipal communities; 2) non-profit organisations such as the Caritasverband, Arbeiterwohlfahrt, Deutsches Rotes Kreuz etc.; 3) private commercial institutions [72]. Those services are financed by the state, district, municipal community, health insurance etc. [10].

According to the named categories of supporting institutions, the corresponding actors are quite different and a very heterogeneous group [10]. In addition to the formal actors, there are a lot of informal ones doing voluntary work [10]. All in all, the actors often belong to the following fields of work, e.g. municipal administration, health care, voluntary work, consulting, church, sports, culture, education, and housing.

1.2.3 Support for Caring Relatives of People with Dementia

The development of support services in German municipal communities is very diverse, making it impossible to make a homogenous statement about the support of caring relatives of people with dementia [29]. This is partly due to the fact that this support does not belong to the mandatory but to the voluntary self-administrative tasks of the municipal communities and related districts. In recent years, health policy and science focused on different ways to support caring relatives of people with dementia [64]. Numerous studies detect that interventions aimed at caring relatives can lead to stress reduction, increase well-being and have positive effects on the quality of their life [26, 100]. Nevertheless, the current research literature shows that implemented services were not taken up by caring relatives of people with dementia [9, 31, 50]. This might be due to a lack of knowledge [128], fit and individuality [9, 67, 79, 98] or because services in general are missing [7]. Studies have indicated that caring relatives need e.g. offers of support and recreation, but also offers of information and counselling [60, 81, 115]. Furthermore, the exchange of experiences with others, appreciation and a dementia-sensitive environment etc. increases their well-being [60].

To ensure the support of caring relatives of people with dementia actors, stakeholders and local authorities from different fields of work need to assume their responsibility - regardless of structural resources [29]. In order to achieve needs-based support for caring relatives, state institutions, welfare organisations, civil society organisations, professionals and citizens must work closely together [29].

1.3 Implementation Science

1.3.1 Implementation Science in Health Care

In health care implementation is defined as

> *“a planned process and systematic introduction of innovations and/or changes of proven value; the aim being that these are given a structural place in professional practice, in the functioning of organizations or in the health care structure”* [129].

Whereby implementation science

> “is *the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine care, and, hence, to improve the quality and effectiveness of health services and care“* [33].

When patients do not, according to scientific evidence, receive the care they could or should receive, the implementation of research findings is needed. This happens either because of the recommendation of new practices according to new scientific insights or because of the recognition of care gaps by health care practitioners themselves [89]. However, studies show that the long term effect mostly fails e.g. because of too much workload of the senior citizen consultants to regularly revise well-known practices [48].

It is necessary to perform „*knowledge translation of research findings*“ [43] because otherwise the target group cannot profit from the research that was done to optimise *their* care. Grimshaw et al. [43] raised central questions that need to be taken into account when transferring research into practice and policy:

- What should be transferred?
- To whom should research knowledge be transferred?
- By whom should research knowledge be transferred?
- How should research knowledge be transferred?
- With what effect should research knowledge be transferred?

There is no *one fit all* implementation strategy for every single change or innovation but depending on the setting, target group etc. different improvement strategies are necessary [48].

Those strategies are organised within a step-by-step process which needs to be evaluated from time to time [48].

Figure 1 gives an example for such an implementation process. It includes a systematic seven step approach which needs to be well planned. It starts with (1) the development of a proposal of change, goes over (2) the analysis of the current status, (3) the problem analysis of the target group and setting, (4) the development and selection of implementation strategies and measures, (5) the development, testing and execution of the implementation plan, (6) the integration of changes into routine care up to (7) the (continuous) evaluation and readjustment of the implementation plan [46]. The arrows on the right indicate the possible need to repeat the whole process or single steps as well as the continuous monitoring depending on what the evaluation reveals [47, 112, 117]. There are different theories, models and frameworks describing what to consider during an implementation process or how to conduct one. Those can be divided into the following four categories: Theories which focus on 1) individual professionals, 2) social processes, 3) organizational systems, 4) economic and societal structures [117].

1.3.2 Implementation Science in Gerontology

Similarly to the definition of implementation in health care, there is a description in gerontology as well: Implementation is "an active and systematic process of integrating innovations into a particular nursing or gerontological setting" [52]. Regarding implementation science, the implementation process itself is the object of research [52].

Greenhalgh et al. (2005) and Rogers (2003) define the subject of implementation as an innovation in a broad and comprehensive sense [42, 95]. Therefore, e.g. a pain intensity scale, a nursing documentation software or a prevention measure up to complex interventions with multiple components can count as such an innovation [52]. The innovation only needs to be perceived as new by some practice actors, needs to differ from the previous approaches and needs to be seen as an improvement of the current situation of the target group [52].

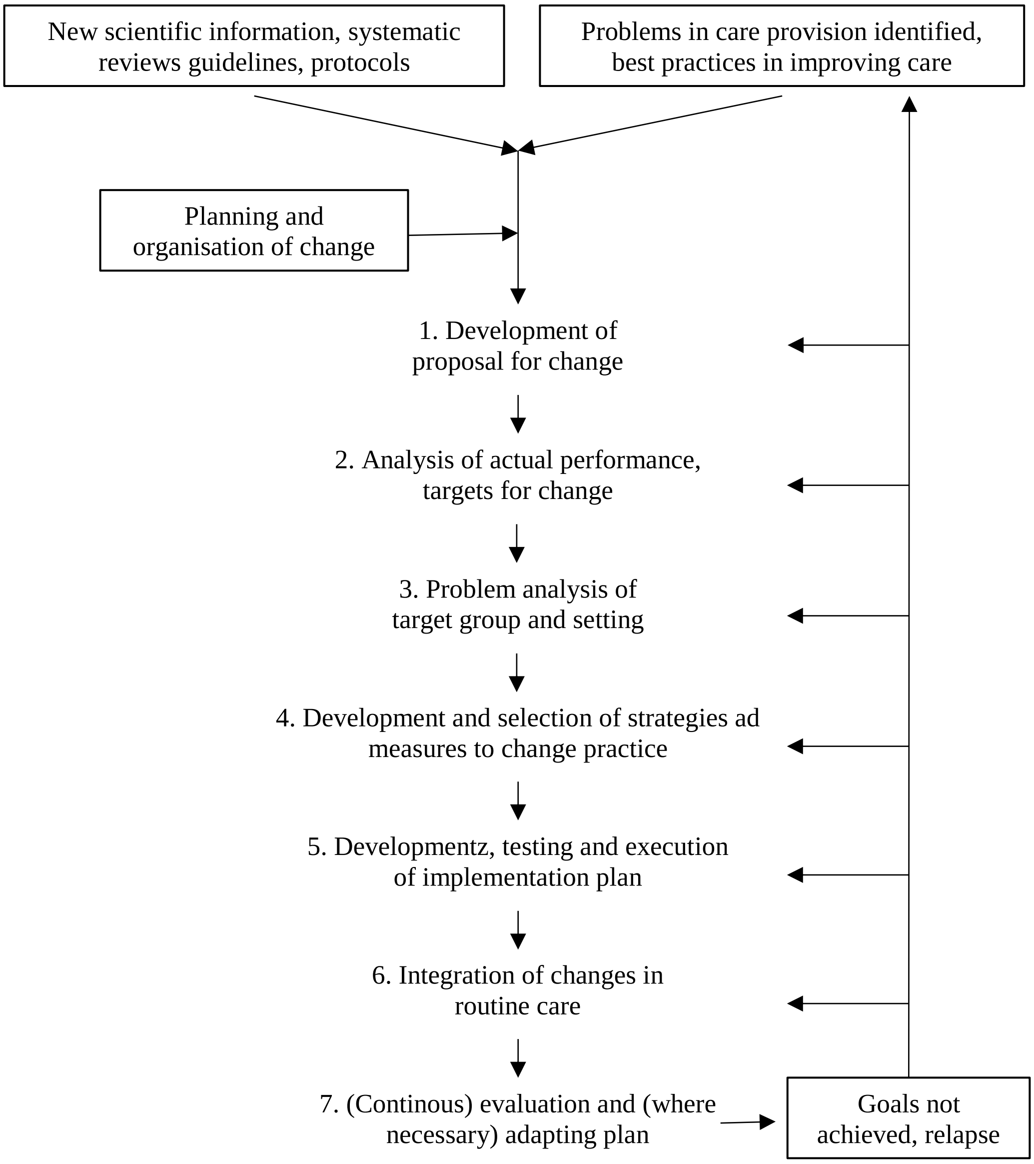

Figure 1: The Grol and Wensing implementation of change model (own illustration) [46, 117].

In gerontology, there are various actors involved in cure und care measures at the same time. These are researchers, nurses, volunteers, politicians, etc. whereby they have different responsibilities. But they have at least some responsibilities in common: The use of implementation scientific knowledge, the realisation of the innovation to be implemented and the handling of the innovation to be implemented [52]. A major challenge for implementation science in gerontology are the various settings e.g. institutions, municipal communities, private homes etc. and diverse populations [114].

As implementation science is not yet fully established in gerontology, there is only limited research about implementation processes of gerontological innovations (e.g, Petrescu-Prahova et al. (2016) about the implementation and maintenance of a community-based older adult physical activity program). Stevens et al. [111] did an extensive implementation study called REACH OUT were the implementation of an evidence based caregiver intervention (REACH I & II) was examined and adapted. This is one of the best-known implementation studies in gerontology.

1.3.3 Implementation Determinants

Both in health care and in gerontology the researchers are addressing determinants of implementation. Determinants are understood to be barriers and facilitators (positively or negatively) influencing different levels of implementation like the practice actors "professionals", the target group, the innovation, the social & professional interactions, incentives and resources, the organisation (and its capacity for change), and the surroundings (societal, political, and legal aspects) [23, 52, 116]. Because of those multiple, complex, changing and interacting factors implementation processes are individual and limitedly predictable [28, 42]. Next to calculable factors e.g. institutional resources, there are dynamic factors e.g. social interaction [28] and subjective perspectives of actors involved [73]. The subjective factors can be defined as cognitive, motivational, or behavioural factors [116].

Hoben (2016) translated and adapted the Consolidated Framework for Implementation Research (CFIR) from Damschroder et al. (2009) according to the gerontological setting [28, 51]. The CFIR deals with determinants and influential factors within implementation processes, synthesises different models and defines the following five overriding factors:

1. Characteristics of individuals
2. Inner Setting
3. Outer Setting
4. Intervention characteristics
5. Implementation process

The CFIR can be used to clearly and orderly analyse barriers and facilitators within an implementation process to make it possible to react to the determinants in time.

Bringing together the support of caring relatives of people with dementia in communities (1.1), elderly care (1.2), implementation science (1.3) and its determinants (1.3.3) the question arises: *What determinants influence the implementation of support services for caring relatives of people with dementia in municipal communities?* To answer this question and to create an overview of the current research, a literature search was conducted.

1.3.4 Implementation Determinants of Support Services for Caring Relatives of People with Dementia in Communities

As described in the previous paragraphs, caring relatives of people with dementia are a relevant target group in gerontology due to their partly burdensome daily lives and their responsibilities towards people with dementia [39, 70, 98]. Furthermore, the official figures of prevalence and incidence of dementia are alarming [109]. However, long-term implementation of support services for caring relatives of people with dementia often fails in municipal communities. With the help of a literature review, determinants influencing the implementation process of support services for the named target group could be identified. To systemise the identified barriers and facilitators, the CFIR was used [28]. All in all, eight (inter)national publications dealing with support services for the target group could be identified in literature databases such as Pubmed or CINHAL and analysed according to the CFIR. Particularly relevant were the communication between individuals, the participation of the target group and a leader who takes responsibility. Accordingly, most attention should be paid to these three main factors in implementation processes. It is noticeable that many of the barriers and support factors mentioned are connected to the individuals and particular authors identify the actors as the most important stakeholders in the implementation process. Hence, it is advisable to examine these more closely in the future.

The results of the literature review help municipal communities and their actors to recognise the relevant determinants within their implementation processes regarding support services for caring relatives of people with dementia [127].

1.3.5 Implementation of Communal Support Services – Determinants of the Implementation of Measures for Caring Relatives of People with Dementia **(1st Publication)**

Wittek M, Kiefer A, Kramer B, Wiloth S (2022): Implementation of communal support services - Determinants of the implementation of measures for caring relatives of people with dementia. *Pflege & Gesellschaft*. 1, 67-81.

Maren Wittek , Anna Kiefer, Birgit Kramer, Stefanie Wiloth

Implementierung kommunaler Unterstützungsangebote –

Determinanten der Implementierung von Maßnahmen für pflegende Angehörige von Menschen mit Demenz

Implementation of communal support services – Determinants of the implementation of measures for caring relatives of people with dementia

Mostly, long-term implementation of support services for caring relatives (CR) of persons with dementia (PWD) fails to come true in communities. With the help of a literature review, this article aims to identify determinants regarding the continuation of support services for CR and their relatives with dementia and present them using the CFIR. The Consolidated Framework for Implementation Research (CFIR) of Damschroder et al. (2009) serves, among other things, the systematization of implementation processes. The systematic review of eight publications dealing with barriers and facilitators of measure implementation for pA of PWD in the community showed different determinants of a successful implementation, such as communication, motivation and assumption of responsibility. The identified barriers and facilitators could each be assigned to one of the five levels of the CFIR (Individuals involved, internal context, external context, innovation to be introduced, implementation process) or rather to one of their subcategories. The present article thus provides communal institutions a systematic overview of determinants and enables them to implement and reflect support services more efficiently.

Keywords
Implementation, community, caring relatives, dementia, support

In Kommunen fehlt häufig eine langfristige Implementierung von Unterstützungsangeboten für pflegende Angehörige (pA) von Menschen mit Demenz (MmD). Ziel dieser Arbeit ist es mit Hilfe einer Literaturübersicht, Determinanten einer Verstetigung von Unterstützungsangeboten für pA und ihre Angehörigen mit Demenz in der Kommune zu identifizieren und mit Hilfe des CFIR darzustellen. Das Consolidated Framework for Implementation Research (CFIR) von Damschroder et al. (2009) dient u.a. der Systematisierung von Implementierungsprozessen. Die systematische Aufbereitung von acht Publikationen, die sich mit Barrieren und Förderfaktoren der Maßnahmenimplementierung für pA von MmD in der Kommune beschäftigen, zeigte unterschiedliche Determinanten einer erfolgreichen Implementierung wie bspw. Kommunikation, Motivation und Verantwortungsübernahme. Die identifizierten Barrieren und Förderfaktoren konnten jeweils einer der fünf Ebenen des CFIR (Involvierte Individuen, interner Kontext, externer Kontext, einzuführende Neuerung, Implementierungsprozess) bzw. deren Subkategorien zugeordnet werden.. Der vorliegende Beitrag ermöglicht kommunalen Institutionen somit eine systematische Übersicht von Determinanten und hilft Unterstützungsangebote effizienter zu implementieren sowie zu reflektieren.

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Schlüsselwörter
Implementierung, Kommune, pflegende Angehörige, Demenz, Unterstützung

1. Einleitung

In Deutschland leben derzeit ca. 1,7 Mio. MmD. Jährlich kommen mehr als 300.000 Neuerkrankungen dazu (DAlzG 2018). Ca. zwei Drittel der Menschen mit Demenz werden zu Hause von einem Familienmitglied versorgt (Statistisches Bundesamt 2018). Damit sind pA eine tragende Säule im deutschen Pflegesystem. Hierdurch wird die Relevanz ihrer Unterstützung deutlich (Blome et al. 2018). Die Versorgung eines MmD in der Häuslichkeit kann wegen den mit der Krankheit einhergehenden Symptomen für die betreuenden Familienmitglieder als besonders belastend erlebt werden (Frewer-Graumann 2020). Dies wirkt sich häufig negativ auf die Gesundheit sowie auf den Alltag pA aus (Kruse 2017; Rothgang et al. 2018).

Zahlreiche Studien zeigen, dass durch entsprechende Unterstützung das Wohlbefinden und die Lebensqualität von pA und MmD verbessert werden kann (Cooper et al. 2012 ; Safavi et al. 2019). Mit der Schaffung von Möglichkeitsräumen zur Entwicklung sowie Implementierung professioneller, aber auch zivilgesellschaftlicher Unterstützungs- und Versorgungsformen für pA werden im Rahmen des siebten Altenberichts des deutschen Bundestages die Kommunen beauftragt (Blome et al. 2018; Deutscher Bundestag 2016). Derzeit werden in vielen Kommunen Studien und Projekte durchgeführt, um vor allem die Lebensqualität pA zu stärken und sie in der Betreuung ihrer Angehörigen zu unterstützen (Forschungsverbund Zunkunftswerkstatt Demenz 2016; Holroyd-Leduc et al. 2017; Jensen et al. 2015). Obgleich dieser Forschungsbereich als sinnvoll angesehen wird, bleibt eine langfristige Implementierung dieser Angebote aus unterschiedlichen Gründen, wie etwa limitierte Projektförderungen, häufig aus (von Lützau-Hohlbein 2017). Für die Umsetzung der im siebten Altenbericht geforderten Maßnahmen ist deshalb unter anderem eine Übersicht über die Rolle der beteiligten Akteure und der den Implementierungsprozess beeinflussenden Determinanten notwendig (Deutscher Bundestag 2016).

Für die erfolgreiche Einführung einer (evidenzbasierten) Intervention in die „Regelversorgung“, bedarf es adäquater Vorgehensweisen im Implementierungsprozess (Greenhalgh et al. 2005; Hoben 2015b). Es gibt unterschiedliche Strategien und Theorien, um den Implementierungsprozess zu gestalten und zu steuern (Damschroder et al. 2009; Grol et al. 2013; Hoben et al. 2015). Der vorliegende Beitrag greift auf das „Consolidated Framework for Implementation Research“ (CFIR) von Damschroder et al. (2009) zurück. Es wird dabei insbesondere Bezug auf die Adaptation und Operationalisierung des CFIR an Implementierungsprozesse der Pflege und Gerontologie von Hoben (2015) Bezug genommen (s. Tabelle 1) (Hoben 2015a).

Das CFIR dient der Darstellung und Synthese von Ergebnissen sowie Einflussfaktoren des Implementierungserfolges, also der Wirksamkeit einer Intervention unter Einbezug einzelner Implementierungsfaktoren wie bspw. Akzeptanz, Nachhaltigkeit o. Ä.

Ebene	*Subkategorie*
Involvierte Individuen	Praxisakteure: Wissen und Überzeugungen bzgl. der zu implementierenden Innovation
	Praxisakteure: Selbstwirksamkeitsüberzeugungen
	Praxisakteure: Veränderungsphase, in der sich das Individuum befindet
	Praxisakteure: Individuelle Identifikation mit der Organisation
	Praxisakteure: Verschiedene weitere Persönlichkeitsmerkmale
	Forschende: Wert legen auf Relevanz
	Forschende: Vielfalt involvierter Disziplinen
	Forschende: Anzahl der Mitglieder
Interner Kontext	Strukturelle Merkmale
	Netzwerke und Kommunikation
	Organisationskultur
	Bereitschaft und Fähigkeit zur Implementierung
Externer Kontext	Bedürfnisse der Bewohner, Patienten oder Klienten
	Kosmopolitismus (Vernetzung)
	Gruppendruck
	Externe Regulationen und Anreizbedingungen
Die zu implementierende Innovation	Relativer Nutzen
	Kompatibilität
	Komplexität
	Testbarkeit
	Beobachtbarkeit der Auswirkungen
	Herkunft/Quelle der Innovation
	Güte und Stärke der Evidenz
	Qualität des Designs und des Gesamtpakets
	Kosten
	Adaptierbarkeit
Der Implementierungsprozess	Planung
	Motivation und Einbindung
	Planmäßige Durchführung
	Reflexion und Evaluation

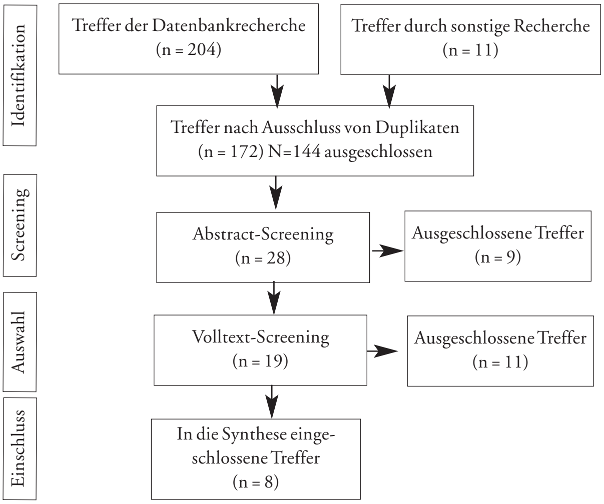
Tab. 1: Ebenen & Subkategorien des CFIR (Damschroder et al. 2009; Hoben 2015a)

(Proctor et al. 2011)auf unterschiedlichen Ebenen. Deshalb eignet sich das CFIR besonders gut für die Strukturierung von Determinanten der Implementierung von Unterstützungsangeboten für pA von MmD in der Kommune (Damschroder et al. 2009). Christie et al. (2018) wendeten das CFIR bspw. für die Implementierung von eHealth Interventionen an. Das Framework beschreibt fünf Ebenen (s. Tabelle 1), denen förderliche und hinderliche Faktoren des Implementierungsprozesses zugeordnet werden können (Damschroder et al. 2009).

Ziel des vorliegenden Beitrags ist, die aktuelle Forschungsliteratur hinsichtlich der Determinanten der Implementierung von Unterstützungsangeboten für pA von MmD in der Kommune unter Anwendung des CFIR systematisch darzustellen. Fokussiert werden hierbei Determinanten aus der Perspektive der beteiligten Akteure aus der Kommune. Die vorliegende Arbeit möchte damit die Umsetzung wissenschaftlicher Erkenntnisse für die Praxis des Implementierungsprozesses in den Kommunen fördern und Akteure aus der Kommune in ihrer Arbeit unterstützen.

2. Methodik

Zunächst wurde eine systematisierte Literaturrecherche (s. Abbildung 1) mit Fokus auf (systematischen) Übersichtsarbeiten, Fallstudien, Implementierungsstudien und RCTs in deutscher und englischer Sprache der letzten 15 Jahre durchgeführt, die sich mit der Analyse der Implementierungsprozesse kommunaler Maßnahmen für pA von MmD beschäftigen (Moher et al. 2009). Die Recherche in den Datenbanken Pubmed, CINAHL, PsychINFO und google scholar sowie die Sichtung von Universitätskatalogen und das Schneeballsystem erbrachten hierbei nationale sowie internationale Suchergebnisse (s. Tabelle 2). Für die elektronische Datenbanksuche wurden vorab die folgenden Stichworte nach Absprache im Autorinnenteam definiert:



Eigene Darstellung in Anlehnung an Moher et al. (2009)

Abb. 1: Flowchart des Vorgehens bei der Literaturrecherche

- implementation, Alzheimers, Dementia, caregivers, family members, relatives, informal caregivers, community, barriers, obstacles, challenges, enablers, factors, facilitators.

- Implementierung, Alzheimer, Demenz, pflegende Angehörige, Familienmitglied, Verwandte, informell Pflegende, Kommune, Barrieren, Hindernisse, Herausforderungen, Förderfaktoren, Faktoren.

Die identifizierten Publikationen wurden im Autorinnenteam hinsichtlich der folgenden, im Voraus festgelegten, Ein- und Ausschlusskriterien diskutiert:

(systematische) Übersichtsarbeiten, Fallstudien, Implementierungsstudien und RCTs
- in deutscher oder englischer Sprache
- der letzten 15 Jahre
- Thematisierung/Evaluation der Implementierung einer Maßnahme für pflegende Angehörige von Menschen mit Demenz in der Kommune (nicht ausschließlich des ländlichen Bereichs und nicht ausschließlich personalisierte/ individuelle Interventionen)
- Ausschluss von Publikationen, die sich ausschließlich mit Maßnahmen der professionellen Pflege oder stationären Pflege beschäftigen

	Autor_innen	*Land*	*Studiendesign/ Methode*	*Thematik*	*Ziel**
1	Bayly et al. (2018)	Australien	Longitudinale, multiple Fallstudie	Anstellung eines „knowledge broker“ zur Implementierung von „Integrated knowledge translation (iKT)“ in der Versorgung von MmD	Ermittlung von Faktoren, die die Entwicklung und Implementierung von iKT-Strategien in der Versorgung von MmD fördern/behindern.
2	Callahan et al. (2014)	USA	Review	Modelle zur Unterstützung von MmD/ pA & Implementierungsprozesse	Zusammenfassung von Barrieren bei der Implementierung von Versorgungsmodellen für MmD.
3	Holroyd-Leduc et al. (2017)	Kanada	Integrierter Wissenstransfer	Meetings, in denen Publikationen über Maßnahmen zur Unterstützungssituation pA diskutiert werden	Bündelung von Lücken, Barrieren und Förderfaktoren für die Implementierung von Unterstützungsangeboten für pA u.a. von MmD.
4	Khanassov et al. (2014)	Kanada	Systematisches „Mixed Studies“ Review	Case Manager für MmD	Identifikation der Beziehungen zwischen den Outcomes des Case Managements für MmD und den Barrieren dessen Implementierung.
5	Mangiaracina et al. (2017)	Niederlande (UK/ Italien/ Polen)	Implementierungsprozess, Mix aus qualitativen Methoden und multiplen Fallstudien	„Meeting Centres Support Programme“ für MmD und ihre pA im internationalen Vergleich	Untersuchung von Faktoren, die die Implementierung und die Wirksamkeit des Implementierungsprozesses von sog. Meeting Centern für MmD und pA beeinflussen.
6	Reichert et al. (2016)	Deutschland	Evaluation, Mix aus quantitativen & qualitativen Methoden	Mobile Demenzberatung	Untersuchung von Konzeption und Implementierung der mobilen Demenzberatung hinsichtlich den Bedarfen der Zielgruppen sowie einer langfristigen Umsetzung in die Regelversorgung.
7	Renehan et al. (2017)	Australien	Bildung von Expert_innen- und Referenzgruppen & systematische Literaturübersicht & qualitative Evaluation von bestehenden Modellen	Frameworks für Hauptverantwortliche in der Unterstützung von pA/ MmD/ Pflegenden in der Kommune	Entwicklung und Beschreibung eines Frameworks für Hauptverantwortliche in der Unterstützung von pA/ MmD/ Pflegenden in der Kommune.
8	Stevens et al. (2009)	USA	Vorstellung der Implementierung eines Modells für pA von MmD „Support Teams for Caregivers“	Verbindung der Intervention REACH II mit dem Support Team Network (Netzwerk Ehrenamtlicher) zu einem sog. „Support Team for Caregivers“ von MmD.	Vorstellung eines Implementierungsmodells sowie des Programms „Support Teams for Caregivers“ für pA von MmD und Präsentation einer Fallstudie.

*Anmerkung: In dieser Spalte wird das Ziel der jeweiligen Publikation genannt, das im (engsten) Zusammenhang mit der Implementierung von Unterstützungsangeboten für pA von MmD in der Kommune steht.

Tab. 2: Eingeschlossene Publikationen

- Ausschluss von Publikationen, die eine Maßnahme evaluieren und nicht die Implementierung der Maßnahme

Im Anschluss an die Literaturrecherche und die Durchsicht von Titeln, Abstracts und Volltexten wurden die Implementierungsdeterminanten von Interventionen der relevanten Publikationen vom Autorinnenteam extrahiert und nach Absprache und Diskussion den fünf Ebenen des CFIRs sowie den jeweiligen Subkategorien (s. Tabelle 1) zugeordnet (Damschroder et al. 2009; Hoben 2015a). Für die Extraktion und Zuordnung hat eine in Anlehnung an den nominalen Gruppenprozess Konsensfindung stattgefunden (IQWiG n. a.). Es wurden die folgenden Daten extrahiert: Autor_innen, Jahr, Land, Ziel, Studiendesign, Thematik (s. Tabelle 2).

3. Ergebnisse

Der Rechercheprozess ergab acht Publikationen, welche sich mit Implementierungsdeterminanten von kommunalen Unterstützungsangeboten für pA von MmD auseinandersetzen.

Tabelle 3 beschreibt die Zuordnung der jeweiligen Determinanten der Implementierung einer Intervention für pA von MmD in der Kommune zu den Ebenen und Subkategorien des CFIRs. In den folgenden Abschnitten wird die Zuordnung der Determinanten zu den einzelnen Ebenen sowie Subkategorien erläutert.

3.1 Ebene 1: Merkmale involvierter Individuen

Im Bereich des *Wissens und der Überzeugungen*[1] von Praxisakteuren bzgl. der zu implementierenden Innovation werden regelmäßige Schulungen der Beteiligten als förderlich bzw. mangelhafte Schulungen und Ausbildungen im Bereich Pflege und Demenz als hinderlich von den Autor_innen angesehen (Khanassov et al. 2014; Reichert et al. 2016; Renehan et al. 2017; Stevens et al. 2009).

Den Studien zur Folge ist Enthusiasmus ein Merkmal, dass sich positiv auf eine Implementierung auswirkt, da man bspw. das Ziel verfolgt, die Lebensqualität des MmD und der pA zu verbessern (Mangiaracina et al. 2017). Dieser Punkt kann der Kategorie *verschiedene weitere Persönlichkeitsmerkmale* der Ebene 1 zugeordnet werden.

3.2 Ebene 2: Merkmale des internen Kontextes

Der interne Kontext beinhaltet unter anderem die Subkategorie der strukturellen Merkmale. Hierunter ist die Struktur der Organisation/Institution zu verstehen, in der die Implementierung stattfindet (Hoben 2015a). „Struktur“ meint sowohl Anzahl und Verantwortungsbereiche der in der Organisation tätigen Individuen und Gruppen, als auch die Stabilität des Personalgefüges (Hoben 2015a). Hierbei erweist es sich laut einiger Studienergebnisse als förderlich, wenn sich unter den in die Implementierung involvierten Personen eine hauptverantwortliche als Ansprechpartner_in bspw. für mögliche Unklarheiten im Prozessablauf fungierende Person befindet (Bayly et al. 2018; Mangiaracina et al. 2017; Reichert et al. 2016). Diese Person kann bspw. ein_e Projektmanger_in sein, die den gesamten Implementierungsprozess überblickt oder auch ein_e Hauptverantwortliche_r für die Steuerung und Durchführung der jeweiligen Intervention (Mangiaracina et al. 2017; Reichert et al. 2016). Weiter sollten zusätzlich zu hauptamtlich Tätigen freiwillig Engagierte, Vertreter_innen der Zielgruppe, also pA und MmD sowie allgemein interdisziplinäre Akteure in die Durchführung der Intervention eingebunden werden (Bayly et al. 2018; Reichert et al. 2016; Stevens et al. 2009). Freiwillig Engagierte können Hauptamtliche bspw. in ihrer Tätigkeit bei Bera-

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[1] In der folgenden Ergebnisdarstellung werden die Bezeichnungen der jeweiligen Subkategorien der fünf Ebenen des CFIRs kursiv geschrieben, um sie kenntlich zu machen.

Ebene	*Subkategorie*	*Zugeordnete Determinante – Förderfaktoren*	*Zugeordnete Determinante – Barrieren*
Involvierte Individuen	Praxisakteure: Wissen und Überzeugungen bzgl. der zu implementierenden Innovation	regelmäßigen Schulungen der Beteiligten (6-8)	Eine mangelhafte Ausbildung und Schulung im Bereich Pflege und Demenz (4,6)
	Praxisakteure: Verschiedene weitere Persönlichkeitsmerkmale	Enthusiasmus (5)	X
Interner Kontext	Strukturelle Merkmale	hauptverantwortliche, als Ansprechpartner_in fungierende Person (1,5,6) freiwillig Engagierte (6,8) Interdisziplinäre Akteure (1,2) Einbezug der Zielgruppe (8)	Vielfalt an Akteuren mit jeweils individuellen finanziellen, kulturellen oder auch technischen Gegebenheiten (2) undefinierte Zuständigkeiten (4) häufiger Personalwechsel (4)
	Netzwerke und Kommunikation	vertrauensvolle & partnerschaftliche Zusammenarbeit unterschiedlicher Akteure (8) intensive Zusammenarbeit (1,7) reger Austausch (1,7) Entstehung & Pflege von Netzwerken (1,4,6,7) Angemessene Sprache (8)	digitale Kommunikation (1) Mangel- bzw. lückenhafte Kommunikation (4)
	Organisationskultur	vertrauensvolle & partnerschaftliche Zusammenarbeit unterschiedlicher Akteure (8) Übereinstimmung von Werten und Kultur unterschiedlicher beteiligter Institutionen (1)	X
Externer Kontext	Bedürfnisse der Bewohner, Patienten oder Klienten	barrierefreie Nutzung (3)	Individualität der Bedürfnisse der pA und der MmD (1)
	Kosmopolitismus (Vernetzung)	Netzwerkarbeit (7) Kooperationen (7)	(örtliche) Trennung der Beteiligten (4) Wettbewerb (5)
	Externe Regulationen und Anreizbedingungen	Transparenz (6)	Ressourcenlimitationen (z.B. Zeit/Geld) (1, 4-6,8) mangelnde Integration der Intervention in das Gesundheitssystem/-versorgung (4,5)
Die zu implementierende Innovation	Relativer Nutzen	kostenfreie Nutzung (6)	X
	Komplexität	barrierefreie Nutzung (3)	X
	Testbarkeit	Nachweis von Alltagstauglichkeit (6-8) Nachweis von Wirksamkeit (5,7)	X
	Herkunft/Quelle der Innovation	von Expert_innen entwickelt (5)	X
	Güte und Stärke der Evidenz	Regelmäßige Überprüfung & Evaluation (1, 6-8)	Regelmäßige Überprüfung & Evaluation (6)
	Adaptierbarkeit	Anpassung der Intervention an Bedürfnisse der pA von MmD (3,5,6) Adaptation an Strukturen der Kommune (6,8)	X
Der Implementierungsprozess	Planung	(langfristige) Planung (5)	X
	Motivation und Einbindung	hauptverantwortliche, als Ansprechpartner_in fungierende Person (1,5,6) freiwillig Engagierte (6,8) Einbezug der Zielgruppe (8)	X
	Planmäßige Durchführung	Klarer stufenförmiger Prozess (5) regelmäßige Schulungen der Beteiligten (6-8) Verwendung eines Frameworks/Modells (7)	X
	Reflexion und Evaluation	Evaluation (8)	X

- Die recherchierten Publikationen enthalten keine Determinanten aus dem CIFR, die den folgenden Subkategorien zugeordnet werden können: Involvierte Individuen – Selbstwirksamkeitsüberzeugung/Veränderungsphase, in der sich das Individuum befindet/Individuelle Identifikation mit der Organisation/Wert legen auf Relevanz/Vielfalt involvierter Disziplinen/Anzahl der Mitglieder; Externer Kontext – Gruppendruck; Die zu implementierende Innovation – Kompatibilität/Beobachtbarkeit der Auswirkungen/Qualität des Designs und des Gesamtpakets/Kosten. Zur verbesserten Übersichtlichkeit werden diese Subkategorien nicht in der Tabelle aufgeführt.
- 1. Bayly et al. (2018); 2. Callahan et al. 2014; 3. Holroyd-Leduc et al. (2017); 4. Khanassov et al. (2014); 5. Mangiaracina et al. (2017); 6. Reichert et al. 2016; 7. Renehan et al. (2017); 8. Stevens et al. (2009)

Tab. 3: Zuordnung der Determinanten zu Ebenen & Subkategorien des CFIR tungseinsätzen unterstützen, pA und MmD wie auch Akteure unterschiedlichster Disziplinen können u. a. in die Entwicklung von Interventionen einbezogen werden, um persönliche Erfahrungen, Bedarfe etc. in die Entwicklung von Unterstützungsmaßnahmen einbeziehen zu können (Reichert et al. 2016; Stevens et al. 2009). Dagegen kann die Vielfalt an Akteuren mit jeweils individuellem kulturellem Hintergrund und unterschiedlichen finanziellen Ressourcen oder auch technischen Gegebenheiten, ungeklärte Zuständigkeiten sowie häufiger Personalwechsel die Implementierung von Unterstützungsangeboten in der Kommune erschweren (Callahan et al. 2014); Khanassov et al. 2014).

Netzwerke und Kommunikation ist eine weitere Kategorie der Ebene zwei des CFIRs. Eine vertrauensvolle, partnerschaftliche und intensive Zusammenarbeit, reger Austausch, eine angemessene Sprache sowie die Entstehung und Pflege von Netzwerken zählen die meisten der eingeschlossenen Studien zu den Förderfaktoren (Bayly et al. 2018; Khanassov et al. 2014; Mangiaracina et al. 2017; Reichert et al. 2016; Renehan et al. 2017; Stevens et al. 2009). Eine mangel- bzw. lückenhafte Kommunikation zwischen den beteiligten Akteuren bspw. zwischen dem_r Hausarzt_in und der Leitung einer Demenzgruppe kann, laut Khanassov et al. (2014) dazu führen, dass Ziele zur Optimierung der Versorgung pA und MmD nicht in der vorgesehenen Zeit bzw. gar nicht erreicht werden können (Khanassov et al. 2014). Bayly et al. (2018) äußerten diesbezüglich Kritik an digitalen Kommunikationsmöglichkeiten, da es hierbei des Öfteren zu Missverständnissen kommt oder Inhalte nicht wahrgenommen werden bspw. im Fall ungelesener E-Mails.

In Bezug auf die *Organisationskultur* wirken sich eine vertrauensvolle und partnerschaftliche Zusammenarbeit der unterschiedlichen involvierten Akteure positiv auf die Implementierung von Interventionen aus, wie bspw. auf die Implementierung der „Support Team for Caregivers“-Intevention von Stevens et al. (2009). Ebenso wird die Relevanz der Übereinstimmung von Werten und Kultur unterschiedlicher beteiligter Institutionen als Förderfaktor genannt (Bayly et al. 2018).

3.3 Ebene 3: Merkmale des externen Kontextes

Für die Ebene des externen Kontextes konnten zu den Subkategorien *Bedürfnisse der Bewohner, Patienten oder Klienten, Kosmopolitismus* (Vernetzung) und *Externe Regulationen und Anreizbedingungen* Determinanten aus der recherchierten Literatur zugeordnet werden. Bei den Bedürfnissen der Zielgruppe wirken sich eine barrierefreie Nutzung positiv auf die Implementierung aus (Holroyd-Leduc et al. 2017). Die Individualität der Bedürfnisse von pA und MmD erschwert den Implementierungsprozess, da sie ebenso eine Individualität in der Versorgung bedingt (Bayly et al. 2018).

In Bezug auf die *Vernetzung* werden eine umfangreiche Netzwerkarbeit sowie Kooperationen der beteiligten Akteure als Förderfaktor von Renehan et al. (2017) genannt. Eine (örtliche) Trennung der Beteiligten wird dagegen von einigen Autor_innen als hinderlich angesehen (Khanassov et al. 2014). Ebenso kann ein Wettbewerb zwischen unterschiedlichen Institutionen wie zwischen einem Pflegedienst und einer Tagespflege im Gegensatz zu einer Kooperation die Implementierung behindern (Mangiaracina et al. 2017).

Eine mangelnde Integration der Intervention in das Gesundheitssystem und die Versorgung spielen in der Subkategorie *Externe Regulationen und Anreizbedingungen* des CFIR eine bedeutsame Rolle und stellen eine Barriere für einen erfolgreichen Implementierungsprozess dar (Khanassov et al. 2014; Mangiaracina et al. 2017). Nahezu jede der eingeschlossenen Publikationen nennt Ressourcenlimitationen als Barriere bei der Implementierung einer Intervention (Bayly et al. 2018; Khanassov et al. 2014; Mangiaracina et al. 2017; Reichert et al. 2016; Stevens et al. 2009). Hierzu zählen personelle, finanzielle und zeitliche Ressourcen (Bayly et al. 2018; Khanassov et al. 2014; Mangiaracina et al. 2017; Reichert et al. 2016; Stevens et al. 2009). Dagegen ist die Transparenz nach außen in Bezug auf Trägerschaften, Kooperationen, gesteckte Ziele uvm. ein wichtiger Erfolgsfaktor (Reichert et al. 2016).

3.4 Ebene 4: Merkmale der einzuführenden Neuerung

Eine kostenfreie Nutzung der Angebote für pA von MmD werden als Förderfaktoren genannt und können der Subkategorie *Relativer Nutzen* zugeordnet werden (Reichert et al. 2016).

Dem Bereich der *Komplexität* der einzuführenden Neuerung kann die von Holroyd-Leduc et al. (2017) genannte barrierefreie Nutzung als förderlicher Faktor zugeordnet werden.

Für die *Testbarkeit* der einzuführenden Neuerung ist es laut einiger Autor_innen von Vorteil, wenn eine Alltagstauglichkeit sowie eine Wirksamkeit nachgewiesen werden kann (Bayly et al. 2018; Mangiaracina et al. 2017; Reichert et al. 2016; Renehan et al. 2017; Stevens et al. 2009).

Ebenso ist es bzgl. der *Herkunft/Quelle der Innovation* förderlich, wenn die Intervention von Expert_innen entwickelt wurde (Mangiaracina et al. 2017).

Einige Auor_innen bezeichnen es als Vorteil, Reichert et al. u. a. auch als Nachteil, die zu implementierende Intervention regelmäßig zu überprüfen und zu evaluieren (Bayly et al. 2018; Reichert et al. 2016; Renehan et al. 2017; Stevens et al. 2009). Der Nachteil bestünde im Aufwand, der im Zusammenhang mit der Evaluation entsteht (Reichert et al. 2016). Der Vorteil in der Möglichkeit der Optimierung der Intervention (Bayly et al. 2018; Reichert et al. 2016; Renehan et al. 2017; Stevens et al. 2009). Die Evaluation ist der Subkategorie *Güte und Stärke der Evidenz* zuzuordnen (s.o.).

Im Rahmen der *Adaptierbarkeit* des zu implementierenden Unterstützungsangebots spielt die Anpassung der Intervention an die Bedürfnisse der pA von MmD sowie an die Strukturen der Kommune eine große Rolle (Holroyd-Leduc et al. 2017; Mangiaracina et al. 2017; Reichert et al. 2016; Stevens et al. 2009).

3.5 Ebene 5: Merkmale des Implementierungsprozesses

Die Notwendigkeit langfristiger *Planung* kann der gleichnamigen Subkategorie Planung zugeordnet werden (Mangiaracina et al. 2017).

Die folgenden zwei Aspekte sind der Subkategorie *Motivation & Einbindung* zuzuordnen. Die Ergebnisse mehrerer eingeschlossener Studien benennen es als vorteilhaft für den Implementierungsprozess, wenn sich (1) unter den in die Implementierung involvierten Personen eine hauptverantwortliche, als Ansprechpartner_in fungierende Person befindet (Bayly et al. 2018; Callahan et al. 2014; Mangiaracina et al. 2017; Reichert et al. 2016). Dieser Aspekt wurde bereits dem internen Kontext zugeordnet und entspricht somit beiden Ebenen. Weiter sollten (2) zusätzlich zu hauptamtlich Tätigen freiwillig Engagierte sowie Vertreter_innen der Zielgruppe in die Durchführung der Intervention eingebunden werden (Stevens et al. 2009).

Der Subkategorie *planmäßige Durchführung* kann die von einigen Autor_innen empfohlene Verwendung eines Frameworks/Modells und eines stufenförmigen Prozesses für die Implementierung zugeordnet werden (Mangiaracina et al. 2017; Reichert et al. 2016; Renehan et al. 2017; Stevens et al. 2009). Des Weiteren sollten regelmäßige Schulungen der Beteiligten durchgeführt werden (Reichert et al. 2016; Renehan et al. 2017; Stevens et al. 2009).

Im Bereich der *Reflexion und Evaluation* gilt laut einiger der eingeschlossenen Studien die Notwendigkeit der Durchführung von Evaluationen als förderlich (Stevens et al. 2009).

4. Handlungsempfehlungen und Diskussion

Für die hier mit Hilfe des CFIR systematisch aufbereiteten Determinanten gilt, dass förderliche Faktoren, wenn möglich beibehalten bzw. übernommen und hinderliche Faktoren angegangen bzw. eliminiert werden müssen. Demnach sollten in der Praxis für hinderliche Faktoren zunächst Lösungswege entwickelt werden, um den Kommunen die Implementierung von Unterstützungsangeboten zu erleichtern. Schönemann-Gieck und Weber (2016) bestätigen im Rahmen des Versorgungskonzeptes „GeRe-Net.Wi" diese Vorgehensweise. Um einen Implementierungserfolg zu gewährleisten, wurden „potentielle Umsetzungsbarrieren [wurden] von vorneherein in die Maßnahmenentwicklung mit einbezogen [...]" (Schönemann-Gieck et al. 2016, S. 337). Auch Berendonk et al. (2016) empfehlen die Entwicklung eines Implementierungskonzeptes für den Transfer von Interventionen in die Praxis. Ein solches Konzept setzt u. a. die Analyse von Einflussfaktoren auf die Implementierung voraus (Berendonk et al. 2016, S. 320). Für eine funktionierende Netzwerkarbeit empfehlen Reichert et al. (2016) bspw. eine intensive Kommunikation und Zusammenarbeit verschiedener Institutionen. Einen signifikanten Zusammenhang zwischen institutioneller Kommunikation und der Implementierung von patientenzentrierter Versorgung zeigte auch die Studie von Hower et al. (2020). Des Weiteren sollte zur Prävention eines Kommunikationsdefizits auf die Fachsprachen der Beteiligten geachtet werden, sodass alle, ob Ärzt_innen, Wissenschaftler_innen, Sozialarbeiter_innen etc., ein gemeinsames Verständnis haben (Stevens et al. 2009). Damit Maßnahmen an die Versorgungsrealität pA von MmD optimal angepasst werden können, müssen diese möglichst früh in den Prozess einbezogen werden (Reichert et al. 2016). Das National Institute for Health Research (NIHR) hat diesbezüglich sog. „Briefing notes“ veröffentlicht, in denen auf die Relevanz des Einbezugs der Zielgruppe hingewiesen wird, um möglichst praxisnahe sowie bedürfnisorientierte Forschung zu betreiben (NIHR 2021). Im Rahmen der in dieser Arbeit betrachteten Publikationen wurde mehrfach die Notwendigkeit einer hauptverantwortlichen Person genannt. Bayly et al. (2018) haben hierzu einen sogenannten „Knowledge Broker“ für ihre Intervention eingesetzt. Auch in der Implementierungswissenschaft ist hinlänglich bekannt, dass die Führung und Leitung einer Implementierung ein essentieller Bestandteil des Gesamtprozesses ist (Damschroder et al. 2009). Das Verhalten der jeweiligen Führungsperson kann dementsprechend einen großen Einfluss auf den Implementierungserfolg haben (Greenhalgh et al. 2004). Die in diesem Beitrag dargestellten Ergebnisse sind vergleichbar mit den Ergebnissen der systematischen Übersichtsarbeiten von Lau et al. (2016) (Komplexe Interventionen der Primärversorgung) und Ross et al. (2016) (E-health), die sich ebenfalls mit Determinanten der Implementierung beschäftigen und diese mit Hilfe des CFIR darstellen. Auch hier werden Ressourcen, Schlüsselpersonen, das Wissen der Beteiligten sowie die Übereinkunft von gegebenen Strukturen und der Innovation als wichtige Implementierungsdeterminante beschrieben (Lau et al. 2016; Ross et al. 2016). Somit scheinen besonders diese Determinanten für die Implementierung unterschiedlicher Interventionen in unterschiedlichen Bereichen relevant und bedeutsam zu sein.

Damschroder et al. (2009) entwickelten das CFIR u. a. zur Erleichterung der Synthese von Forschungsergebnissen. Bei Betrachtung des Modells wird deutlich, dass diese Synthese gelingt, es jedoch schwierig werden wird mit dem CFIR einzelne Determinanten umfassend zu analysieren, wie bspw. die „Individualität der Zielgruppe“. Während unter anderem die Determinante „Finanzierung“ bzw. „Netzwerk“ bereits umfassend in der vom BMG 2012 geförderten DemNet-D-Studie bzgl. Demenznetzwerken erforscht wurde, gilt es in einem nächsten Schritt auch die anderen in diesem Beitrag thematisierten Determinanten umfangreich zu analysieren (Michalowsky et al. 2017). Des Weiteren wird in dem vorliegenden Beitrag deutlich, dass einzelne Subkategorien des CFIR bisher noch nicht in der Literatur betrachtet wurden. Hierzu zählen bspw. auf Forschende bezogene Subkategorien, einige der auf Praxisakteure bezogene Subkategorien, Bereitschaft und Fähigkeit zur Implementierung, Gruppendruck, Kompatibilität, Herkunft/Quelle der Innovation, Qualität des Designs und des Gesamtpakets, Kosten (vgl. Tabelle 1 und 3). Diese könnten somit Schwerpunkte für zukünftige Forschung darstellen. In dem Systematic Review über die Implementierung von E-Health beeinflussende Faktoren wurden 44 Studien eingeschlossen und ebenfalls das CFIR zur Strukturierung hinzugezogen, wobei bis auf Gruppendruck und Planmäßige Durchführung alle Subkategorien mit Hilfe der Literatur betrachtet werden konnten (Ross et al. 2016). Diese Thematik scheint somit bereits intensiver beforscht.

Der vorliegende Beitrag liefert eine umfassende Darstellung von Determinanten der Implementierung von Unterstützungsangeboten in der Kommune für pA von MmD. Dennoch limitieren die Diversität sowie Internationalität der Interventionen, der kommunalen Arbeit sowie der Gesundheitssysteme die Aussagekraft der Ergebnisse. Die Struktur des jeweiligen Gesundheitswesens beeinflusst maßgeblich die Integration von Maßnahmen in den Gesundheitsmarkt oder auch die Kooperation und Ressourcenbereitstellung (Wendt 2006). Auch das Angebot von Online-Maßnahmen ist erheblich mit dem Internetausbau und dem Stadt-Land-Gefälle der jeweiligen Region verbunden (Tenzer 2020). Zwar wird dadurch die Vergleichbarkeit und Verallgemeinerung der hier dargestellten Barrieren und Förderfaktoren der Implementierung von Unterstützungsangeboten in der Kommune für pA von MmD erschwert, dennoch gelingt es in diesem Beitrag einen ersten Überblick über die bestehenden Determinanten zu geben und diese mit Hilfe eines Frameworks systematisch darzustellen. Für die Übertragung der Ergebnisse in den deutschen Raum sollten die Ressourcen und Umstände des jeweiligen Landes in den Blick genommen werden, aus dem die Erkenntnis kommt. Nur so können Bedingungen verglichen und bei Bedarf angepasst werden.

5. Schlussfolgerungen

Die aktuelle Forschungslage zeigt, dass sich bereits einige Studien mit den Determinanten einer erfolgreichen Implementierung von Unterstützungsangeboten für pA von MmD auseinandersetzen. In dem vorliegenden Beitrag wurden erstmals die vorliegenden Ergebnisse mit Hilfe des CFIRs systematisiert und zusammengefasst. Wenn Unterstützungsangebote in einer Kommune implementiert werden sollen, ist die Berücksichtigung aller genannter Ebenen relevant. Die folgenden Aspekte spielen, als Exzerpt der analysierten Literatur, eine bedeutsame Rolle: die Kommunikation der Beteiligten, die frühzeitige Partizipation der Adressaten der Maßnahme, eine Führungsperson, die die Verantwortung übernimmt. Daher ist es sinnvoll diesen Aspekten eine besondere Aufmerksamkeit zu widmen.

In einem nächsten Schritt gilt es, Maßnahmen zu entwickeln, die Kommunen den Zugang zu den hier recherchierten und vergleichbaren Ergebnissen ermöglichen, um eine Nutzbarkeit wissenschaftlicher Erkenntnisse in der Praxis sicherzustellen. Der vorliegende Beitrag hilft kommunalen Institutionen und Entscheidungsträgern herausfinden, welche Determinanten innerhalb der einzelnen Ebenen relevant sein können, um diese im eigenen Implementierungsprozess entsprechend zu berücksichtigen.

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1.4 Theoretical Domains Framework (TDF)

1.4.1 Evidence and Development of the TDF

Next to structural determinants of implementation processes, such as time and money constraints [104, 105], person-related factors of actors from the communities play a decisive role in the implementation of support services for caring relatives of people with dementia, as described by Wittek et al. (2022) [127]. To optimise an implementation process, a behavioural change of involved actors (also those from the communities) is often necessary [83].

In health sciences, the Theoretical Domains Framework (TDF) from Michie et al. (2005) can answer the question about the cause or explanation of the implementation behaviour of health care practitioners or rather the factors influencing it [82]. Following Greenhalgh et al. (2005), such procedures are necessary for long-term implementation of evidence-based interventions into standard care.

In subsequent, the development process of the TDF is described [42]. Because of too many different theories and constructs about behaviour and behaviour change, Michie et al. (2005) decided to put together the key concepts influencing the effective implementation of evidence-based practice and to make them usable [82]. Therefore, a working group out of 18 health psychology theorists, 16 health services researchers and 30 health psychologists was founded to 1) identify existing theories and theoretical constructs, 2) simplify them into theoretical domains, 3) evaluate the importance of the theoretical domains, 4) interdisciplinary evaluation, 5) validation of the domain list, and 6) creation of pilot interview questions [82]. At the beginning of the six-phases consensus approach, there were 128 explanatory constructs on 33 psychological theories and in the end of the consensus approach there were 12 theoretical domains left over relevant to behaviour change of health care practitioners (see Figure 2) [82]. As Michie et al. (2005) recognised the identified domains match with those Fishbein et al. (2001) once detected; they take it as a validation of their work [36, 82].

12 domains of the „Theoretical Domains Framework“:

1. Knowledge
2. Skills
3. Social/professional role/identity
4. Beliefs about capabilities
5. Beliefs about consequences
6. Motivation & goals
7. Memory/ attention/ decision process
8. Environmental context & resources
9. Social influences
10. Emotional regulation
11. Behavioural regulation
12. Nature of the behaviour

Figure 2: Domains of the Theoretical Domains Framework (own illustration) [82].

1.4.2 Previous Research Using the TDF

There is evidence that the person-related factors of actors, such as knowledge, professional role and motivation, included in the TDF play an important role in implementing interventions or in explaining suboptimal implementation processes [22, 56, 82]. Therefore, the TDF was used in many different studies about implementation behaviour or rather behaviour change. However, the framework always needed to be adapted according to the respective subject or target population. Table 1 contains some exemplary studies for the previous use of the TDF. As shown, some used the framework to develop a quantitative questionnaire [6, 58, 94] and some did qualitative interviews [17, 62, 86] on the basis of the TDF. Each study addresses its own research health care topic from the implementation of physical activity interventions [57] to the implementation of dementia guidelines into general practices [86].

Table 1: Examples of previous research using the TDF.

Authors	**Year**	**Title**	**Topic**	**Method**	**Number of Domains**
Beenstock et al.	2012	What helps and hinders midwives in engaging with pregnant women about stopping smoking? A cross-sectional survey of perceived implementation difficulties among midwives in the North East of England	Engaging midwives for smoking cessation in pregnancy	Quantitative questionnaire	11
Boscart et al.	2012	Using psychological theory to inform methods to optimize the implementation of a hand hygiene intervention	Optimisation of a hand hygiene intervention	Qualitative interviews	12
Huijg et al.	2015	Factors Associated With Physical Therapists' Implementation of Physical Activity Interventions in the Netherlands	Physical therapists' implementation fidelity regarding physical activity interventions	Quantitative questionnaire	18
Islam et al.	2012	A cross-country comparison of intensive care physicians' beliefs about their transfusion behaviour: A qualitative study using the theoretical domains framework	Intensive care physicians' beliefs about their transfusion behaviour	Qualitative interviews	12
Murphy et al.	2014	Understanding diagnosis and management of dementia and guideline implementation in general practice: a qualitative study using the theoretical domains framework	Dementia guideline implementation in general practice	Qualitative interviews	12
Ris et al.	2021	Adapting the determinants of implementation behaviour questionnaire to evaluate implementation of a structured low back pain program using mixed-methods	Implementation of low back pain primary care programs	Quantitative questionnaire	10

Chapter 2

Aim and Research Question

2 Aim and Research Question

According to the theoretical background about the situation of caring relatives and people with dementia, the responsibilities and possibilities of municipal communities, and the methods of implementation science, the implementation of support services for the target group needs to be examined in more detail. The work of Wittek et al. (2022) as well as research literature makes clear that in gerontology, research should focus on the individuals but also on the actors in communities to optimise implementation processes [4, 20, 54, 68, 80, 91, 92, 110, 127]. Thus, the aim of the dissertation is to investigate the person-related factors as well as the implementation behaviour of actors from the communities implementing support services for caring relatives of people with dementia. Subsequently, potential measures to assist the actors from municipal communities are to be derived.

The main research question is:

> *In which person-related factors is the behaviour of actors from municipal communities founded in relation to the implementation of support services for caring relatives of people with dementia and how can it be positively influenced?*

Further research questions occurred during the research process and are embedded within the followed writing.

Chapter 3

General Material and Methods

3. General Material and Methods

3.1 Community Implementation Behaviour

3.1.1 Adaption of the TDF

As described within the previous sections, a tool to answer the arising research question already exists. However, it only exists in health sciences or rather in health care related topics (see Table 1). Thus, for having an appropriate tool for the gerontological context and according to the named target group, the TDF needs to be adapted. The process of the adaption is illustrated in Figure 3 and will be explained in the following paragraph.

First, an analysis of the twelve TDF domains and their definitions was conducted. Afterwards, additional studies using the TDF were screened to understand how they adapted the TDF and what kind of or how many domains were included. For example, the authors listed in Table 1 adapted, extended or specified the TDF in different ways according to their topic and target population. The considered studies contained between eleven and fourteen domains. Out of all these domains, eleven domains that are appropriate for the topic *implementation of support services for caring relative of people with dementia in communities* were identified. Especially the Determinants of Implementation Behaviour Questionnaire (DIBQ) and its definitions prove to be suitable for the chosen topic (see additional file 1) [58, 59]. The decision about the inclusions of the domains was taken in a consensus approach through the involvement of different research colleagues. The identification of suitable domains has taken place following the nominal group process of consensus finding [61]. This created the basis for the development of the Community Implementation Behaviour Questionnaire (CIBQ) for examining the implementation behaviour of actors from the community according to implement support services for caring relatives of people with dementia.

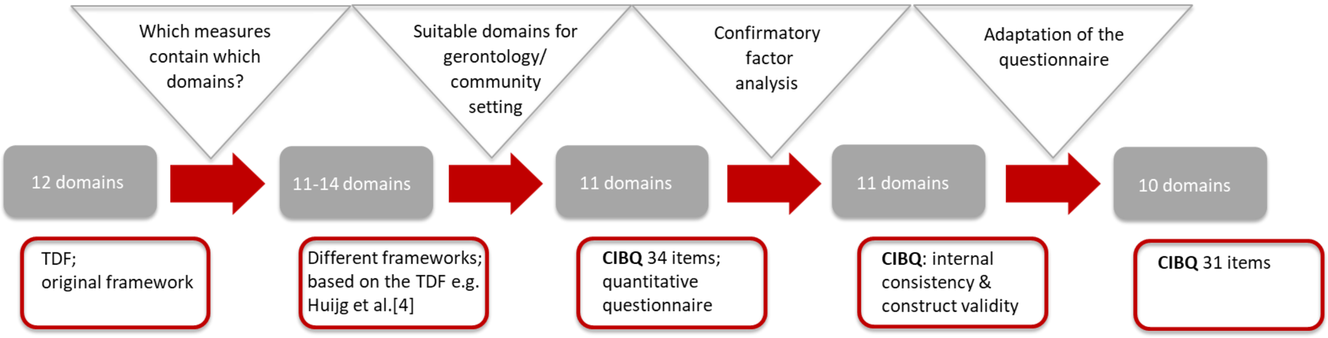

Figure 3: Process of development of the Community Implementation Behaviour Questionnaire.

3.1.2 Development of the Community Implementation Behaviour Questionnaire (CIBQ)

Based on the described consensus approach, the CIBQ was developed. As said, the DIBQ is most suitable which is why not only the definition of many of its domains but also the items specifying the respective domains were considered for the development of the CIBQ. The results of this collaborative process, including the choice of domains and their definitions, are shown in Table 2. Each of the eleven domains is specified through three items (except one domain, which is specified through four items). Since the underlying literature is English- and the target population is German-speaking, the domains, corresponding definitions and items needed to be translated. Therefore, a five-step procedure for producing accurate translations and adaptations of measures was considered. It consists of: 1) forward translation; 2) comparison of two translated versions and consensus meeting; 3) blind back-translation; 4) comparison of two back-translated versions and consensus meeting; and 5) pilot testing of the pre-final version and adaptation of the questionnaire [5, 107, 124]. Because of the extensive adaptation of the domains and items, phases three and four were omitted [5, 107, 124]. The translation process was done by a psychologist whose native language is German and who completed their psychology degree in English (Scotland) and by an English teacher whose mother tongue is also German and who lived in the USA for about one year [5, 107, 124]. Afterwards, the translated domains, definitions and items were subsequently discussed with experts from different fields of work: a politician from the German County Association

(Deutscher Landkreistag), a senior citizen consultant, a social mayor, a gerontological researcher and psychologist and two more gerontological researchers. The experts received the tool via e-mail and could comment on the comprehensibility and applicability of the domains and items in written form, on the phone and/or in person. If necessary, changes were made to the questionnaire. Table 2 shows the final version of the eleven domains with their definitions.

3.2 Recruitment and Sample

3.2.1 Cooperation Project "Town Hall Project"

The recruitment of the study population succeeded with the help of a cooperation project, the so called "Town Hall Project". The Town Hall Project was conducted at the Institute of Gerontology at the University of Heidelberg and aimed to examine the situation of caring relatives of people with dementia as well as their support and consideration within the municipal communities [125]. The scope of the project was, among other things, to create a dialogue between the caring relatives of people with dementia and actors of different fields of work in the community, such as municipal administration, health care, voluntary work, consulting, church, sports, culture, education, and housing in so called town hall meetings [125]. These events took place in different communities in Germany either in the respective town halls or in a digital format via the video-conference platform Zoom (Zoom Video Communications, Inc., San José – California, United States) because of the Corona-Virus Pandemic. Interested citizens with or without relation to the target group were invited to listen and to join the discussions at those events.

According to determined criteria, like the region (urban and rural), number of inhabitants, state and reachability, German communities were invited. In case of interest of the communities, preliminary talks were organised to give detailed information about the background and process of the project. All in all, 45 municipal communities were invited to participate in the project. 16 communities accepted a participation. Figure 4 shows the distribution of the participating communities. Reasons for non-participation were e.g. difficulties to find a date or problems to cope with the work-load. As it can be seen in Figure 4, a large proportion of participating communities are located in the area around Heidelberg. Because of the university's proximity or the knowledge about its existence, those communities may have been more interested in participating.

In each community, about ten caring relatives of people with dementia and about ten actors from the community were invited to participate in the town hall meetings. The size of the audience was not defined. For the recruitment of the caring relatives and actors, central contact persons, so called *multipliers,* from the respective community were identified and collaborated with. Those multipliers, e.g. senior citizen consultants, had a good overview of possibly relevant participants and gave us their contacts (with their consent) for getting in touch and inviting them. To build a heterogeneous group, we proposed different fields of work (see above) and invited actors who were already working with caring relatives and/or people with dementia as well as actors who were not yet in contact with the target group. The inclusion criteria comprised participating actors from the community to be of legal age (≥ 18 years of age) and to understand German. As already said, they were from different fields of work in the community such as municipal administration, nursing, health care, voluntary work, consulting, church, sports, culture, education, housing, etc.

The participation of the caring relatives was followed by different quantitative questionnaires [125] and everybody was asked about his/her expectations as well as his/her evaluation according to the town hall meeting. The town hall meetings themselves took three hours and three distinct discussion groups were moderated with guiding questions. About six weeks after each event, a one-hour focus group took place to reflect the content of the town hall talks. The focus group was moderated by guiding questions, too. The actors were invited to the focus group to talk about their experiences, possible changes within the community, the time after the event and anything else they want to report.

Table 2: Definition of the domains and the adaptation to the gerontological context.

	Domain	Original definition	Adaptation to the gerontological context
D1	**Knowledge**	An awareness of the existence of something.	The actors from the community have the knowledge about the situation and understand the relevance of caring relatives of people with dementia.
D2	**Skills**	An ability or proficiency acquired through practice.	The actors from the community have the skills and training to implement support services for caring relatives of people with dementia in the community.
D3	**Social/ professional role and identity**	A coherent set of behaviours and displayed personal qualities of an individual in a social or work setting.	The behavioural spectrum and the personal qualities of the actors from the community with regard to implementing support services for caring relatives of people with dementia in the community are part of the professional setting.
D4	**Beliefs about capabilities**	Acceptance of the truth, reality or validity about an ability, talent, or faculty that a person can put to constructive use.	The actors from the community are confident in their abilities to implement support services for caring relatives of people with dementia in the community.
D5	**Beliefs about consequences**	Acceptance of the truth, reality or validity about outcomes of a behaviour in a given situation.	The actors from the community understand the advantages and disadvantages of implementing support services for caring relatives of people with dementia in the community.
D6	**Goals**	Mental representations of outcomes or end states that an individual wants to achieve.	The actors from the community have goals that they would like to achieve regarding implementation of support services for caring relatives of people with dementia in the community.
D7[*]	**Sociopolitical context**	Any characteristics of the sociopolitical context that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behaviour.	The sociopolitical context has characteristics that motivate or discourage actors from the community to develop competences, skills, adaptive behaviours and independence regarding the implementation of support services for caring relatives of people with dementia in the community.
D8	**Social influences**	Interpersonal processes that can cause individuals to change their thoughts, feelings, or behaviour.	Interpersonal processes that lead to a change in the actors' from the community's thoughts, feelings or actions regarding the implementation of support services for caring relatives of people with dementia in the community.
D9	**Emotions**	A complex positive/negative reaction pattern involving experiential, behavioural, and physiological elements by which the individual attempts to deal with a personally significant matter or event.	The actors from the community have positive emotions about implementing support services for caring relatives of people with dementia in the community.
D10	**Reinforcement**	Increasing the probability of a response by arranging a dependent relationship, or contingency, between the response and a given stimulus.	A given stimulus increases the probability of actors from the community implementing support services for caring relatives of people with dementia in the community.

D11	**Nature of the behaviour**	The nature of the aggregate of all responses made by an individual in any situation.	The actors from the community have an original (intuitive, personal) way of behaving on which all actions and reactions in relation to caring relatives of people with dementia are based.

Domain definitions were based on definitions from Huijg et al. (2014) [59].

*D7 was excluded because of the poor fitting indicated by Cronbach's alpha and the inter-item correlation.

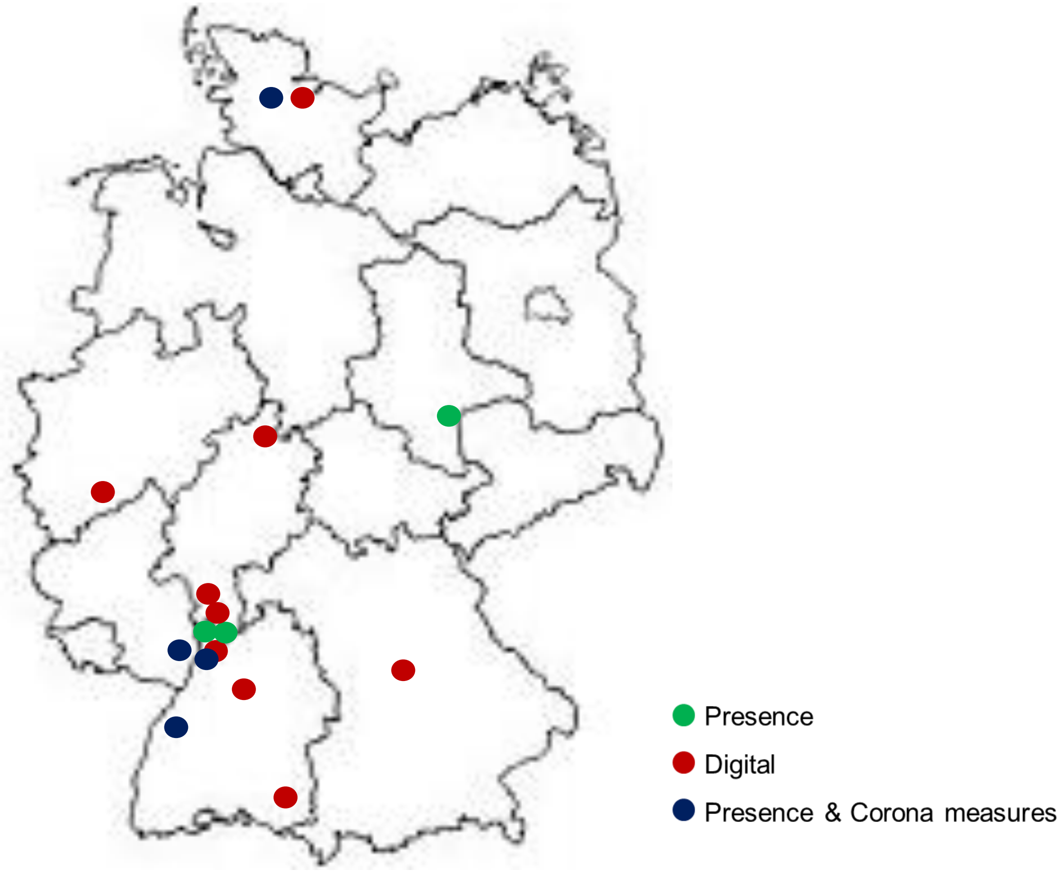

Figure 4: Distribution of the participating communities [126, 128].

Additional research question:

During the town hall meetings, it was recognisable that the actors from the communities addressed the presented CIBQ domains or rather that the actors' contributions to the discussions might be assignable to particular CIBQ domains. Thus, the following question arises:

> *(2) Which of the CIBQ domains were addressed by actors from the communities and how is that reflected in their implementation behaviour in relation to support caring relatives of people with dementia?*

The respective aim is to identify the most relevant and addressed domains and to check the association between the domains being brought up within the public dialogue and the behaviour of the actors after the town hall meetings.

Next to this qualitative approach to examine the CIBQ domains, a quantitative approach was considered to study the implementation behaviour of actors from the community in more detail. According to the eleven domains, 34 associated items can be seen in Table 3. Consistent with previous quantitative questionnaires (1.4.2), the agreement with each of the 34 items or statements are rated on a seven-point scale (1 = strongly disagree; 7 = strongly agree). In addition to questions about the domains, sociodemographic and employment information of the study population were collected in the final questionnaire (see additional file 2). The corresponding quantitative questionnaire is based on self-completion and self-reports. The participation was voluntarily and without any incentives.

The CIBQ was subsequently pretested by ten actors from different fields of work (e.g. teachers, mayors, nurses, researchers, senior citizen consultants, clergyman of the church) and adjusted according to their feedback. Already after seven pilot tests, no new information occurred and the tool reached saturation. The testers completed the questionnaire within 10-15 minutes on average. Final amendments were adopted and an online version on the online survey application *LimeSurvey* (version 3.22.1+200129, LimeSurvey, Hamburg, Germany) was created [74].

Additional research question:

Regarding the topic and the developed questionnaire, the following research question arises:

(3) *Is there any relation between the agreement in the CIBQ domains and the implementation of support services for caring relatives of people with dementia (within the last two years) in their municipal community?*

The respective aim is to identify whether the domain scores of actors from the community are associated with the execution of implementing support services for caring relatives of people with dementia.

3.2.2 Design, Recruitment and Data Collection

The qualitative data of the town hall meetings was used to answer the second research question (2).

For answering the main (1) and the third (3) research question, a cross sectional observational questionnaire study was conducted. Therefore, the actors from the communities who were contacted for the town hall meetings were recruited again. To participate in the CIBQ study, it was not mandatory for them to have attended a town hall meeting. They solely needed to be in list of contacts. All actors from this list were invited via email to answer the CIBQ (see additional file 3). They received a link to an online questionnaire which was anonymous, voluntary and self-reported. It was conducted via the internet using LimeSurvey (version 3.22.1+200129, LimeSurvey, Hamburg, Germany) and participants received no incentives for completion. Withdrawal from the survey was possible at any time without giving a reason. Before the actors had the possibility to start the survey, they needed to read and confirm the data protection statement or privacy policy (see additional file 4). Additionally, the email request included a link to further information and explanations about the research proposal and aim of the study (see additional file 5). In case of non-response, the contacted actors received two more email-reminders. If they still did not participate, they were marked as non-responder. Data collection was done from October 2021 to December 2021.

Table 3: Community Implementation Behaviour Questionnaire.

	Domain	Items
D1	**Knowledge**	a. I know why it is important to implement support services for caring relatives of people with dementia in the community. b. I know the goals for the implementation of support services for caring relatives of people with dementia in the community. c. I know what is expected of me in the implementation of support services for caring relatives of people with dementia in the community.
D2	**Skills**	a. I have been trained (e.g. in the context of training/ further training/ induction etc.) on the implementation of support services for caring relatives of people with dementia in the community. b. I have the skills or the necessary knowledge to implement support services of people with dementia in the community. c. I am experienced in implementing support services for caring relatives of people with dementia in the community.
D3	**Social/ professional role and identity**	a. The implementation of support services for caring relatives of people with dementia in the community is part of my job description and my area of responsibility. b. I see it as part of my remit to implement support services for caring relatives of people with dementia in the community. c. My role in the implementation of support services for caring relatives of people with dementia in the community is clearly defined for me.
D4	**Beliefs about capabilities**	a. I am convinced that I can implement support services for caring relatives of people with dementia in the community. b. I am convinced that I can implement support services for caring relatives of people with dementia in the community, even if obstacles arise. c. I am convinced that I can implement support services for caring relatives of people with dementia in the community, even if caring relatives of people with dementia are not motivated.
D5	**Beliefs about consequences**	a. If I implement support services for caring relatives of people with dementia in the community, the cooperation in my work environment is strengthened. b. The implementation of support services for caring relatives of people with dementia in the community is a satisfying task for me. c. When I implement support services for caring relatives of people with dementia in the community, it helps caring relatives of people with dementia to be better cared for.
D6	**Goals**	a. Within the scope of my field of activity, one of my goals is the implementation of support services for caring relatives of people with dementia in the community. b. I set myself realistic short-term goals regarding the implementation of support services for caring relatives of people with dementia in the community.

		c. I set myself realistic long-term goals regarding the implementation of support services for caring relatives of people with dementia in the community.
D7[*]	**Sociopolitical context**	a. With the support of the federal government, the states and municipal communities it is possible to implement support services for caring relatives of people with dementia in the community.
		b. With the support of the care insurance it is possible to implement support services for caring relatives of people with dementia in the community.
		c. With the (given) resources (e.g. staffing/funding) it is possible to implement support services for caring relatives of people with dementia in the community.
D8	**Social influences**	a. Most of the people I matter about are in favour of me implementing support services for caring relatives of people with dementia in the community.
		b. People from my work environment (also) implement support services for caring relatives of people with dementia in the community.
		c. People from my work environment are helpful in implementing support services for caring relatives of people with dementia in the community.
D9	**Emotions**	a. When I implement support services for caring relatives of people with dementia in the community, I am optimistic.
		b. When I implement support services for caring relatives of people with dementia in the community, I feel comfortable.
		c. When I implement support services for caring relatives of people with dementia in the community, I am not insecure.
		d. When I implement support services for caring relatives of people with dementia in the community, I am not frustrated.
D10	**Reinforcement**	a. When I implement support services for caring relatives of people with dementia in the community, it is valued by carers of people with dementia.
		b. When I implement support services for caring relatives of people with dementia in the community, I receive recognition from my work environment.
		c. When I implement support services for caring relatives of people with dementia in the community, I receive recognition from my private environment.
D11	**Nature of the behaviour**	a. The implementation of support services for caring relatives of people with dementia in the community is something that comes naturally to me (personally).
		b. The implementation of support services for caring relatives of people with dementia in the community is something that I pursue on my own initiative (also independent of my job description/area of responsibility).
		c. The implementation of support services for caring relatives of people with dementia in the community is important for me.

Domain definitions were based on definitions from Huijg et al. (2014)[59].

[*] D7 needs to be excluded for further analysis because of poor fitting indicated by Cronbach’s alpha and inter-item correlation.

Chapter 4

Methodology, Data Analytic Procedures and Results

4. Methodology, Data Analytic Procedures and Results

4.1 Qualitative Part

4.1.1 Qualitative Analysis

The in-person and digital town hall meetings as well as the focus groups were recorded electronically, pseudonymised and rule-based transcribed afterwards. For this, the participants were informed orally and in writing about the content, aim and data protection or privacy policy (see additional file 6). The collected data was then analysed by using the content structuring qualitative content analysis according to Kuckartz (2018) [71]. As the named method includes the verification of pre-existing assumptions as well as theoretical constructs, it suits the qualitative analysis of the data in relation to the CIBQ domains which answers the second research question (2). For this purpose, the *eleven domains* are determined as deductive categories or rather pre-existing theoretical constructs for the town hall meeting data. Within the focus groups, the deductive categories were *planned changes* and *concrete effects*. The software MAXQDA 2020 (Verbi Software GmbH, Berlin, Germany) was used for analysing the data.

Kuckartz (2018) divided the process of analysing qualitative data in seven different phases [71]. First of all, it begins with textual work. Thus, the transcripts of town hall meetings and focus groups needed to be read in detail and important aspects were marked. Afterwards, the data was initially structured according to the deductive categories (see above: eleven domains, planned changes, concrete effects). According to the third step of the content structuring qualitative content analysis, selected text sequences were allocated to the deductive categories. The unfitting sections were left out and were not coded. This process was done by two more coders in a consensus approach. Subsequently, the name, description and definition as well as a key example of each category were noted in a codebook (see additional file 8). This is necessary to ensure quality and comparability. On top of that, the codebook enables different coders to work with the same understanding of the categories. Only in this way an inter- and intra-coder-reliability can be ensured. The following phases of the process according to Kuckartz (2018) needed to be skipped because of the concentration on the predefined deductive codes [71].

In addition to the qualitative analysis of the transcripts, the number of quotes in each deductive category was counted to get an impression how often each of the eleven domains were addressed and how many planned changes or concrete effects were mentioned.

4.1.2 Qualitative Results

As described in the methods section *cooperation project "Town Hall Project"* (3.2.1) and *qualitative analysis* (4.1.1), the research question (2):

> *Which of the CIBQ domains were addressed by actors from the communities and how is that probably influencing their implementation behaviour according to support caring relatives of people with dementia?*

was answered by analysing qualitative data from the town hall meetings and complementary focus groups. The aim was to investigate which of the CIBQ domains actors from the community addressed in a public dialogue and what kind of results this achieved in terms of the implementation of support services for caring relatives of people with dementia. To ensure clarity and comprehensibility the qualitative content analysis focused, besides on the reported outcomes of care optimization, on the three most frequently addressed domains *knowledge*, *goals* and *sociopolitical context*. With regard to domain *knowledge*, it was evident that the awareness of the situation and relevance of carers and their relatives was present in at least some of the actors. *Goals* for optimising the support of caring relatives of people with dementia were mentioned by actors from individual communities. The *sociopolitical context* was often addressed through statements about incomplete requirements. Furthermore, several changes within the support of caring relatives of people with dementia were reported and could be linked to the addressed domains. The link is indicated by the fact that in the communities where the domains were addressed in the town hall talks, there were more changes in the support recognisable afterwards. This leads to the conclusion that increased discussion about the domains within public dialogues influences the actors and their awareness according to the improvement of support services for caring relatives of people with dementia.

The detailed presentation of the results can be read in the following research paper which was published open access in the *Journal of Public Health (Berl.)* (4.1.3).

4.1.3 Community Support for Caring Relatives of People with Dementia: Qualitative Analysis Using the Theoretical Domains Framework **(2nd Publication)**

Wittek M, Voß H, Kiefer A, Wiloth S, Schmitt E (2022): Community support for caring relatives of people with dementia: qualitative analysis using the Theoretical Domains Framework. *J Public Health (Berl.)*. https://doi.org/10.1007/s10389-022-01744-w

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ORIGINAL ARTICLE

Community support for caring relatives of people with dementia: qualitative analysis using the Theoretical Domains Framework

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Abstract

Aim Although caring relatives of people with dementia are a mainstay of many care systems, the availability of support services for them within the municipal community shows deficiencies. Adopting the Theoretical Domains Framework (TDF) this study aims to investigate 1) which of the TDF domains adapted to gerontology show up in public dialogue, and 2) the results that public dialogues produce in terms of support services for caring relatives.

Subject and methods The data consists of town hall meetings and focus groups from 14 municipal communities in Germany. Participants were caring relatives and stakeholders of the communities. A qualitative content analysis was conducted, focusing on the assessment of three TDF domains, namely *knowledge, goals*, and *sociopolitical context* as well as outcomes of care optimisation.

Results With regard to domain *knowledge*, it was evident that in every community there were actors aware of the situation and relevance of carers and their relatives. Only some actors mentioned *goals* for optimising the care of the target group. The *sociopolitical context* is often addressed through statements about incomplete requirements.

Conclusion Overall, a relation between the discussion about the domains in public dialogues and changes in supporting carers of people with dementia can be assumed. The results indicate that an increased discussion about the domains within town hall meetings influences the actors and their statements with regard to the improvement of support services for caring relatives of people with dementia. Since the domains were not developed exclusively for the outlined context, this approach can also be applied to other areas of care.

Keywords Caring relatives · People with dementia · Municipal community · Support services · Theoretical Domains Framework · Implementation

Introduction

Caring relatives and people with dementia

According to official figures, approximately 1.6 million people in Germany and over 55 million people worldwide are currently living with dementia (DAlzG 2020; Gauthier et al. 2021). In 2030, there will be over 2 million cases in Germany and approximately 78 million cases worldwide (Gauthier et al. 2021; DAlzG 2020). However, the exact figures are assumed to be even higher, as an unknown number of cases go unreported. In Germany, approximately two-thirds of people with dementia (PWD) are cared for by relatives at home (Federal Statistical Office of Germany 2018). This makes caring relatives (CRs) a mainstay of the German care system and demonstrates the relevance of their support (Blome et al. 2018).

Caring for a PWD at home can be particularly burdensome for CRs because of the symptoms associated with the disease such as changes in character and behaviour accompanying changes in relationships which occur, most of which are difficult to predict and are progressive (Frewer-Graumann 2020). This often has a negative impact on the health and daily lives of CRs (Kruse 2017; Rothgang and Müller 2018). Numerous studies indicate that support services can improve the well-being and quality of life of CRs of PWD (Safavi et al. 2019). The municipal communities with their stakeholders and local authorities such as communal actors,

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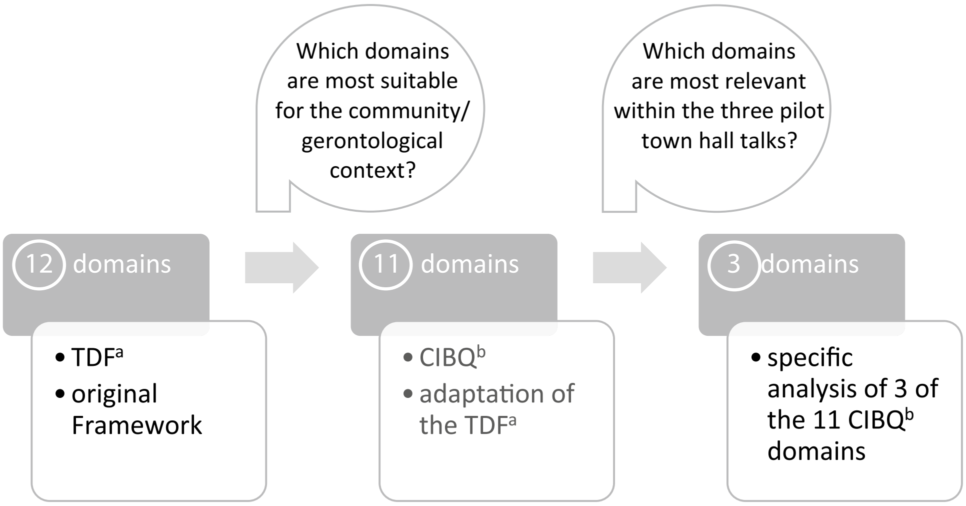

Fig. 1 Adaption and selection process of the discussed domains. ᵃTDF = Theoretical Domains Framework; ᵇCIBQ = Community Implementation Behaviour Questionnaire

social workers, volunteers etc. are one entity responsible for offering adequate support for CRs. The *Seventh Report on the Elderly* published by the German Federal Government called on municipal communities to create opportunities for developing and implementing support and care for CRs (Blome et al. 2018; BMFSFJ 2016). According to Chapter 9, §71 of Book XII of the Social Code, the German municipal communities are responsible for the services in the public general interest and a local culture of care (Brettschneider 2020). However, because of divided competences between federal government, states, and municipal communities, the responsibilities vary between the different states, and the degree to which support is actually implemented also varies greatly between communities (BMG 2016; Holroyd-Leduc et al. 2017; Jensen et al. 2015). Frequently, care within the community is only carried out on a project basis, and long-term implementation fails (von Lützau-Hohlbein 2017).

Implementation science and the Theoretical Domains Framework

For the successful realisation and long-term implementation of an (evidence-based) intervention into "standard care", adequate procedures are required in the implementation process (Greenhalgh et al. 2005; Hoben 2015). There are multiple strategies and theories for designing and controlling the implementation process, such as the “Consolidated Framework for Implementation Research” by Damschroder et al. (2009) or the “Theoretical Domains Framework” by Michie et al. (2005) (Grol et al. 2013; Hoben et al. 2015).

Discussions and research have shown that the level of support is highly dependent on individual actors in the communities (CAs) such as social workers, volunteers, nurses etc. (BMFSFJ 2016; Wittek et al. 2022a). In addition to structural determinants such as time or money, (personal) characteristics of CAs such as knowledge, professional roles, and motivation play an important role in implementing support services for CRs of PWD. The present article applies the Theoretical Domains Framework (TDF) as it addresses the implementation behaviour of different actors and their aforementioned characteristics (Michie et al. 2005). In a six-phase consensus process with the help of health psychology theorists, health psychologists and health services researchers, Michie et al. (2005) generated a validated theoretical framework for implementation science, the TDF (Michie et al. 2005). The application of the TDF is used to understand behavioural change processes, which are part of an implementation process. The TDF answers the question: *Which characteristics of actors influence their behaviour during the implementation of interventions?* and (the original version) consists of 12 domains, e.g., knowledge, beliefs about capabilities, or social influences (see Appendix Fig. 1).

This study adapted the domains of the TDF to the context of gerontology, municipal communities and demands of CRs of PWD. Furthermore, the adapted framework consists of 11 newly developed domains, and were compared to existing validated questionnaires, especially to the questionnaire of Huijg et al. (2014), tested and readjusted to the *Community Implementation Behaviour Questionnaire* (CIBQ) (see Appendix Table 1).

The idea behind the adaptation was to answer the question: *Which characteristics of CAs influence their behaviour during the implementation of support services for CRs of PWD in communities?* To ensure better clarity and understanding, only three out of 11 domains are considered in the following. Those three domains should be the most frequently addressed domains within the town hall talks.

The adaptation and selection process of the domains discussed in this paper can be traced in Fig. 1.

Town hall meetings

To design and develop the implementation of interventions, e.g., support services for CRs of PWD, participatory methods are recommended (Bergold and Thomas 2020). As described by Grol (1997) and Hoben et al. (2015), among others, designing and developing the implementation of interventions is the first step of implementation. It is called *planning and developing proposals for change to the current care situation* (Grol 1997; Hoben et al. 2015). As "a healthy democracy depends on the ability of citizens to affect the public policies that deeply influence their lives […]" (Lukensmeyer and Brigham 2002, p 351), one opportunity to facilitate the participation of target groups, citizens, and stakeholders is the method of town hall meetings. This style of public dialogue has a long tradition in the USA starting in the seventeenth century, and is an established part of the municipal participatory culture (Bipar 2016). In town hall meetings, members of different groups and functions have the opportunity to exchange ideas and learn about each other's needs (Bergold and Thomas 2020). While this method was originally used primarily in a political context, it is now applied in a wide variety of contexts, including medical care (Bipar 2016). Various studies show the added value of (digital) town hall meetings in different settings (Allen et al. 2020; Jayawardena et al. 2020; Wittek et al. 2022b). For example, different CAs could identify coronavirus pandemic-related gaps in supporting the CRs of PWD in the community through participation in town hall meetings (Wittek et al. 2022b). The benefits of participatory methods such as town hall meetings become clear in this context (Wiloth et al. 2020; Bergold and Thomas 2020).

This article wants to combine a town hall meeting in German municipal communities about the living situation of CRs of PWD and possible offers of support at the community level *with* the characteristics of CAs, which might be necessary for successful implementation of those support services (Wiloth et al. 2020). The scope of the town hall meetings is to create a dialogue between the CRs of PWD and actors of different fields of work in the community, such as municipal administration, health care, voluntary work, consulting, church, sports, culture, education, and housing. Through this dialogue structure, the various participants can influence both the content of the research project and the content of future care. This provides a participatory approach to the development of care. Within this participation, CAs have the opportunity to report on eventual existing services and reflect on their past and current implementation behaviour with regard to support services for CRs of PWD, as well as on their possible future behavioural changes. CAs should *listen and report, and reflect and act*. The participation of CRs consists of describing their daily lives with all their supportive measures or people and barriers or gaps in care. Furthermore, CRs should articulate their needs and how they can become part of optimising their own situation together with CAs and other CRs. Thus, CRs should *describe, wish, and get involved*. These events took place in the respective town halls of different communities in Germany or in a digital format because of the coronavirus pandemic. Interested citizens were invited to listen and to join the discussion. The aim of this public dialogue was to exchange information about needs, burdens and rewards of caring for PWD, as well as the use or needs of support services for CRs of PWD in their community.

Aim and research questions

The aim of this study is to investigate (1) which of the previously presented and adapted domains appear in a public dialogue, and (2) the results that town hall meetings produce in terms of support services for the CRs of PWD.

Materials and methods

Within the research project, "Giving a voice to caring relatives of persons with dementia — The Town Hall Project", data was collected, and in the current study this data was analysed on the basis of new research questions (see above). The methodological procedure of recruitment, data collection, and data analysis were published by Wiloth et al. (2020) and can be read in detail here. The Town Hall project received a positive vote from the Ethics Committee of the University of Heidelberg, Faculty of Behavioural and Cultural Studies, in 2019.[1]

Data — town hall meetings

The town hall meetings described in the background section last 3 hours and are moderated by SW using predeveloped leading questions. The interview guide was developed according to the research questions and on the basis of theoretical concepts such as resilience (Ryff and Keyes 1995) and psychological well-being (Connor and Davidson 2003) and literature on the topics of vulnerability, stress, maturity, and resources, as well as on the basis of the contents of the *Sixth and Seventh Report on the Elderly* published by the German Federal Government (Kruse 2017; BMFSFJ 2016). Up to approximately ten CRs and approximately ten CAs participated in each talk. After approximately 6 weeks, each town hall meeting was followed by a 1-hour focus group. The

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[1] In February 2021, due to the Corona pandemic, an amendment was submitted to the Ethics Committee, which was again positively assessed on 24.02.2021 (2021 1/1-A1).

different CAs took part in this focus group to reflect on the content of the previous event. These were moderated by SW using predeveloped leading questions as well, and took place in person or virtually, according to the pandemic situation.

The data were collected from November 2019 to January 2022. Based on defined criteria such as region (urban and rural), the number of inhabitants and accessibility, municipal communities were selected to be invited to participate in the project. For interested communities, preliminary meetings were held with representatives of the communities to provide detailed information on the background and the process of the project. A total of 45 municipal communities received an invitation to participate in the project. Sixteen municipalities participated and each had a town hall talk. Nonparticipation was due to difficulties in finding a date or the effort involved. To answer the aforementioned research questions, data from 14 out of 16 town hall meetings and focus groups were analysed. At the time of analysis, the other two town hall meetings and focus groups had not yet fully been analysed. The distribution and location of the 16 different municipal communities within Germany can be read elsewhere (Wiloth et al. 2020; Wittek et al. 2022b). The characteristics of $n = 93$ CRs and $n = 138$ CAs can be found in Tables 1 and 2.

Data analysis

The town hall meetings and focus groups were recorded, transcribed, and evaluated by means of qualitative content analysis based on Kuckartz (2018). For data analysis, MAXQDA 2020 (Verbi Software GmbH, Berlin) was used. To ensure reliability and validity, the analysis was performed by three coders in a consensual process (MW, AK, HV). Afterwards, the results were discussed by the project team. First, the project team created deductive codes according to the adapted domains. For a good understanding, only the three domains that occur most frequently in the first three (pilot) town hall meetings are considered in the following analysis.

Second, the project team created inductive codes while analysing the focus groups. Thus, the changes in CRs care caused by town hall meetings can be shown.

The entire research process was accompanied and documented by keeping a logbook (Rädiker and Kuckartz 2019).

Table 1 Characteristics of CRs and PWDs

Characteristics[a] ($n = 93$)	Total[b]
Sex of CR	
Female	74.2 (69)
Male	25.8 (24)
Age of CR (in years)	65.69±11.36
Relationship between CR and PWD	
Wife/ husband/ partner	53.8 (50)
Daughter/ son	41.9 (39)
Daughter-/ son-in-law	1.1 (1)
Other	3.2 (3)
Education[c] of CR	
Primary school	21.7 (20)
Secondary school	26.1(24)
High school graduation	10.9 (10)
University degree	25.0 (23)
PhD	5.4 (5)
Other	10.9 (10)
Occupation of CR	
Yes	34.4 (32)
No	65.6 (68)
Duration (months) of care of PWD by CR	50.86±40.03
Sex of PWD	
Female	52.2 (48)
Male	47.8 (44)
Age of PWD	80.17±8.16
Care level of PWD[d]	
No care level	1.1 (1)
Care level I	5.4 (5)
Care level II	17.2 (16)
Care level III	43.0 (40)
Care level IV	24.7 (23)
Care level V	8.6 (8)

[a] Data presented as percentage (number) except for: age of CR, duration of care of PWD by CR, age of PWD: these are presented as mean and standard deviation.

[b] Data were missing for education of CR($n = 1$), sex of PWD ($n = 1$), age of PWD ($n = 1$)

[c] The education definition corresponds to the German education system and has been translated accordingly

[d] According to the national long-term care insurance scheme

Results[2]

Domains in public dialogues

As already mentioned, only three of the 11 domains (see Appendix Table 1) are considered in this study, to ensure better clarity and understanding. Table 3 shows the frequencies of the occurrence of domains within the first three (pilot) town hall meetings. The following three domains came up most frequently within those talks: *Knowledge,*

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[2] As the project was carried out in Germany, the following quotations in the Results section are literal translations from German. The original German quotations can be found in Appendix Table 2.

Table 2 Characteristics of CAs

Characteristics[a] (n = 138)	Total[b]
Sex of CA	
Female	66.1 (80)
Male	33.9 (41)
Age of CA	53.15±10.73
Education[c] of CA	
Primary school	0.8 (1)
Secondary school	14.9 (18)
High school graduation	11.6 (14)
University degree	66.9 (81)
Other	5.8 (7)
Occupational field of CA	
Politics	8.0 (11)
Municipal administration	15.2 (21)
Consulting	13.0 (18)
Nursing	13.0 (18)
Medicine/ pharmacy	10.9 (15)
Church	9.4 (13)
Culture	2.2 (3)
Sports	7.2 (10)
Education	8.0 (11)
Living	4.3 (6)
Volunteering	8.7 (12)

[a] Data presented as percentage (number) except for: age of CA: this is presented as mean and standard deviation.

[b] Data were missing for sex of CA (n = 17), age of CA (n = 16), education of CA (n = 17)

[c] The education corresponds to the German education system and has been translated accordingly

Table 3 Number of occurrences of the domains within the first three town hall meetings

Domains		Number of Occurrences
D1	Knowledge	24[a]
D2	Skills	13
D3	Social/professional role and Identity	0
D4	Beliefes about capabilities	0
D5	Beliefes about consequences	0
D6	Goals	14[a]
D7	Sociopolitical context	25[a]
D8	Social influences	4
D9	Emotions	10
D10	Reinforcement	0
D11	Nature of the behaviour	7

[a] Most frequent occurred domains

Goals, and Sociopolitical Context. Further analysis points out that those domains show up in public dialogues in different ways. Each of the 14 town hall meetings thematises at least two out of the three domains.

Knowledge

The CAs of each town hall meeting share their knowledge of CRs of PWD or rather the care situation in Germany. CAs from communities 1, 2, and 3 also have passages where they express not knowing enough about the target group and its circumstances. Overall, different aspects were discussed:

Some CAs show their knowledge during the town hall meetings about the demographic situation and about the demographic change: "*So when there are fewer and fewer relatives who can provide care, when the situation changes, other things have to take effect*." (4) In addition, their awareness of the relevance and necessity of CRs of PWD becomes clear within the data: "*They are the biggest care service we have in the country.*"(4) and "*Without you, without the relatives, our system would completely collapse."*(10)

The CAs not only know about the care situation in Germany but also about the individual situation of the CRs of PWD. They have themselves partially experienced what it is like to accompany a relative with dementia. The following topics are raised during the town hall talks: lack of support, missing money, many services that need to be paid by the families themselves, overload of CRs, or the lack of flexibility of support services: "*[…] however structures, flexible structures have to be created that relieve the caring relatives regularly and also a bit more extensively than once a month or so, so that they can still live their own lives a bit.*"(4) Furthermore, CAs talk about their knowledge and experiences of courage, which is sometimes needed to get help and to accept help as a CR: "*[…] I noticed […] that there is an incredible inhibition threshold for relatives to "come out", because embarrassing things happen at home."*(7)

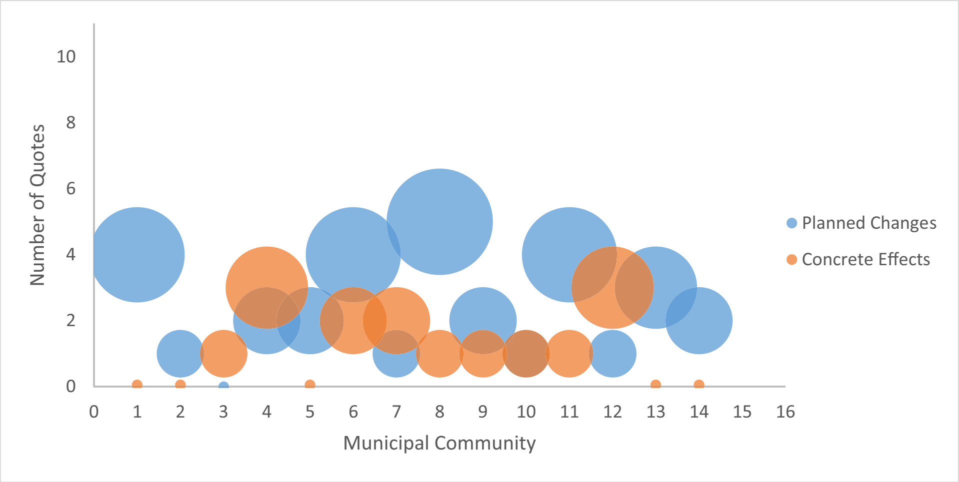
On the other hand, some CAs did not know the high number of PWD or rather the development of the disease. They also mentioned not knowing about some of the existing services: "*[…] I myself was not so aware that the [population with dementia] is so large, has such a weight and corresponding importance for our city.*"(2)

Goals

Concrete goals are not discussed in each town hall talk. The CAs of communities 5 and 14 did not mention any goals, and in some communities, only ideas or ventures were shared. Each of the shared goals had a different focus.

During the town hall meetings, the CAs talked about creating and strengthening networks with colleagues or other CAs. They mentioned that they wanted to become mediators

Fig. 2 Number of quotes per municipal community. *The size of the bubbles reflects the number of the quotes on the *y*-axis and the municipal communities on the *x*-axis. **The data from the communities 15 and 16 have not yet been fully analysed



or multipliers to facilitate the exchange of information about support opportunities with the CRs of PWD. While they themselves are willing to become more attentive to the target group, they also want to motivate colleagues to do so: "*And I think that it is of course also a medical task to instruct the relatives at an early stage […]. I will also take this with me to our doctors' meeting, we regularly exchange ideas that we should take the time even more intensively, especially in the case of early forms of dementia.*"(1)

In addition, CAs talked about engaging the public. They have goals such as organising public events to raise the awareness for CRs and PWD and doing public relations: "*We have already said that we would like to go more public and that is also one of our goals, to appear regularly in the press with topics that move the citizens and our clients.*"(8)

New support services and, above all, affordable support services are further goals which were mentioned within the town hall meetings, especially because of the inflexible, limited, and bureaucratic way of getting support services reimbursed: "*The neighbourhood assistance no longer exists in the way we had. We are in the process of rebuilding it, which unfortunately is not that easy and we need a lot of patience. However, that is our goal.*"(4)

Sociopolitical context

The CAs of each town hall meeting reported on the sociopolitical context and the connection to CRs of PWD and their situation. Except for communities 6 and 10, the CAs of each community shared positive and negative aspects of the sociopolitical context. In communities 3, 11, and 12, negative points predominated. Overall, different aspects were discussed.

When talking about the sociopolitical context of implementing support services of CRs of PWD, CAs discussed positive and negative aspects. It was often mentioned that resources are scarce for developing the necessary support services for CRs of PWD possible. Resources are mainly time, money, and human resources. Networks and groups which might be partly already established could help out: "*Well, the structures are prescribed by the long-term care insurance. That is, where you finance the services […].*"(14)

Furthermore, CAs said that federalism as well as the separated responsibilities between city, municipal community, and district complicate the implementation of support services for CRs of PWD. This fact also aggravates using the services and makes it more bureaucratic: "*One can either like or dislike the fact that there are responsibilities with the city, some with the district, and some with the payers. That does not make it easy for the carers […]. Too much bureaucracy, too many phone calls back and forth.*"(12) After the CAs, another aspect within the sociopolitical context is laws and regulations, which are very strict and not very supportive for the care sector: "*[…] that short-term care is so reluctant to be offered for economic reasons. I find it distressing and it sheds a terrible light on our social system here.*"(11)

During the town hall talks, some CAs say that those in politics need much more awareness of care, CRs, and PWD. This might succeed through founding organisations supporting the opinion, interests, and needs of the target group in political decisions: "*Relatives' organisations that can also act as lobbyists, and only if everyone from all directions, so to speak, carries this upwards again and again, will there also be an awareness of this.*"(8)

Support and care services for CRs of PWD

Looking at the focus groups of the respective municipal communities and their CAs, which took place approximately 6 weeks after the town hall meetings, changes in the support services for CRs of PWD can be seen. Not every municipal community reported concrete effects that have already been implemented, but there are CAs who at least have already planned some changes or optimisations for the support of the target group in each community (see Fig. 2).

Figure 2 shows the number of quotes (y-axis) concerning *planned changes* (blue bubble) and *concrete effects* (orange bubbles) per municipal community (x-axis). The size of the bubbles indicates the number of quotes in each case.

During the focus groups, the CAs mentioned so-called *concrete effects* as well as *planned changes* to support the CRs of PWD in their community. As the categories are quite similar, the quotes and contents are reported together.

Among other things, they talked about offering (further) possibilities to inform CRs about themes such as care, dementia or support services. This could be in the form of brochures: "*[…] we used the time to create a special dementia guidebook.*"(3), events, flyers, homepages, or lectures: "*[…] we wanted to organise a lecture in the summer […] about dementia. Just basics again. Which is public and takes place here in the town hall […].*"(1)

In addition, CAs intend to organise different services for CRs and/or PWD. Some services can be used exclusively by CRs to spend time for themselves, to recharge or just to free their minds from everyday tasks and responsibilities. This could be a yoga session, a painting course, or a discussion group because CRs "*[…] need to be able to exchange experiences with other like-minded people. In fact, this has led us to start another group, which is there for the exchange of experiences.*"(7)

Other offers are addressed exclusively for PWD, where CRs gain time, for example, to get things done. These are services such as daycare or similar care offers: "*There will be daycare on Saturdays once a month on a trial basis for 6 months next year. Depending on how this is accepted, it can be continued.*"(6) Then, there are services for both CRs and PWD. Both can spend time together outside of their everyday lives: "*We want to set up a kind of sensory garden where relatives can sit down with the person they are caring for without having to worry.*"(14) Sometimes there is also a professional who looks after them and who is caring for both of them. CAs know about the need for flexibility, affordability, and practicability of such offers. That is why they are thinking along of appropriate time and place: "*We are now planning to create an offer that takes place at times when working people can also come along.*"(4)

In some communities, human resources are needed to plan, organise, and offer support services, or rather to have someone who knows about the possibilities within the community and who can consult the CRs of PWD. For this reason, the CAs are talking about hiring somebody: "*[…] neighbourhood assistance was also mentioned in the town hall talk, and we have developed a concept. We have also promised a position.*"(4)

"*We have already set up a mailing list. There is a new e-mail address […] where you can contact us to get on the mailing list or to ask questions about dementia in general.*"(8) This quote is one example of the networking effect, the town hall meeting had. The CAs talked in the focus groups about getting in touch with CAs and CRs they did not know before. They report on exchanged contact details, meetings and newly formed working groups: "*Following the town hall talk, we networked very intensively: District Office, Care Support centre and the City […].*"(12)

Raising awareness of the general public as well as the policy-makers is another point the CAs talked about during the focus groups. For this purpose, they "*[…] are going to bring it to a municipal council committee right away and [we] are going to call for municipal political support there as well.*"(5) In addition, they plan to involve citizens by organising public events about care and dementia or arranging for the dementia network to have its own newspaper column: "*[…] there [in the newspaper] we are actually allowed to present ourselves once a month with the headline "News from the Dementia Network" and with our logo.*"(8)

Discussion

The article examined the benefit of CAs thematising three domains from the TDF within a public dialogue for the improvement of the care of CRs of PWD. Only these three domains were part of the presented results. Above all, the data showed that most CAs are aware of the themes along with the domains of *knowledge*, *goals*, and *sociopolitical context* and brought them up themselves during town hall meetings. According to the scope of the topics discussed at the meetings, the focus groups of the municipal communities show varying effects. The first mentioned domain *knowledge* described whether the participating CAs are aware of the situation and relevance of CRs and PWD. Their statements in the town hall meetings show that in each community, there are at least some CAs who bring this knowledge up. On the other hand, there are also a few CAs who communicate their lack of knowledge. In those communities (1, 2, 3), less concrete effects were reported in the focus groups (seeFig. 2). Within the second domain, *goals,* a distinction must be made between concrete goals and more generally formulated goals. In two communities (5, 14), there were no goals mentioned, and they also reported no concrete effects in the focus groups (seeFig. 2). The third domain, *sociopolitical context,* is often addressed negatively. When the negative comments outweigh the positive ones, this mostly leads to less or no concrete outcome in the focus groups.

The results indicate that the intensity of the upcoming domains within the town hall meetings influences the CAs and their statements regarding the improvement of support

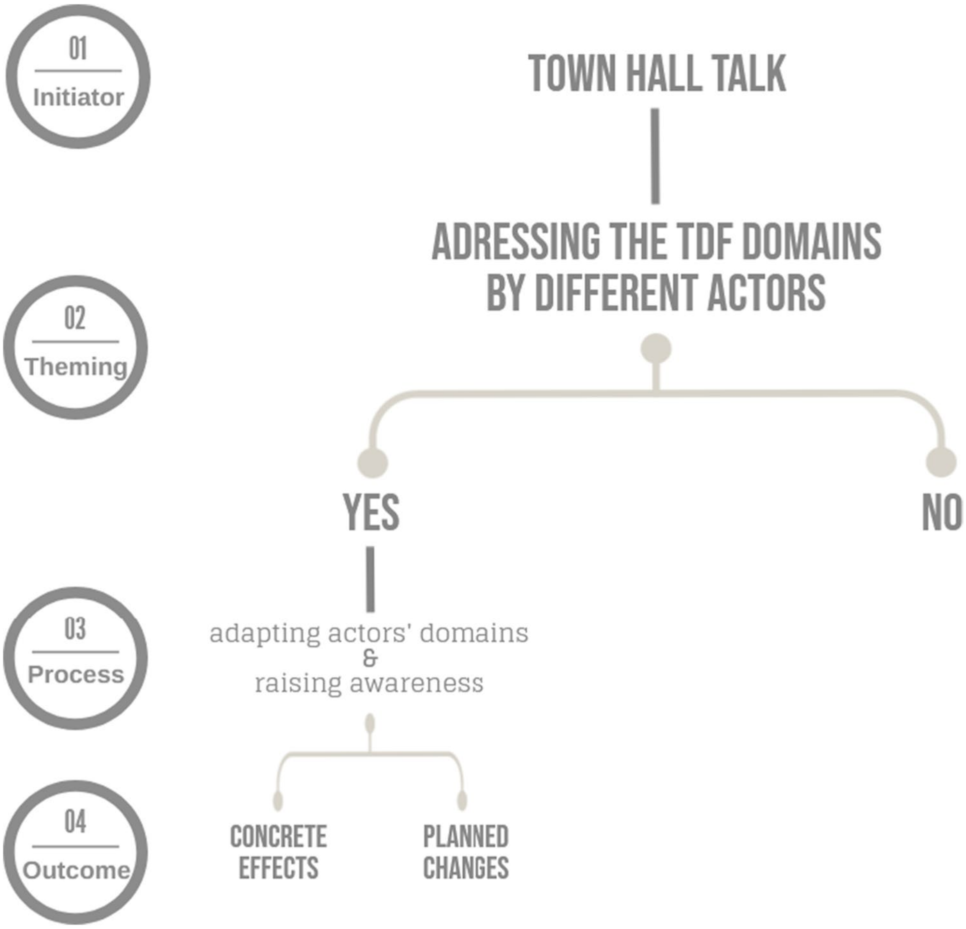


Fig. 3. Illustration of the relationship between the town hall meetings, the TDF domains, and the resulting effects

services for the CRs of PWD (seeFig. 2). The data show that communities that have *less* knowledge, *fewer* goals or *more negative experiences* with the sociopolitical sector reported *fewer concrete effects* within the focus groups. This could be a first indication of a link between the presence of the TDF domains and an improvement of the support for CRs of PWD. This link leads to the assumption that thematising TDF domains in a public dialogue can be seen as the first step in the implementation of support services (see Fig. 3).

With regard to the procedure in the implementation process, among others Grol (1997) and Hoben et al. (2015) describe this step as *planning and developing proposals for change for the current care situation*. Those CAs who reported concrete effects and solutions are already well advanced in the implementation process. Those CAs who have ideas or plan changes need to follow the next necessary steps: 1) identification of facilitating and hindering factors for implementation, 2) application of interventions to overcome these barriers, 3) planning of implementation, and 4) steering and evaluation of implementation (Grol 1997; Hoben et al. 2015).

With regard to one community, the CAs who thematised a domain within a town hall meeting might not be the same persons who developed support for CRs reported within the focus group. The question arises as to what extent the domains that are addressed by one CA are related to an effect reported by another CA. The findings reflect the consensus in the current literature that raising community awareness and understanding, for example, of dementia, enables communities to act, e.g., to develop dementia-friendly communities (Buckner et al. 2019; Phillipson et al. 2019; Williamson 2016). Creating awareness through conversation, as has been shown in this paper, is also considered an effective method in the literature (Buckner et al. 2019; Phillipson et al. 2019). However, conversation is not the only way to raise awareness and knowledge. Media, educational events, lectures, or information leaflets are also well-known techniques within the current research (Buckner et al. 2019; Heward et al. 2017; Phillipson et al. 2019; Williamson 2016). The fact that some actors report from their own professional or personal experience and that family carers also take part in town hall meetings supports the findings that first-hand experiences in particular lead to awareness changes (Hung et al. 2021; Williamson 2016).

As our method is participatory by involving different stakeholders, practice partners, and CRs, it is also supported by the results of Dorant and Krieger (2017). They involved service providers as co-researchers to foster awareness and motivation. In addition, Williamson (2016) and Heward et al. (2017) state that it is important to raise awareness within different professions or fields of work, such as sports clubs, volunteering, and policy-making, as is also done in our study format. The participation of different CAs and CRs of PWD can thus achieve what has already been described in the background section. While CAs *listen and report*, and *reflect and act*, or develop an awareness of CRs and the necessary support services, CRs of PWD *describe, wish* and *get involved* to shape their future as well as future support together with the communities.

Strengths and limitations

The strengths of this paper include the link between strategies or methods of implementation science and the project itself with its given data. In addition, the use of the TDF as a theoretical foundation of qualitative analysis needs to be rated positively because this framework has already proven its usefulness in different contexts (Huijg et al. 2014; Murphy et al. 2014; Seward et al. 2017). However, some methodological limitations may have affected the strength of evidence or rather informative value: no control group was considered. Accordingly, it is not possible to make a statement about what effects would have arisen without the town hall meetings. Nevertheless, the actors and stakeholders from the community mentioned that they follow the results and effects because of the public event. Another limitation consists of the heterogeneity of the reported effects. It is difficult to compare, for example, a new contact or flyer with realising a new position for senior citizen counselling. The time span in which the focus group took place could also have influenced the results. It could have been too long, so that the participants could not remember the content of the town hall talks, or it could have been too short to achieve results. In addition, the analysis of the data from the last two communities (15 & 16) had not yet been completed. The aspect of presenting only three of 11 domains provides more clarity, but does not give any insight into the remaining eight domains and how they are addressed in the town hall talks.

Conclusion

The present paper highlights the beneficial application of the TDF within a public dialogue on improving care for CRs of PWD. As stated in the literature, creating awareness might be central to this finding. The first indications become clear; that addressing at least the three TDF domains of *knowledge, goals* and *sociopolitical context* encourages actors and stakeholders to find solutions for the deficiencies in the care of CRs of PWD in their communities. Accordingly, in future discussions with actors, a targeted approach to the domains can be made to build awareness to achieve the effects described. Since the domains were not developed exclusively for the outlined context, this approach can also be applied to other care topics. As a result, the care of CRs and other target groups can be optimised. For future research, it would be beneficial to apply the described domains of the gerontological context in a resource-efficient, time-saving and generalisable way, as is possible with a quantitative questionnaire.

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Authors' contributions MW conceived the hypotheses and designed the study. MW, AK, and SW undertook experimental work and data collection. MW, HV, and AK performed data analysis. MW performed writing and original draft preparation. MW, HV, AK, SW, and ES contributed to interpretation of the data, editing and critically revision of the manuscript, approved the final version of the manuscript, and have agreed to the published version of the manuscript. All persons who qualify for authorship are listed, and all persons designated as authors qualify for authorship.

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Availability of data and material The data is available on request by the corresponding author.

Code availability The code is available on request by the corresponding author.

Declarations

Ethical approval The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Ethics Committee of the Ruprecht Karls University, Faculty of Behavioural and Cultural Studies, on the 24th February, 2021 (2021 1/1-A1).

Consent to participate Not applicable.

Consent for publication Not applicable.

Conflicts of interest The authors declare no conflict of interest.

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4.2 Quantitative Part

4.2.1 Psychometric Properties

Before the questionnaire can be applied as a measuring instrument, its psychometric properties must be verified. Although the questionnaires on which the CIBQ is based on have been validated, the psychometric properties of the CIBQ needed to be tested again. Due to the translation and adaption process, the validity of the original questionnaires cannot be assumed and transferred.

For the analysis, the data was exported from *Limesurvey* and analysed by using the open-source software R (packages: sjPlot [77], MVN [69], psych [93], lavaan [96], semPlot [34]). First, descriptive data was analysed to get to know the study population. To identify the best model fit, the construct validity as well as the internal consistency of the questionnaire were tested. The construct validity was tested by conducting a confirmatory factor analysis (CFA). Because of the given structure (domains and items) which needed to be checked, a CFA instead of an exploratory factor analysis (EFA) was conducted [32]. The EFA is suggested by the literature to identify a structure [32]. The internal consistency was verified by computing inter-item correlations and Cronbach's Alpha.

After computing the described analysis, the questionnaire was adapted and the revised CIBQ consists of ten domains and 31 items. The model fit of the questionnaire shows satisfactorily results with regard to the internal consistency and construct validity.

The detailed presentation of the development and psychometric properties of the CIBQ can be read in the following research paper which is an open access publication in the *International Journal of Environmental Research and Public Health* (4.2.2).

4.2.2 Development and Psychometric Properties of the CIBQ in the Context of Supporting Caring Relatives of People with Dementia **(3rd Publication)**

Wittek M, Manke-Reimers F, Schmitt E (2022): Development and psychometric properties of the Community Implementation Behaviour Questionnaire (CIBQ) in the context of supporting caring relatives of people with dementia. *Int. J. Environ. Res. Public Health.* 19(23), 16198. https://doi.org/10.3390/ijerph192316198

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Development and Psychometric Properties of the Community Implementation Behaviour Questionnaire (CIBQ) in the Context of Supporting Caring Relatives of People with Dementia

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Abstract: The Theoretical Domains Framework (TDF) investigates the determinants influencing the implementation behaviour of actors in healthcare. Caring for people with dementia (PWD) can be burdensome. Therefore, caring relatives (CRs) often rely on support of various actors in their community (CAs). However, the support of this target group is not sufficient, and the implementation of support services needs to be optimised. As it stands, there is no German-language questionnaire to investigate the factors that influence the implementation behaviour of CAs. Therefore, based on the TDF, the Community Implementation Behaviour Questionnaire (CIBQ) was developed in this study. A total of 205 CAs from 16 German communities were surveyed. The 34-item CIBQ asked about their implementation behaviour regarding support services for CRs of PWD. To identify the best model fit, the internal consistency and construct validity were computed. After adaptation, the final CIBQ consisted of ten domains and thirty-one items. The psychometric properties of the questionnaire are as follows: CMIN/DF = 1.63; SRMR = 0.05; RMSEA = 0.07; CFI = 0.92; Cronbach's alpha 0.74–0.89; inter-item correlation 0.38–0.88. The initial results show satisfactory internal consistency and construct validity of the CIBQ. Using the CIBQ enables the health and care optimisation of CRs of PWD.

Keywords: implementation science; municipal community; caring relatives; people with dementia; support services; theoretical domains framework; psychometric properties

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1. Introductions

Adequate procedures in the implementation process are required for the successful long-term implementation of evidence-based interventions in standard care [1,2]. The Consolidated Framework for Implementation Research by Damschroder et al. (2009) and the Theoretical Domains Framework (TDF) by Michie et al. (2005) are two examples of strategies and theories for designing and controlling the implementation process and can be used to understand the behaviour of healthcare professionals within such processes [2–5].

The present study was concerned with the TDF as it addresses the implementation behaviour of different actors and their characteristics [5]. Much is known about the structural determinants of implementation processes, such as time and money constraints [6,7]. Furthermore, according to scientific findings, the person-related factors of the actors also play an important role in the implementation of measures or in explaining suboptimal implementation. These include, for example, their knowledge, their professional role or their motivation [8]. However, the impact of these personal characteristics needs to be examined more closely in different contexts. Personal characteristics are covered in the TDF, which makes this framework particularly well-suited for research in the field of behaviour change in implementation processes [5,9]. Michie et al. (2005), along with several health researchers, generated this validated theoretical framework for implementation science by using an extensive consensus process [5]. The TDF answers the question of which characteristics of actors influence their behaviour during the implementation of interventions and consists of twelve domains, including knowledge, beliefs about capabilities and social influences [5]. The TDF has been used as a basis for many quantitative questionnaires (e.g., [10,11]) and qualitative research (e.g., [12,13]) on different topics within the healthcare sector. Therefore, the TDF has often been adapted to the context of the respective topic. However, to our knowledge, there is no suitable tool for the gerontological context, especially in connection with the responsibility of actors from municipal communities.

One gerontological topic for which the application of the TDF would be relevant is the support of caring relatives (CRs) of people with dementia (PWD) within their municipal community. It is understood from discussions and the literature that the extent to which actors from the community (CAs) support CRs of PWD is highly dependent on their individuality [14,15]. In Germany, communities, among others, are responsible for providing adequate support for CRs of PWD [16,17].

Worldwide, there are over 55 million PWD [18]. In Germany, there are currently about 1.7 million people living with dementia, of whom two-thirds are cared for at home by their relatives [17,19]. Therefore, CRs are an important pillar of the German care system and are deserving of support [16]. However, the degree to which communities implement support services for CRs who are physically and/or psychologically burdened varies greatly [20–23]. Although caregiving for PWD often negatively impacts the health and daily lives of CRs [24,25] and numerous studies show that support services can improve the well-being and quality of life of this population, successful implementation often fails to occur [26].

The structural barriers to receiving support are partially understood [27,28], but there is a need for a framework and tool to examine potential implementation barriers with a focus on personality traits and behavioural change in the context of supporting CRs of PWD within municipal communities. Wittek et al. (2022) undertook a qualitative investigation in this context and highlighted the need for a quantitative tool to look more closely at such characteristics [29]. A quantitative questionnaire based on the TDF needs to be developed to enable a resource-efficient, timesaving and generalisable examination of the implementation behaviour of CAs, especially concerning the demands of CRs of PWD.

The purpose of adapting and developing the questionnaire is to answer the following question: which characteristics of CAs influence their behaviour during the implementation of support services for CRs of PWD in communities? To answer this research question, we developed and established an adapted tool: the Community Implementation Behaviour Questionnaire (CIBQ).

The adaptation and selection process of the domains discussed in this paper is described in the methods section and is presented in Figure 1.

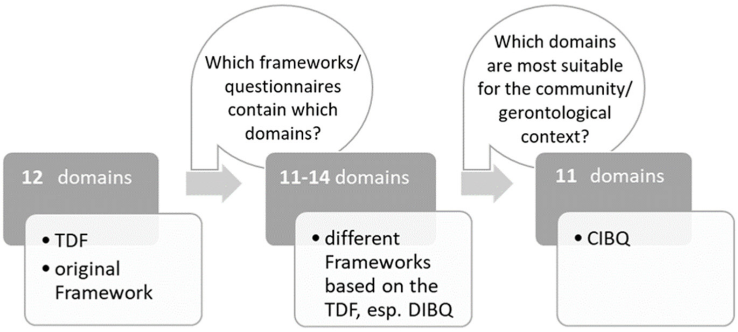

Figure 1. Adaption and selection process of the discussed domains. TDF = Theoretical Domains Framework; DIBQ = Determinants of Implementation Behavior Questionnaire; CIBQ = Community Implementation Questionnaire.

2. Materials and Methods

The aim of the study was to develop a tool that can examine the characteristics of CAs that influence their behaviour during the implementation of support services for CRs of PWD in communities and to verify its psychometric properties. A cross-sectional observational study of actors from different communities in Germany was conducted.

2.1. Context

The recruitment of the study participants was carried out via a cooperation project called “Giving a voice to caring relatives of persons with dementia—The Town Hall Project” in which town hall meetings were held in communities in Germany. The Townhall meetings intend to achieve a dialogue between CRs of PWD and CAs from different work sectors in the community. The participants discussed the needs of CRs and possibilities for their support. Based on defined criteria such as region (urban and rural), number of inhabitants and accessibility, municipal communities were selected to receive an invitation to participate in the Town Hall Project. A total of 45 municipal communities were invited to participate, and 16 municipal communities finally participated. Communities that did not participate gave reasons such as difficulties in finding dates or the workload involved. In each community, a multiplier such as a nurse or a senior citizen counsellor established contact with CAs, which enabled us to recruit them for the town hall talk and/or participation in the cross-sectional observational study described in this paper. These actors were either already working with CRs and/or PWD or could potentially work with them. They were from different fields of work in the community, such as municipal administration, nursing, healthcare, voluntary work, consulting, church, sports, culture, education and housing.

The project was approved by the Ethics Committee of the University of Heidelberg, Faculty of Behavioural and Cultural Studies, in 2019.

The distribution of the 16 municipal communities within Germany and the methodological procedures of recruitment and other content-related aspects about the town hall meetings have been previously published [30,31]. In the present study, the town hall project was used exclusively for recruitment. The data collection and analysis were completely separated.

2.2. Development of the CIBQ

The CIBQ was initially based on the original version of the TDF, which consists of twelve domains of behaviour change [5]. With the inclusion of further existing quantitative questionnaires that are also based on the TDF [5,9,10,32–35], the framework was adapted for this study and the described context. The authors of these questionnaires had previously adapted, extended, and specified some of the domains and included between eleven and 14 domains in their work. For the CIBQ, many domains were compared, and the eleven most suitable domains were selected. The Determinants of Implementation Behavior Questionnaire (DIBQ) by Huijg et al. (2014) was considered to be the best fit [33].

Although the current study focused on the behaviour of implementing support services for CRs of PWD in the community, the adaptation of the domains and items could be readjusted and used for CAs within the gerontological context in general. For the development and adaptation of the CIBQ, a combination of evidence from the literature [5,9,10,32–35] and experts’ opinions (e.g., politicians at the federal and state levels, mayors, senior citizen advisors, volunteers, and scientists) were taken into account. First, the research team translated and modified the existing domains and items, with a particular focus on Huijg et al. (2014), before the experts gave their feedback. This approach ensured maximum construct validity. The results of this collaborative process, including the choice of domains and their definitions, are shown in Table 1.

As the frameworks and questionnaires utilised were written in English and the target group was German-speaking, the definitions and items needed to be translated. There is a procedure for producing accurate translations and adaptations of measures. The procedure includes the following five steps: (1) forward translation; (2) comparison of two translated versions and consensus meeting; (3) blind back-translation; (4) comparison of two back-translated versions and consensus meeting; and (5) pilot testing of the pre-final version and adaptation of the questionnaire [36–38]. As a result of the extensive adaptation of the domains and items, phases three and four were omitted [36–38].

Table 1. Definition of the domains and the adaptation to the gerontological context.

	Domain	Original Definition	Adaptation to the Gerontological Context
D1	Knowledge	An awareness of the existence of something.	The CAs have the knowledge about the situation and understand the relevance of CRs of PWD.
D2	Skills	An ability or proficiency acquired through practice.	The CAs have the skills and training to implement support services for CRs of PWD in the community.
D3	Social/Professional Role and Identity	A coherent set of behaviours and displayed personal qualities of an individual in a social or work setting.	The behavioural spectrum and the personal qualities of the CAs with regard to implementing support services for CRs of PWD in the community are part of the professional setting.
D4	Beliefs about Capabilities	Acceptance of the truth, reality or validity about an ability, talent, or faculty that a person can put to constructive use.	The CAs are confident in their abilities to implement support services for CRs of PWD in the community.
D5	Beliefs about Consequences	Acceptance of the truth, reality or validity about outcomes of a behaviour in a given situation.	The CAs understand the advantages and disadvantages of implementing support services for CRs of PWD in the community.
D6	Goals	Mental representations of outcomes or end states that an individual wants to achieve.	The CAs have goals that they would like to achieve regarding implementation of support services for CRs of PWD in the community.
D7 *	Sociopolitical Context	Any characteristics of the sociopolitical context that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behaviour.	The sociopolitical context has characteristics that motivate or discourage CAs to develop competences, skills, adaptive behaviours and independence regarding the implementation of support services for CRs of PWD in the community.
D8	Social Influences	Interpersonal processes that can cause individuals to change their thoughts, feelings, or behaviour.	Interpersonal processes that lead to a change in the CAs' thoughts, feelings or actions regarding the implementation of support services for CRs of PWD in the community.
D9	Emotions	A complex positive/negative reaction pattern involving experiential, behavioural, and physiological elements by which the individual attempts to deal with a personally significant matter or event.	The CAs have positive emotions about implementing support services for CRs of PWD in the community.
D10	Reinforcement	Increasing the probability of a response by arranging a dependent relationship, or contingency, between the response and a given stimulus.	A given stimulus increases the probability of CAs implementing support services for CRs of PWD in the community.
D11	Nature of the Behaviour	The nature of the aggregate of all responses made by an individual in any situation.	The CAs have an original (intuitive, personal) way of behaving on which all actions and reactions in relation to CRs of PWD are based.

Domain definitions were based on definitions from Huijg et al. (2014) [33]. CA = Actor from the community; CR = Caring relative; PWD = Person with dementia. * D7 was excluded because of the poor fitting indicated by Cronbach's alpha and the inter-item correlation.

The corresponding quantitative questionnaire was based on self-completion and self-report. In the questionnaire, each of the eleven domains is specified through three items (except 'emotions', which is specified through four items) (see Appendix A). Consistent with previous questionnaires, the participants were asked to rate their level of agreement with each of the 34 items or statements on a seven-point scale (1 = strongly disagree; 7 = strongly agree). In addition to questions about the domains, sociodemographic and job information was collected: sex (male, female), age (in years), education (university degree yes/no), state, population of the community (number of inhabitants), profession (nurse, consultant etc.), extent of employment (full-time, part-time, voluntary), work experience (in years), proportion of content (CRs of PWD) related tasks within the last two years (in per cent), implementation of support services for CRs of PWD within the last two years (yes/no), importance of content (CRs of PWD) for the field of work and personal importance (each on a on a seven-point ratio scale (1 = no importance at all; 7 = very great importance). The questionnaire was subsequently pretested by ten CAs from different fields of work in the community and adjusted accordingly. After seven subsequent pilot tests, we did not obtain any new information and reached saturation. The CAs completed the questionnaire within 10–15 min on average. Final amendments were adopted in the questionnaire. The CIBQ was designed as an anonymous and voluntary online survey without any incentives for completion. For the data collection, the online survey application LimeSurvey (version 3.22.1 + 200129, LimeSurvey, Hamburg, Germany) was used [39].

2.3. Study Population and Data Collection

The study population consisted of actors and stakeholders from different communities in Germany. These actors were either already working with CRs and/or PWD or could potentially work with them. They were from different fields of work in the community, such as municipal administration, nursing, healthcare, voluntary work, consulting, church, sports, culture, education and housing. Only people of legal age ($\geq$18 years) were authorised to participate in the survey.

Data were collected between October and December 2021. The CAs received an invitation and participation link via e-mail. In the case of non-response, the CAs received an e-mail reminder. A maximum of two reminder e-mails were sent at intervals of on average 10.5 working days. A total of 205 questionnaires were distributed to CAs who met the inclusion criteria. A total of 23 CAs declined to participate, and 182 CAs completed the questionnaire (88.78% response rate) and were included in our study.

Data were collected anonymously to reduce the potential of social desirability bias. The participating CAs were informed about the study and its conditions in writing before the survey started. Starting the online survey was only possible by accepting the data protection agreements. Withdrawal from the survey was possible at any time without giving a reason.

The dataset will be provided by the corresponding author on reasonable request.

2.4. Data Analysis

The data were analysed using the open-source software R (packages: sjPlot [40], MVN [41], psych [42], lavaan [43], semPlot [44]). We conducted all of the tests using 95% confidence with $\alpha = 0.05$. If missing data was identified during the analysis, the whole case was left out of the analysis.

2.4.1. Internal Consistency

The internal consistency of the eleven domains was assessed by using Cronbach's alpha and the inter-item correlation. A Cronbach's alpha between 0.70 and 0.95 is considered acceptable [45]. The value of the inter-item correlation should be $\geq$0.15–0.50 [46,47].

2.4.2. Construct Validity

Before approving internal consistency and construct validity, the linearity and the multivariate normal distribution of the data were checked. These are preconditions to conduct a confirmatory factor analysis (CFA) [45]. The CFA was chosen for assessing the construct validity of the CIBQ because it is suitable for verifying the correct assignment of domains and items if these have already been assigned in advance on the basis of other questionnaires or the literature [45,48]. Therefore, each item should load on only one domain [48]. The CFA was performed with the lavaan package of R by using the maximum likelihood estimation (ML) or, more precisely, a robust version of the ML (MLR) to ensure that even if the data did not follow a normal distribution, they would be calculated and interpreted correctly [45,49]. If there were inappropriate items in the questionnaire, they could be removed to achieve better consistency and reduce the participants' burden.

Next, inferential statistical tests were performed to assess the goodness-of-fit of structural equation models, such as the chi-square test [50]. Descriptive goodness-of-fit measures were reported because they allow for a gradual assessment of the deviation between the model and data [45]. The following guidelines for testing the model fit were considered:

- Chi-square to degrees of freedom ratio (CMIN/DF) < 2.00: The chi-square test statistic is generally regarded as being too stringent; therefore, the chi-square to degrees of freedom ratio was considered [51].
- Descriptive goodness-of-fit:
  - Standardised root mean square residual (SRMR) between $\leq$0.05 and $\leq$0.08: Absolute measure—average residual between standardised variables; is not based on the chi-square test [52,53].
  - Root mean square error of approximation (RMSEA) between $\leq$0.05 and $\leq$0.08: Parsimony index—measure of approximated fit [52,53].
  - Comparative fit index (CFI) $\geq$0.9: Incremental index—comparison of the examined model with the independence model [53,54].

Structural equation models can be plotted in the form of path diagrams [45]. To visualise the affiliation of the different items to the respective domains, a plot path diagram was created using the semPaths command in the lavaan package of R [42–44,55]. This function enables the graphical representation of the CFA.

3. Results

The characteristics of the study population are shown in Table 2.

Table 2. Characteristics of CAs.

Characteristics [a] (n = 182)	Total [b]
Sex	
Female	70.8 (119)
Male	29.2 (49)
Age	54.40 ± 11.09
Education [c]	
University of Applied Sciences Degree	40.6 (67)
University Degree	32.7 (54)
Training	15.8 (26)
PhD	10.9 (18)
Occupational field	
Consulting	24.4 (40)
Municipal administration-seniors' work	17.1 (28)
Volunteering	14.0 (23)
Politics	10.4 (17)
Education	7.9 (13)

Table 2. *Cont.*

Characteristics [a] (n = 182)	Total [b]
Medicine	6.7 (11)
Church	6.1 (10)
Nursing	4.9 (8)
Sports	4.3 (7)
Pharmacy	1.8 (3)
Culture	1.8 (3)
Living	0.6 (1)
Extent of employment in the field of CRs/PWD	
full-time	82.2 (139)
voluntary	17.8 (30)
part-time	0.0 (0)
Years of work in the field of CRs/PWD	
>10	55.6 (94)
>5–10	18.3 (31)
>2–5	16.6 (28)
0–2	9.5 (16)
Workload in the field of CRs/PWD	
<50%	93.9 (154)
>50%	6.1 (10)
Importance of CRs/PWD	
Personal (CAs)	4.83 ± 1.77
Occupational field	4.22 ± 1.90
State [d]	
Baden-Wuerttemberg	41.4 (70)
Schleswig-Holstein	17.8 (30)
Hesse	17.2 (29)
North Rhine-Westphalia	6.5 (11)
Bavaria	5.9 (10)
Rhineland-Palatinate	5.9 (10)
Saxony-Anhalt	5.3 (9)
Number of inhabitants [d]	
5.000 < 10.000	1.8 (3)
10.000 < 20.000	9.5 (16)
20.000 < 50.000	47.0 (79)
50.000 < 100.000	13.7 (23)
100.000–500.000	27.4 (46)
>500.000	0.6 (1)

[a] Data presented as percentage (number) except for age and importance of CRs/PWD presented as mean ± standard deviation. [b] Data were missing for sex (n = 14); age (n = 11); education (n = 17); occupational field (n = 18); extent of employment in the field of CRs/PWD (n = 13); years of work in the field of CRs/PWD (n = 13); workload in the field of CRs/PWD (n = 18); importance of CRs/PWD occupational field (n = 15); importance of CRs/PWD personal (CAs) (n = 19); state (n = 13); number of inhabitants (n = 14). [c] The education corresponds to the German education system and has been arranged accordingly. [d] No CAs from: Berlin, Brandenburg, Bremen, Hamburg, Lower Saxony, Mecklenburg-Western Pomerania, Saarland, Saxony, Thuringia.

The final sample comprised 182 CAs who participated in the online survey and completed the CIBQ. Of the CAs, 70.8% (n = 119) were female, and the mean age was 54.40 years (SD ± 11.09 years). The study participants had different levels of education: 15.8% (n = 26) had completed a training, 40.6% (n = 67) had a degree from a university of applied sciences, 32.7% (n = 54) had a university degree and 10.9% (n = 18) had a PhD. The CAs worked in various occupational fields. Nearly one-quarter (24.4%; n = 40) were active in counselling for senior citizens. The majority (82.3%; n = 139) worked full-time in the field of CRs and/or PWD. More than half (55.6%; n = 94) of the participants had been working with CRs and/or PWD for more than ten years, but less than 10% (6.1%; n = 10) were primarily concerned with this topic. On a scale from one (no importance at all) to seven (very great importance), the participants rated the importance of the topic of CRs of PWD as 4.22 (SD ± 1.90) for the respective occupational fields of the CAs and 4.83 (SD ± 1.77) for the CAs personally.

Most of the actors worked in Baden-Wuerttemberg (41.4%; n = 70), and CAs from seven of the sixteen states in Germany were represented. The represented municipal communities were small, middle or large cities according to the number of inhabitants. The majority (47.0%; n = 79) of CAs worked in medium-sized municipal communities (20,000 < 50,000 inhabitants). Only one participant (0.6%) described his community as having more than 500,000 inhabitants.

3.1. Internal Consistency

The Cronbach's alpha and the inter-item correlations are shown in Tables 3 and 4.

Table 3. Cronbach's Alpha of each domain.

Domain	Number of Items	Cronbach's Alpha
D1 Knowledge	3	0.74
D2 Skills	3	0.83
D3 Social/ Professional Role and Identity	3	0.88
D4 Beliefs about Capabilities	3	0.89
D5 Beliefs about Consequences	3	0.83
D6 Goals	3	0.89
D7 Sociopolitical Context *	3	0.56
D8 Social Influences	3	0.81
D9 Emotions	4	0.89
D10 Reinforcement	3	0.84
D11 Nature of Behaviour	3	0.89

* D7 needs to be excluded for further analysis because of unfitting values in Cronbach's Alpha and Inter-Item Correlation.

Table 4. Inter-Item Correlation.

Item	Inter-Item Correlation
D1 Knowledge	
D1a & D1b	0.48
D1a & D1c	0.38
D1b & D1c	0.60
D2 Skills	
D2a & D2b	0.57
D2a & D2c	0.53
D2b & D2c	0.74
D3 Social/ Professional Role and Identity	
D3a & D3b	0.75
D3a & D3c	0.71
D3b & D3c	0.65
D4 Beliefs about Capabilities	
D4a & D4b	0.88
D4a & D4c	0.63
D4b & D4c	0.68
D5 Beliefs about Consequences	
D5a & D5b	0.68
D5a & D5c	0.56
D5b & D5c	0.65
D6 Goals	
D6a & D6b	0.66
D6a & D6c	0.73
D6b & D6c	0.77

Table 4. *Cont.*

Item	Inter-Item Correlation
D7 Socio-Political Context *	
D7a & D7b	0.73
D7a & D7c	0.08
D7b & D7c	0.08
D8 Social Influences	
D8a & D8b	0.52
D8a & D8c	0.59
D8b & D8c	0.66
D9 Emotions	
D9a & D9b	0.75
D9a & D9c	0.60
D9a & D9d	0.58
D9b & D9c	0.68
D9b & D9d	0.60
D9c & D9d	0.77
D10 Reinforcement	
D10a & D10b	0.56
D10a & D10c	0.57
D10b & D10c	0.76
D11 Nature of Behaviour	
D11a & D11b	0.73
D11a & D11c	0.72
D11b & D11c	0.77

* D7 needs to be excluded for further analysis because of poor fitting indicated by Cronbach's alpha and inter-item correlation.

Cronbach's alpha ranged from 0.56 to 0.89, and the inter-item correlation ranged from 0.08 to 0.88. Ten of the eleven domains showed internal consistency with a Cronbach's alpha between 0.70 and 0.95 and an inter-item correlation of ≥0.15–0.50. Only one domain had a Cronbach's alpha of 0.56 and an inter-item correlation of 0.08 (sociopolictical context). The underlying cause of dissatisfactory values was checked, and the responsible items D7b and D7c were excluded from further analysis. Accordingly, the CIBQ consisted of 32 items rather than 34, and the domain D7 sociopolitical context was reduced from three items to one item. As it is not possible to determine Cronbach's alpha and the inter-item correlation within a domain containing only one item, the entire domain D7 sociopolitical context was also excluded from further analysis.

3.2. Construct Validity

The initial CFA with D7 showed the following model fit: CMIN/DF = 1.70; SRMR = 0.09; RMSEA = 0.07; CFI = 0.90. However, a SRMR of 0.09 is not satisfactory. A revised CFA without D7 showed the following model fit and indicated satisfactory construct validity: CMIN/DF = 1.63; SRMR = 0.05; RMSEA = 0.07; CFI = 0.92. Figure 2 shows the CFA, or more precisely, the affiliation of the items to the domains.

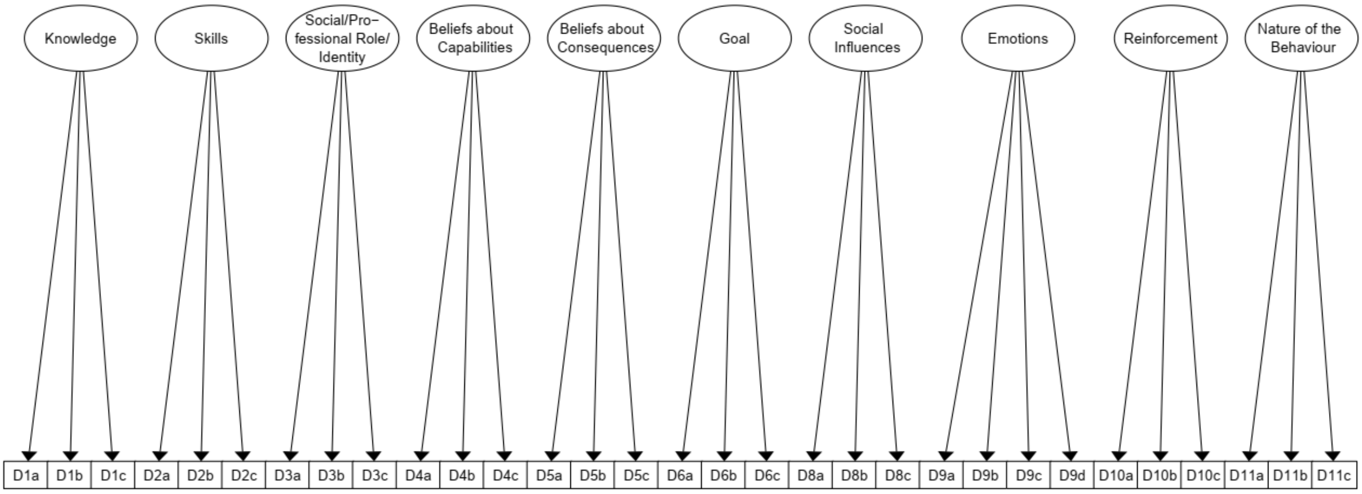

Figure 2. Path diagram of the CFA of the CIBQ. CFA = Confirmatory Factor Analysis; CIBQ = Community Implementation Behaviour. Circular nodes represent the latent variables (domains) whereas square nodes represent the manifest variables (items). The arrow represents a directed effect between a latent and a manifest variable.

4. Discussion

In the investigated context, implementation depends not only on the behaviour and behaviour change in CAs but also on many other factors that facilitate or hinder the implementation of support services of CRs of PWD, such as participation of the target group, time, and money [15]. However, studies have shown that the implementation behaviour, or rather its change, is one essential way in which to optimise an implementation process that can solve many other problems or gaps in care [5].

The present study developed and tested the CIBQ for measuring the psychosocial domains of behaviour change among CAs for the implementation of support services for CRs of PWD in communities. The CIBQ is based on the original TDF and other research using the TDF. To the best of our knowledge, this is the first questionnaire to examine the necessary behaviour change among CAs to support CRs of PWD by considering the general gerontological and community contexts. Although there is a revised version of the TDF that comprises 14 domains [9], we decided to use the original version as a basis for our questionnaire [5] because studies have shown that the 12-domain version is more applicable for developing questionnaires [33]. Furthermore, the closely related DIBQ by Huijg et al. (2014) used this version [33]. While some frameworks and measurement tools for different areas of care already exist [32,34,35], the CIBQ can also be used for gerontological and community topics and to assess care gaps.

In contrast to most of the domains, the excluded domain sociopolitical context (D7) does not relate to the characteristics of the actors but to their environment [9]: (a) With the support of the federal government, the states and municipal communities, it is possible to implement support services for caring relatives of people with dementia in the community. (b) With the support of care insurance, it is possible to implement support services for caring relatives of people with dementia in the community. (c) With the given resources (e.g., staffing/funding), it is possible to implement support services for caring relatives of people with dementia in the community (see Appendix A). The items of D7 are very different and independent from each other and cover a large and diverse field using only three items. Furthermore, the participants have different relationships or connections to, for example, care insurance whereby volunteers may not be able to comment on care insurance at all, but carers would be familiar with this topic. This could be a possible explanation for the poor fit of D7, which led to the exclusion of this domain. The domain needs to be considerable adjusted if it is to be included.

The final questionnaire with ten domains and thirty-one items demonstrated good internal consistency and construct validity. In comparison to the validity and reliability of previous questionnaires, e.g., Taylor et al., 2013 (eleven domains; twenty-three items) [34] and Seward et al., 2017 (14 domains; 61 items) [35], also based on the TDF, the CIBQ showed similar values considering the CFA and the sufficient internal consistency (see Table 5). The chi-square test in both cases was significant (p value ≤ 0.05). Therefore, the chi-square to degrees of freedom ratio was also checked in the validation. The chi-square to degrees of freedom ratio of the CIBQ was better than those of Taylor et al. and Seward et al., and the CFI also had a better fit [34,35].

Table 5. Comparison of construct validity and internal consistency of different questionnaires.

	CIBQ *	**Taylor et al., 2013 [34]**	**Seward et al., 2017 [35]**
CFA			
CMIN/DF	1.63	1.98	2.5
SRMR	0.05	-	0.07
RMSEA	0.07	0.06	0.07
CFI	0.92	-	0.78
Internal Consistency			
Cronbach's Alpha	0.74–0.89	-	0.61–0.90
Inter-Item correlation	0.38–0.88	0.21–0.64	-

* Including ten out of initially eleven domains. CIBQ = Community Implementation Behaviour; CFA = Confirmatory Factor Analysis; CMIN/DF = Chi-square to degrees of freedom ratio; SRMR = Standardised root mean square residual; RMSEA = Root mean square error of approximation; CFI = Comparative fit index.

There are no official guidelines for supporting the CRs of PWD in municipal communities; however, such guidelines need to be implemented and realised, as is often the case in healthcare. Additionally, the implementation needs are much more individual than they are in health and thus cannot be generalised for the target group of CRs of PWD. The written context is interdisciplinary, similarly to the healthcare sector. However, in gerontology, there are many more actors and stakeholders who are in fields other than healthcare. This aspect makes it more difficult to specify a study population and the corresponding interventions or measures that need to be implemented. By analysing the relevant actors and enabling them to initiate necessary behavioural changes, the present study is a first step to optimise the implementation processes in this important and seminal field of caring for relatives of people with dementia. The CIBQ could be used by communities to determine their status quo and what they might work on in the future to optimise their implementation behaviours regarding caring relatives of people with dementia. For this purpose, however, the questionnaire should first be applied in science.

Limitations

Although the results indicated internal consistency and construct validity of the CIBQ, there are some limitations that need to be taken into account. First, the recruitment of the study participants took place in the context of a cooperating project. Thus, the number of CAs was limited. A larger sample size would ensure more representative and confidential results. Future adaptations or further developments of the CIBQ should conduct a power calculation to ensure that the sample size is adequate to assess the number of variables, which would increase confidence in the results. Furthermore, the participants were not selected randomly but were identified through multipliers from the different communities. Thus, there is potential for selection bias, which needs to be considered for the content-related analysis of the CIBQ. Second, after testing for internal consistency, two items in one of the domains were excluded because of poor fitting. Therefore, one domain contains only one item. Less than three items per domain is not recommended [56]; hence, the entire domain D7 was excluded. In further research, the questions within D7 should be adapted so that this relevant domain can be included in the CIBQ.

5. Conclusions

To the best of our knowledge, the CIBQ is the first quantitative questionnaire that is applicable in the gerontological and municipal community context. The CIBQ serves as an appropriate way to understand the implementation behaviour of CAs and hence optimises the health and care of CRs of PWD, which might also positively affect the well-being of PWD. It is hoped that many researchers, practitioners, politicians, and CAs will use it. Initial results showed internal consistency and construct validity of the CIBQ for assessing factors and barriers related to the behavioural changes in CAs. Future research should apply the CIBQ to examine the barriers to behavioural change in CAs and use it to investigate additional community care gaps.

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Appendix A

Table A1. Community Implementation Behaviour Questionnaire [a].

	Domain	Items
D1	Knowledge	a. I know why it is important to implement support services for CRs [b] of PWD [c] in the community. b. I know the goals for the implementation of support services for CRs of PWD in the community. c. I know what is expected of me in the implementation of support services for CRs of PWD in the community.
D2	Skills	a. I have been trained (e.g. in the context of training/ further training/ induction etc.) on the implementation of support services for CRs of PWD in the community. b. I have the skills or the necessary knowledge to implement support services CRs of PWD in the community. c. I am experienced in implementing support services for CRs of PWD in the community.
D3	Social/Professional Role and Identity	a. The implementation of support services for CRs of PWD in the community is part of my job description and my area of responsibility. b. I see it as part of my remit to implement support services for CRs of PWD in the community. c. My role in the implementation of support services for CRs of PWD in the community is clearly defined for me.

Table A1. *Cont.*

	Domain	Items
D4	Beliefs about Capabilities	a. I am convinced that I can implement support services for CRs of PWD in the community. b. I am convinced that I can implement support services for CRs of PWD in the community, even if obstacles arise. c. I am convinced that I can implement support services for CRs of PWD in the community, even if CRs of PWD are not motivated.
D5	Beliefs about Consequences	a. If I implement support services for CRs of PWD in the community, the cooperation in my work environment is strengthened. b. The implementation of support services for CRs of PWD in the community is a satisfying task for me. c. When I implement support services for CRs of PWD in the community, it helps CRs of PWD to be better cared for.
D6	Goals	a. Within the scope of my field of activity, one of my goals is the implementation of support services for CRs of PWD in the community. b. I set myself realistic short-term goals regarding the implementation of support services for CRs of PWD in the community. c. I set myself realistic long-term goals regarding the implementation of support services for CRs of PWD in the community.
D7 [b]	Sociopolitical Context	a. With the support of the federal government, the states and municipal communities it is possible to implement support services for CRs of PWD in the community. b. With the support of the care insurance it is possible to implement support services for CRs of PWD in the community. c. With the (given) resources (e.g. staffing/funding) it is possible to implement support services for CRs of PWD in the community.
D8	Social Influences	a. Most of the people I matter about are in favour of me implementing support services for CRs of PWD in the community. b. People from my work environment (also) implement support services for CRs of PWD in the community. c. People from my work environment are helpful in implementing support services for CRs of PWD in the community.
D9	Emotions	a. When I implement support services for CRs of PWD in the community, I am optimistic. b. When I implement support services for CRs of PWD in the community, I feel comfortable. c. When I implement support services for CRs of PWD in the community, I am not insecure. d. When I implement support services for CRs of PWD in the community, I am not frustrated.
D10	Reinforcement	a. When I implement support services for CRs of PWD in the community, it is valued by carers of people with dementia. b. When I implement support services for CRs of PWD in the community, I receive recognition from my work environment. c. When I implement support services for CRs of PWD in the community, I receive recognition from my private environment.
D11	Nature of the Behaviour	a. The implementation of support services for CRs of PWD in the community is something that comes naturally to me (personally). b. The implementation of support services for CRs of PWD in the community is something that I pursue on my own initiative (also independent of my job description/area of responsibility). c. The implementation of support services for CRs of PWD in the community is important for me.

Domain definitions were based on definitions from Huijg et al. [33]. [a] The questionnaire was developed in German. For the purpose of this article, all items were translated into English. [b] CRs = Caring relatives. [c] PWD = People with dementia.

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4.2.3 Quantitative Analysis

After approving the psychometric properties as well as the model fit of the CIBQ, the completed questionnaires were analysed in terms of content and according to research questions (1) and (3). For this, the open-source software R (packages: dplyr [123], psych [93]) was used.

First, descriptive statistics as percentages, means and standard deviations of the characteristics of the study population were computed. Secondly, the means and standard deviations of each of the ten domains were calculated whereby each domain was scored on a rating scale from one (strongly disagree) to seven (strongly agree). Higher means indicate greater agreement with the content of the respective item. Additionally, an overall score considering all ten domains was calculated.

The next step during the quantitative analysis, was the calculation of the pearson correlation coefficients to examine associations between the domains and the covariates (variables such as sociodemographics that were asked next to the items of the domains). The extent of the correlations were grouped in <.10 as small, <.30 as medium and >.50 as large correlations [25].

To investigate the associations between the weighted sum score of the domains as the independent variable and the self-reported implementation of support services for caring relatives of people with dementia within the last two years as the dependent variable, a binary logistic regression was applied. As mentioned before, the domains were measured on a seven-point likert scale. The dependent variable is binary and coded with either *yes* or *no*. By conducting a stepwise regression (forward and backward), self-reported covariates (see Table 4) were included into the binary logistic regression analysis. To decide whether the single variables needed to be included as relevant covariates, the AIC (Akaike information criterion)[8] was considered [1]. When all relevant variables are considered as included covariates, the AIC

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[8] Akaike information criterion (AIC) = estimator of the prediction error. Therefore, it is an estimator of the relative quality of statistical models, too (Akaike, 1973).

needs to be lower than the AIC of the regression model where the entire variables were included [1].

Furthermore, to identify if and which simplified structure could represent the domains as a whole, a principle component analysis was conducted. In addition to each of the individual domains, this weighted sum score was than included as the independent variable into the binary logistic regression analysis. This approach was done by Beenstock et al. (2012), too [6]. To determine the model fit, Nagelkerke's R^2 (N^2) was calculated [87].

Table 4: Sociodemographic and job information of actors from the community.

Characteristics	
Sex of actors	Female / male / divers
Age of actors	In years
Education* **of actors**	University degree yes/ no
Occupational field of actors	Politics / municipal administration (seniors' work) / consulting / nursing / volunteering / medicine / pharmacy / church / sports / education / culture / living
Extent of employment of actors in the field of caring	full-time / part-time / voluntary
Years of work of actors in the field of caring relatives and/or people with dementia	0-2 / >2-5 / >5-10 / >10
Workload of actors in the field of caring relatives and/or people with dementia	>50% / <50%
Importance of caring relatives of people with dementia	For the field of work / personal (actors)
Actors offering support services in the last 2 years	Yes / no
**State ** **	Baden-Wuerttemberg / Bavaria / Hesse / North Rhine-Westphalia / Rhineland-Palatinate / Saxony-Anhalt / Schleswig-Holstein
Number of inhabitants	5.000 < 10.000 / 10.000 < 20.000 / 20.000 < 50.000 / 50.000 < 100.000 / 100.000 – 500.000 / >

* The education corresponds to the German education system and has been arranged accordingly.
** No actors from: Berlin, Brandenburg, Bremen, Hamburg, Lower Saxony, Mecklenburg-Western Pomerania, Saarland, Saxony, Thuringia

4.2.4 Quantitative Results

To answer the research question (3):

Is there any relation between the agreement in the CIBQ domains and the implementation of support services for CRs of PWD in their municipal community within the last two years?

the quantitative data which was collected through the CIBQ was analysed. For that, 205 actors from 16 municipal communities across Germany were asked to answer the CIBQ. After the conduction of logistic regression analyses the results show a positive and significant ($p<.001$) association between the implementation of support services for caring relatives of people with dementia and the agreement of the actors from the communities with the CIBQ domains. Higher scores in the CIBQ increase the chance of actors from the community to implement support services for the target group. The present model yields an $N^2=.378$. According to Backhaus et al. (2006) this applies to an acceptable amount of explained variance [3].

The detailed presentation of the results can be read in the following research paper that is under review for open access publication in the journal *Zeitschrift für Gerontologie und Geriatrie* (4.2.5).

4.2.5 Communities' Implementation Behaviour Regarding Caring Relatives of People with Dementia – A Quantitative Study Among German Communities **(4th Publication)**

Wittek M, Manke-Reimers F, Schmitt E (2023): Communities' implementation behaviour regarding caring relatives of people with dementia – a quantitative study among German communities. *ZfGG.* [in Press].

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Implementation behavior of communities regarding relatives caring for people with dementia

A quantitative study among German communities

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Abstract

Background: Actors from the community (CAs) play a fundamental role in the support of caring relatives (CRs) of people with dementia (PWD). As their support is not sufficient, the implementation of support services needs to be optimized; however, little is known about the factors associated with the implementation behavior of CAs.
Aim: This study aimed to investigate the association of person-related factors with the implementation behavior of CAs.
Methods: In a cross-sectional study, 205 CAs from 16 German communities were surveyed with the community implementation behaviour questionnaire (CIBQ), which is based on the theoretical domains framework. Logistic regression analyses were conducted to identify person-related factors associated with the implementation behavior regarding support services for CRs of PWD.
Results: Implementing support services for CRs of PWD is positively and significantly ($p < 0.001$) associated with the agreement of Cas with the CIBQ domains. Higher scores in the CIBQ increase the chance that CAs implemented support services for the target group.
Conclusion: The CIBQ is a tool to determine the status of implementation behavior of communities. This enables an analysis of the areas CAs need to work on in order to optimize the implementation of support services for CRs of PWD or other health and care-related topics.

Keywords
Cross-sectional study · Questionnaire · Aged · Quantitative study · Support services

Supplementary Information

The online version of this article (https://doi.org/10.1007/s00391-023-02232-w) contains supplementary material, which is available to authorized users.

Scan QR code & read article online

Introduction

Taking care of people with dementia (PWD) can be burdensome [11]. As there are many PWD who are cared for by relatives at home [10], supporting those caring relatives (CR) is of high relevance. The communities are one of the entities responsible for offering adequate support for CRs [9, 23].

The theoretical domains framework (TDF) was developed to design and control implementation processes in health care [15]. This study used an adapted version of the TDF, the community implementation behavior questionnaire (CIBQ) [25], to examine person-related factors that influence the implementation behavior of the actors from the communities (CAs) regarding the support of CRs of PWD.

Background

Approximately 4.1 million Germans are classified as in need of care according to the German Code of Social Law XI (SGB XI) [10]. The majority (3.3 million) of care receivers are cared for by relatives at home [10]. A particularly burdened group are CRs of PWD, as they face special challenges due to the symptoms of dementia [11]. This group should be of special interest, as some 1.7 million people in Germany are currently living with dementia, which is roughly 2% of the population [8].

The book of law "Altenhilfe" (§ 71 SGB XII) contains possible elder care measures and circumstances under which these should be provided [13, 20]. Assisting older people is a compulsory task of the municipal communities in the area of essential public services but due to e.g., financial resources and priority setting of the communities, the way and extent of support varies greatly [5]. For example, some communities focus on childcare or on the economic topics because of their existing knowledge and experiences. As § 71 SGB XII leaves a lot of room for action and interpretation, the extent and content of elder care varies greatly.

To ensure the care of CRs of PWD as comprehensively as possible, CAs such as senior citizen consultants, nurses and volunteers play a central role. The CAs support, advise or take care of CRs and their PWDs. In 2017 the World Health Organization (WHO) assigned the communities to support carers [23]. Additionally, in Germany, the communities were explicitly called upon to develop and offer opportunities to support CRs [9] through various measures (e.g., flyers, care offers, conversation groups) [2, 18]. Therefore, it is of interest to investigate different areas influencing the support of CR of PWD, such as CAs as they can often influence the focus on CRs of PWD within their work. For instance, some sports clubs offer special courses for people with disabilities or other special issues. It might be possible to implement courses for CRs and PWDs as well. Person-related factors of CAs might be associated with their behavior in implementing support services to optimize the implementation. Although the responsibility of the CAs differs according to their role, position, duties etc. they can become active within their possibilities. For example, a mayor can advance other measures than a volunteer; however, to the best of our knowledge there is no evidence on the implementation and the implementation behavior of CAs regarding the support of CRs of PWD.

Michie et al. [15] generated the TDF, a validated framework for implementation science, which was adapted to the gerontological context and to the context of CR of PWD, revalidated and named the CIBQ by Wittek et al. [25]. Both frameworks consist of domains according to person-related factors, such as knowledge and emotions, which are associated with the behavior of actors during the implementation of evidence-based interventions, guidelines in health care [14] or dementia guidelines [16] (TDF) and the implementation of support services for CRs of PWD in a community (CIBQ) [25]. The domains of the newly developed CIBQ can be seen in the supplementary file 1 or in a corresponding paper about the psychometric properties of the CIBQ [25].

This study investigated whether the agreement with the CIBQ domains affected the chance of CAs to have implemented support services for CRs of PWD.

Methods

A cross-sectional questionnaire study was conducted. The survey was anonymous and voluntary. It was conducted online using *LimeSurvey*[1] and participants received no incentives. Data collection was done from October to December 2021. The study considered the Declaration of Helsinki and was approved by the Ethics Committee of Heidelberg University, Faculty of Behavioral and Cultural Studies (2021 1/1-A1).

Participants

Participants were actors from 16 different German communities. The recruiting took place in the context of the "Town Hall Project", which aimed to examine the situation of CRs of PWD as well as their support and consideration in communities by conducting so-called town hall meetings [24]. According to defined criteria, such as the region, number of inhabitants, state and reachability, 45 German communities were invited. Of these, 16 communities and their CAs participated in the "Town Hall Project" and were asked to participate in the CIBQ survey as well. The inclusion criteria were that participating CAs were either already working with CRs and/or PWD or could potentially be working with them, were of legal age (≥ 18 years of age) and understood German. To get in touch with those CAs, multipliers within each community were contacted who knew relevant stakeholders in supporting carers of PWD. Appropriate CAs received an e-mail including a link to the online survey and were assured about the confidential and anonymous handling of their data. After a nonresponse, the CAs were reminded by e-mail on two occasions at most.

The distribution of the 16 communities as well as the recruitment were described elsewhere [24–26].

Measurement

The CIBQ items and domains were adapted and translated in accordance to other existing quantitative questionnaires also based on the TDF [4, 6, 14, 15]. Especially, the determinants of implementation behavior questionnaire by Huijg et al. (2014) was considered [14].

After adapting some items (e.g., for better comprehensibility) during the pre-tests and excluding one domain (D7) for further analysis because of poor fitting indicated by Cronbach's alpha and interitem correlation, the final CIBQ consisted of 10 domains and 31 items. A definition of each domain as well as the development and piloting of the survey and its psychometric properties can be found in supplementary file 1 and in Wittek et al. (2022) [25]. The survey is based on self-completion and self-reporting. Participants indicated their level of agreement with each of the 31 items on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). Besides the information about the domains, the following data were collected (Supplement 2): sex, age, education, state, population of the community (number of inhabitants), profession (nurse, consultant etc.), extent of employment (full-time, part-time, voluntary), work experience (years), proportion of content (CRs of PWD) related tasks within the last 2 years (%), implementation of support services for CRs of PWD within the last 2 years (yes/no), importance of content (CRs of PWD) for the

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[1] Version 3.22.1 + 200129, LimeSurvey, Hamburg, Germany.

field of work and personal importance (ratio scale 1 = no importance at all; 7 = very great importance).

Data analysis

The data were analyzed using the open-source software R [19]. All the tests were conducted using 95% confidence intervals (CI) with a p-value of 0.05. Mean scores and standard deviations were calculated for the domains. Higher means indicate greater agreement with the items. Pearson correlation coefficients examined associations between the domains and the covariates[2] [7]. Binary logistic regression analysis (BLRA) was used to investigate the associations between the domains (independent variables) and the self-reported implementation of support services within the last 2 years (dependant variable, yes/no). Furthermore, the covariates were included stepwise (forward and backward) into the analysis (Supplement 3). The Akaike information criterion (AIC) was considered to become lower than in the model including all of the relevant variables as covariates [1]. The BLRA was performed by including a weighted sum score in the form of a principal component to identify if and which simplified structure could represent the 10 domains [4]. Furthermore, a BLRA was conducted with each of the individual domains as an independent variable. To describe the model's fit Nagelkerke's R^2 (N^2) was calculated [17].

Results

Sample characteristics

From 205 invited CAs 182 participated in the CIBQ (response rate 88.78%). Of the CAs 70.8% ($n = 119$) were female, and the mean age was 54.40 years (SD ± 11.09 years). The study participants had different levels of education: training, university degree (of applied sciences), PhD. The CAs worked in various occupational fields. Nearly one quarter (24.4%; $n = 40$) worked in counselling for senior citizens. The majority (82.3%; $n = 139$) worked full-time. More than half (55.6%; $n = 94$) had been working with CRs and/or PWD for more than 10 years but less than 10% (6.1%; $n = 10$) were primarily concerned with this topic. The participants rated the importance of the topic of CRs of PWD as 4.22 (SD ± 1.90) for the respective occupational fields of the CAs and as 4.83 (SD ± 1.77) for the CAs personally.

Most of the actors worked in Baden-Wuerttemberg (41.4%; $n = 70$). The majority (47.0%; $n = 79$) of CAs worked in medium-sized cities (20,000 < 50,000 inhabitants).

Domain analysis

The domain means ranged from 3.45 (D2 skills, SD ± 1.65) to 5.46 (D1 knowledge, SD ± 1.19) and indicated that the CAs are generally in favor of implementing support services for CRs of PWD. The mean of the sum score of all domains (4.33, SD ± 1.25) is also above 3.50 and therefore indicates a positive attitude towards the implementation. In supplement 4, descriptive variables for all domains can be seen.

The domains were highly and significantly ($\alpha \le 0.01$) correlated with each other (Supplement 5). The principle component analysis of the CIBQ domains resulted in one component having an eigenvalue of 6.24 indicating that 62.4% of variability in the domains scores can be described with this single factor.[3] Following Beenstock et al. (2012) [4] we call this principle component propensity to act.

The variable propensity to act has a positive, significant and

- large correlation with importance for the field of work (0.535)
- medium correlation with profession (0.420), personal importance (0.449) and support services (0.475)
- small correlation with proportion of content-related tasks (0.238).

The variable support services have a positive, significant and

- medium correlation to propensity to act (0.475) and profession (0.326)
- small, positive and significant correlation to age (0.169), proportion of content-related tasks (0.183), importance for the field of work (0.233) and personal importance (0.212).

Regression analysis

The AIC of the model including the covariates was 160.72. After conducting a stepwise logistic regression, the AIC was 151.05 and only the variables age, education and profession were included as covariates.

The BLRA in ◘ **Table 1** shows that the chance that CAs implemented support services for CRs of PWD significantly increased ($p < 0.001$) by an odds ratio (OR) of 2.03 (95% CI 1.50–2.85) with a higher propensity to act. The present model yields an $N^2 = 0.378$. According to Backhaus et al. (2006) this applies to an acceptable amount of explained variance [3].

Furthermore, each individual domain was included into a BLRA as the independent variable (Supplement 6) while support services was still the dependent variable and the covariates were the same as in ◘ **Table 1**. Higher scores in 9 out of 10 domains significantly increased the chance that CAs implemented support services for CRs of PWD. For example, the chance that CAs implemented support services for CRs of PWD significantly increased ($p < 0.001$) the more likely implementation was part of the CAs' training by an OR of 2.11 (95% CI: 1.51–3.09).

Discussion

According to the chapter in the SGB "Altenhilfe" (§ 71 SGB XII), the WHO and the German national dementia strategy (*Nationale Demenzstrategie*), communities are supposed to support carers [21, 23]. Besides structural determinants, such as infrastructure, [27] the individuals who (could) work with the CRs of PWD play a key role in the implementation of support services. While the present article measures the propensity to act of CAs Gansefort et al. [14] conducted a similar project. The community readiness model is based on the concept of community capacity building, which summarizes the development and strength of community structures [21]. Instead of asking actors about their personal propensity to act (self-

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[2] Grouped with < 0.10 as small, < 0.30 as medium and > 0.50 as large correlations.

[3] There were no further principle components having an eigenvalue > 1.

Table 1 Binary logistic regression analysis of propensity to act and support services

	Support services		
Independent variables	**OR**	**95% CI**	***P* value**
Propensity to act	2.03	1.50–2.85	$< 0.001^{***}$
Covariates			
Profession			
Formal	2.22	0.95–5.24	0.066
Informal	1	–	
Age	1.04	1.00–1.09	0.033^{*}
Education—University degree			
Yes	2.92	0.91–9.97	0.076
No	1	–	
N^2	0.378		

OR odds ratio, *CI* confidence interval, N^2 Nagelkerke's R^2
$^{*}p \leq 0.05$; $^{**}p \leq 0.01$, $^{***}p < 0.001$

disclosure; quantitative), they conducted interviews about actors' estimation of the community's readiness as a whole (third-party disclosure; qualitative) [12, 25]. As the perspectives and methods differ, the approaches can coexist and even complement each other.

The results of the present study demonstrate that CAs' implementation of support services for CRs of PWD is positively and significantly associated with their agreement with the CIBQ domains or rather their propensity to act. Furthermore, 9 out of the 10 domains are also on their own significantly associated with the implementation behavior of the CAs within the last 2 years, only the domain D1 knowledge is not. As most of the CAs are already working with CRs and/or PWD, the sample might lack heterogeneity, which is indicated by a low standard deviation (see SD of D1 in Supplement 4). Hence, the group might be too similar within D1 for the sample size to yield significant results. Nevertheless, the results show the relevance of CAs in this context. It turns out that the CIBQ is an appropriate tool to evaluate the current implementation practices in communities. Although it was developed for the topic CRs of PWD, it could be used for further gerontological and communal topics after minor adaptions. For example, the implementation behavior of CAs in supporting people with Parkinson's disease or on the topic of accessibility in communities could be examined.

Implications

As CAs play a central role in supporting CRs of PWD in communities, it is important to know what is associated with their behavior in implementing support services. For instance, the relatively low mean score in D2-skills suggests that the CAs need further training. The relatively high mean score of D5-beliefs about consequences suggests that the CAs know about the (dis)advantages the implementation of support services for CRs of PWD entails.

The CIBQ can e.g., be used by community networks to determine their status quo and to decide what they could work on in the future to optimize their implementation behavior and the well-being of carers. Even if the optimization of implementation behavior by itself does not solve all problems, addressing and changing person-related factors might be at least a beginning of improvement.

Strengths and limitations

In health sciences, implementation research commonly focuses on one innovation, intervention or guideline which is evidence based and realized by a specific profession for a specific target population within a specific setting [22]. This is not the case for the present topic. There are plenty of innovations and measures (to be) implemented within the "gerontological social care setting". Most of them are "experience based" and the setting as well as the involved professions vary widely; however, although the scope of action of the referenced CAs differs, all of them have the possibility to provide support according to their profession and position. In order to serve the needs of this diverse target group and circumstances, a variety of institutions and professions are required. Furthermore, the requirements in communities differ.

This might be the first study investigating the association of CAs' person-related factors and the implementation of support services for CRs of PWD in communities. In addition, it might be the first adaptation of the TDF [15] to the described context. Recruiting participants within a cooperation project limited the number of CAs and therefore the variance of single domains. In addition, participants were not randomly selected but identified through multipliers from the different communities. This can cause selection bias.

Conclusion

The analysis showed that CAs' implementation of support services for CRs of PWD is positively associated with their agreement with the CIBQ domains. Using the CIBQ provides an opportunity to optimize the health and care of CRs of/and PWD in communities on a time-saving manner by identifying determinants that influence CAs' existing implementation behavior.

Practical conclusion

- **CRs of PWD are often burdened and CAs are (jointly) responsible for supporting them.**
- **The CIBQ was used to examine CAs' implementation behavior regarding the support of CRs of PWD.**
- **The more CAs agreed with the domains, the greater was their support of CRs of PWD.**

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Declarations

Conflict of interest. M. Wittek, F. Manke-Reimers and E. Schmitt declare that they have no competing interests.

For this article no studies with human participants or animals were performed by any of the authors. All studies mentioned were in accordance with the ethical standards indicated in each case.

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Zusammenfassung

Implementierungsverhalten von Kommunen in Bezug auf pflegende Angehörige von Menschen mit Demenz. Eine quantitative Studie in deutschen Kommunen

Hintergrund: Kommunale AkteurInnen (kA) spielen eine grundlegende Rolle in der Unterstützung pflegender Angehöriger (pA) von Menschen mit Demenz (MmD). Da deren Unterstützung nicht ausreichend ist, muss die Implementierung von Unterstützungsmaßnahmen optimiert werden. Allerdings ist über Faktoren, die mit dem Implementierungsverhalten der kA zusammenhängen, wenig bekannt.
Ziel: Ziel war die Untersuchung des Zusammenhangs von personenbezogenen Faktoren mit dem Implementierungsverhalten von kA.
Methoden: In einer Querschnittsstudie wurden 205 kA aus 16 deutschen Kommunen befragt. Dazu wurde der Community Implementation Behaviour Questionnaire (CIBQ) verwendet, der auf dem Theoretical Domains Framework basiert. Logistische Regressionsanalysen wurden genutzt, um personenbezogene Faktoren zu identifizieren, die mit dem Implementierungsverhalten bei Unterstützungsmaßnahmen für pA von MmD in Verbindung stehen.
Ergebnisse: Die Umsetzung von Unterstützungsmaßnahmen für pA von MmD ist positiv und signifikant ($p < 0{,}001$) mit der Übereinstimmung der kA mit den CIBQ-Domänen assoziiert.
Punktzahlen im CIBQ erhöhen die Chance, dass kA Unterstützungsmaßnahmen für die Zielgruppe implementieren.
Schlussfolgerung: Der CIBQ ist ein Instrument zur Bestimmung des Status des Implementierungsverhaltens von Kommunen. Dies ermöglicht eine Analyse der Bereiche, an denen kA arbeiten müssen, um die Implementierung von Unterstützungsmaßnahmen für pA von MmD oder andere gesundheits- und pflegebezogene Themen zu optimieren.

Schlüsselwörter
Querschnittsstudie · Fragebogen · Ältere Menschen · Quantitative Studie · Unterstützungsmaßnahmen

Author queries

1 page 5, column B-C (abstract-2)

Bitte bestätigen Sie die Änderung des folgenden Satzes (Verbzeiten): "Höhere Punktzahlen im CIBQ erhöhen die Chance, dass kA Unterstützungsmaßnahmen für die Zielgruppe implementieren."

2 page 1, column B-C (abstract-1)

To enhance searchability, each article should list 5 relevant keywords/Schlüsselwörter that are not already mentioned in the main title of the article. Please check and confirm if the suggestions are acceptable or modify accordingly.

3 page 1, column B

" Communities' implementation behavior" please note that the use of an apostrophe as a possessive or genitive case would be better as "Implementation behavior oc communities"

4 page 1, column B

Please verify the hierarchic structure of headings throughout the document.

5 page 1, column B

Please verify the affiliations (address and institutional information).

6 page 1, column B

Please confirm the German translation of the article title.

7 page 2, column A

" The book of law "Altenhilfe"" appears to be incorrectly formulated. Perhaps "The chapter on "Help for the Aged" (Altenhilfe) (§71 SGB XII)" wold be more appropriate. Please check and confirm if acceptable. Also, at the beginning you quote SGB XI and here SGB XII. Please check and use consistently.

8 page 2, column A

" elderly": Please note that the term "elderly" is now generally considered to be discriminatory and alternatives should be used. Please check if this is acceptable or modify accordingly.

9 page 2, column A

Abbreviations/acronyms are written out in full the first time they appear in the article title, abstract/Zusammenfassung, main text, conclusion, or tables. Please confirm the changes.

10 page 2, column A

" a mayor can advance other measures than a volunteer" is unclear. Please check and confirm if "a mayor is in a position to offer different measures than a volunteer".

11 page 2, column C

" multipliers within each community" it is unclear what "multipliers " refers to. Please check and modify using an appropriate term.

12 page 3, column B

" The participants rated the importance of the topic of CRs of PWD as 4.22" please include the scale used here.

13 page 4, column A-B (table 1_html)

Please verify the layout of the tables by using the PDF of the preliminary print version of the article. The file is accessible under "Home" (house symbol) under the section "Download File".

14 page 4, column A-B (table 1_html)

Table 1: it would be better to more clearly define what formal and informal professions mean. This should also be mentioned in the text as no explanation is given at all.

15 page 4, column A-B (table 1_html)

In Table 1 a dash (–) was inserted into deliberately empty cells. Please confirm.

16 page 4, column A-B (table 1_html)

In Table 1 why are explanations for p-values included in the footnote when the actual p-values are already given in the table? Please consider and if necessary delete.

17 page 3, column C

"For example, the chance that CAs implemented support services for CRs of PWD significantly increased ($p < 0.001$) the more likely implementation was part of the CAs' training by an OR of 2.11" please check this sentence as it appears to be grammatically incomplete.

18 page 3, column C

Please include reference '[27]' in the bibliography or remove the respective reference(s) in the text.

19 page 4, column A

Please verify and confirm or correct: (see SD of D1 in table 2)" changed into"(see SD of D1 in Supplement 4).

20 page 5, column A

Please confirm or correct the statement for ethical guidelines.

21 page 5, column C

Please confirm the article DOI.

Chapter 5

Discussion

5. Discussion

5.1 Summary and General Discussion

5.1.1 Summary

The first publication (1.3.5) provides an overview of the current research literature on the topic *community implementation behaviour* or more precisely, the *implementation of support services for caring relatives of people with dementia*. It turns out that there is no literature addressing exactly the aforementioned dissertation topic. Until now, there was no research done looking at the implementation *behaviour* of actors from the community supporting caring relatives of people with dementia. In contrast, there is literature on the implementation determinants of support services for the named target group in general. The literature review conducted in the first publication systematically identified barriers and facilitators influencing the implementation process of support for caring relatives of people with dementia within the community. Eight suitable (inter)national publications were analyzed dealing with support services for the target group. The determinants were divided into facilitators and barriers and were arranged according to the CFIR. Next to relevant aspects such as the communication between individuals, the participation of the target group and a leader who takes responsibility, particular authors identify the actors (from the community) as the most important stakeholders in the implementation process. Hence, that makes it advisable to examine these actors more closely. This is exactly what this dissertation dealt with.

First of all, a tool to research the implementation behaviour was chosen. As described in the background section, the TDF is particularly well suited for the examination of the implementation behaviour. But since it was originally in English language and designed for the application in health sciences it needed to be translated into German and adopted to the gerontological context or rather the context of caring relatives of people with dementia and their support within communities. This is why and how new domains and the appropriate CIBQ were developed.

The second publication (4.1.3) applies the modified domains for the analysis of qualitative data from the Town Hall Project (town hall talks and focus groups) where actors from the community talked, among other things, about the support of caring relatives of people with dementia. This allows to investigate which of the CIBQ domains actors from the community addressed in a public dialogue and what kind of results this achieved in terms of the implementation of support services for caring relatives of people with dementia. After the data analysis, it can be concluded that addressing the domains in a public dialogue positively influences the actors and their awareness according to the improvement of support for the target group. Analysing the qualitative data has given a good first indication regarding the relevance of investigating the domains in this field.

To deepen the investigation, it became clear that a more detailed examination of the actors from the community is necessary. Thus, a quantitative questionnaire, the CIBQ, was developed according to the domains and existing TDF questionnaires. First, to ensure that the questionnaire is valid, the psychometric properties of the CIBQ were calculated. The third publication (4.2.2) presents the content of the CIBQ and its psychometric properties in detail. It can be seen that the model fit of the CIBQ shows satisfying results with regard to the internal consistency and construct validity.

The fourth publication (4.2.5) intended to present the content analysis of the quantitative data of the CIBQ. Findings can be reported on the associations between the answers in the CIBQ and the implementation behaviour of the actors from the community within the last two years. Data shows a positive and significant ($p<.001$) association between the implementation of support services for caring relatives of people with dementia and the agreement of the actors from the communities with the CIBQ domains. Higher scores in the CIBQ increase the chance that actors from the community implemented support services for the target group within the last two years. Therefore, the association between the CIBQ domains and the implementation of support services becomes clear.

5.1.2 General Discussion

Next to the alarming figures of caring relatives and people with dementia referred to in the introduction, actual debates in Germany make the relevance of this topic clear: shortage of skilled workers in nursing [63], the need for volunteers and civic-minded people to provide care locally or in the "neighborhood" [15] or living arrangements for the elderly [12]. These aspects have to be considered with regard to the care of caring relatives and persons in need of care as for example people with dementia. Furthermore, actors from the community are required to take them on. Thus, the necessity of examination of actor’s behaviour in implementing measures in order to serve the debates, aspects and needs, becomes clear. An increasing number of German communities, cities or states set out on the path of neighborhood development to enable a shared life across ages and generations [70, 85]. As this dissertation shows, not only structural factors but also person-related factors need consideration for successful support for caring relatives of people with dementia as well as for successful aging in general.

Implementation research is (in health sciences) commonly applied to study the implementation of *one* innovation, intervention or guideline which is *evidence based* and realized by a *specific profession* for a *specific target population* within a *specific setting* [118]. This is not the case for the present topic of the dissertation. There are plenty of innovations and measures (to be) implemented within the “gerontological – social – care – setting”. Most of them are not evidence but experience based as they were developed and executed during everyday life depending on what is needed and did not originate from researchers. The setting and the involved professions vary widely since *care* is not reducible to exclusively one area or professional group. The course and symptoms of dementia are diverse and so are the circumstances and living conditions of people with dementia and their relatives. In order to meet their needs and requirements and to be able to serve them, a wide variety of institutions and persons or professions are required. Furthermore, the requirements in communities differ from community to community, from state to state and from country to country. It is not comparable to the procedure of e.g. hand disinfection, which should be performed in the same way in general practices, whether it is a large or a small practice in an urban or rural area [2]. Grol and Wensing (2020) published "Characteristics of successful innovations" [44]. Although those characteristics are mostly not given in the present context, the conditions should be followed as much as possible.

5.1.3 Reference to Research Questions

During the research process of the dissertation, different research questions were generated.

The first and the second question could be answered as followed:

> *The CIBQ domains or at least some of them are addressed by actors from the communities while talking about supporting caring relatives of people with dementia in a public dialogue.*
>
> *Addressing the CIBQ domains or at least some of them by actors from the communities while talking about supporting caring relatives of people with dementia in a public dialogue positively influences the actors' implementation behaviour according to support caring relatives of people with dementia.*

as the results in the second publication (4.1.3) show that the addressed domains positively influence the support of caring relatives of people with dementia. The third question could be answered as:

> *Actors' agreement in the CIBQ domains is positively associated with their implementation of support services for CRs of PWD (within the last two years) in their community.*

as the results in the fourth publication (4.2.5) show the positive and significant association with the agreement in the CIBQ domains and the implementation of support services in the respective community (within the last two years).

5.2 Strengths and Limitations

Specific strengths and limitations of each paper were already discussed in the corresponding paragraph (1.3.5; 4.1.3; 4.2.2; 4.2.5). In the following, more general aspects are discussed addressing both the research focus itself, the sample and research design of this dissertation.

5.2.1 Strengths

As implementation science in total is relatively new in gerontology or rather in the elderly care within community settings, this dissertation addresses and fills a decisive gap in the research literature and much more in the care and support of caring relatives of people with dementia. Additionally, a practice-oriented tool that could be applied in communities to state their status quo in supporting caring relatives of people with dementia was developed and validated. Here, the possibility of using the tool in/for other community contexts after only marginal modifications is of great advantage. The CIBQ is versatile and sustainably usable. During the research process and while applying the CIBQ there were/are people from very different disciplines involved: senior citizen counsellors, nurses, volunteers, mayors, health scientists, nursing scientists, gerontologists, psychologists and many more. This makes the interdisciplinarity of the work very clear. *„Interdisciplinarity analyzes, synthesizes and harmonizes links between disciplines into a coordinated and coherent whole“* [21]. Choi et al. (2006) cite, among others, the following four advantages and possible applications of interdisciplinary collaboration 1) solving real-world problems 2) solving complex problems 3) different perspectives 4) generating a comprehensive prospective theory-based hypothesis for research [24]. These aspects fit very well the topic of the dissertation project. Diversity is not only present in the actors involved but also in the methodology of this dissertation. First of all, theoretical work was done with the framework. Afterwards, on the basis of the newly developed domains, qualitative data was analyzed. This data was collected in a context that is not exclusively planned for this purpose but more open and focusing on different aspects of the situation of caring relatives of people with dementia. Finally, a quantitative online survey was conducted – the CIBQ – where actors from different communities were recruited exclusively. All in all, the methodology went from the general to the specific.

5.2.2 Limitations

In the following, some weaknesses of the dissertation will be mentioned that require further attention in future research. First of all, the selection and recruiting of the study sample was restricted because of the cooperation with another research project. The advantage of the cooperation with the "Town Hall Project" was that it gave a set of communities and actors to participate in the dissertation project. It was necessary to predefine a study population as well as locational and numerical boundaries because the potential study population is too diverse and distributed extensively in Germany that it would not have been possible to order or (randomly) select them. Therefore, the "Town Hall Project" was beneficial but it also prefixed the sample size and selection which could have been higher and more various to get more meaningful results.

On the one hand, the heterogeneous study population was stated as a strength of the dissertation. On the other hand, it can be seen as a weakness because it makes it difficult to compare the actors, activities, possibilities, responsibilities etc.

5.3 Implications for the Future

Since the results obtained can be applied directly in the support and care of caring relatives of people with dementia, but also to other target groups in communities, relevant implications appear. The present dissertation has implications for future practice as well as for future research.

5.3.1 Implications for the Future Practice

Based on the present results, future policy and practice should address the implementation behaviour within the work of actors from the community. Especially in elderly care or the support of caring relatives of people with dementia. There is the necessity not only to require or presuppose the implementation of support services for caring relatives of people with dementia, but also to analyse the actors accordingly and to provide them with assistance if needed. Therefore, specified and validated [84] tools, like the CIBQ, to measure the status and potential of actors' implementation behaviour should be applied. Afterwards, the actors should be trained and sensitized to optimise their implementation behaviour. Subsequently, structures and certain regularities to not only measure the implementation behaviour but also to apply respective implementation strategies are recommended.

5.3.2 Implications for the Future Research

As described in *Dissemination of Innovation* by Grol and Wensing (2020), innovations such as support services or even the CIBQ need to be disseminated effectively [45]. Therefore, they recommend e.g. mass media or personalized methods [45]. In the present context, a personalized approach addressing communities might be most successful. Furthermore, Grol and Wensing specified five main stages of change: (1) Orientation, (2) Insight & Understanding, (3) Acceptance, (4) Change, (5) Maintaining the Change [18, 48]. According to the stage where the community and its actors are situated, there are different implementation strategies to follow like stage (2) - useful instructional material and regular repetitions [18, 48].

Based on the present results and the future implications for policy and practice, future research should focus on the evaluation of the CIBQ-application in communities. Now, that we can assume that it represents the implementation behavior of actors from the community, it should also be evaluated when used in practice. Questions such as: How are communities handling the application of the CIBQ? Does anything need to be adapted? Do communities need any support? – should be addressed.

In general, more scientific studies on implementation behavior in gerontology or elderly care are desirable. Even the questionnaire presented here could benefit from comparisons with other studies and measurement instruments. Regarding for instance the shortage of skilled (nurses) workers, the relevance of actors from the community becomes even clearer.

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Congress Contributions and Further Publications

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Wittek M (2022, October). „Entwicklung und psychometrische Eigenschaften des Community Implementation Behaviour Questionnaire (CIBQ): Im Kontext der Unterstützung pflegender Angehöriger von Menschen mit Demenz" (Presentation). 21st German Conference on Health Services Research 2022. Potsdam.

Wittek M (2022, September). „Versorgung pflegender Angehöriger von Menschen mit Demenz in der Kommune: Qualitative Analyse unter Verwendung des Theoretical Domains Frameworks." (Presentation). Gerontology and Geriatrics Congress 2022, Frankfurt on the Main.

Wittek M (2022, September). „Unterstützung pflegender Angehöriger von Menschen mit Demenz - Entwicklung des Community Implementation Behaviour Questionnaire (CIBQ)." (Posterpresentation). Gerontology and Geriatrics Congress 2022, Frankfurt on the Main.

Kiefer A & **Wittek M** (2022, April). „Schöne Momente in der Pflege und Begleitung von Menschen mit Demenz – Auch in schwierigen Zeiten." (Presentation). 6th Dementia Week Rhine-Erft District on the Topic „Pflege für die Pflegenden – die Situation von pflegenden Angehörigen auch bei Demenz". Bergheim.

Kiefer A & **Wittek M** (2022, March). „Innovative Hilfen für Pflegende: Berührende Momente auch in schwierigen Zeiten" (Presentation). Gerontological Study Day of the Evangelical Regional Church 2022 on the Subject of „Altern in gesellschaftlichen Veränderungsprozessen". Heidelberg.

Wittek M (2021, September). „Unterstützungsangebote in der Kommune für pflegende Angehörige von Menschen mit Demenz in Zeiten der Corona-Pandemie: Ausschnitte aus qualitativen Daten des Town Hall – Projektes" (Presentation). Joint Symposium of Sections III and IV of the German Society for Gerontology and Geriatrics. Siegen.

Further Publications

Wittek M, Kiefer A, Voß H, Wiloth S (2022): Unterstützung pflegender Angehöriger von Menschen mit Demenz in der Pandemie: Eine qualitative Studie. *Pflege.* https://doi.org/10.1024/1012-5302/a000915

Wiloth S, Kiefer A, **Wittek M**, Arroyo y Villora T, Obermeier M, Schmitt E, Kruse A (2022): Rethinking a Traditional Method of Participation: "Town Hall Meetings" to Support Family Carers of People with Dementia. *J Alzheimers Dis*, 87(3), 981-990. https://doi.org/10.3233/JAD-215582

Wiloth S, Kramer B, Kiefer A, **Wittek M**, Fraas C, Böttner S, Kruse A (2021): Die Methode der „Rathausgespräche": Ein Studienprotokoll. *Z Gerontol Geriat*, 54, 775–780. https://doi.org/10.1007/s00391-020-01788-1

Appendix

Appendix

Additional file 1: DIBQ domains from Huijg et al. (2014) (own illustration) [59].

	Domain	Definition
D1	**Knowledge**	An awareness of the existence of something.
D2	**Skills**	An ability or proficiency acquired through practice.
D3	**Social/ professional role and identity**	A coherent set of behaviors and displayed personal qualities of an individual in a social or work setting.
D4	**Beliefs about capabilities**	Acceptance of the truth, reality, or validity about an ability, talent, or facility that a person can put to constructive use.
D5	**Optimism**	The confidence that things will happen for the best or that desired goals will be attained.
D6	**Beliefs about consequences**	Acceptance of the truth, reality, or validity about outcomes of a behavior in a given situation.
D7	**Intentions**	A conscious decision to perform a behavior or a resolve to act in a certain way.
D8	**Goals**	Mental representations of outcomes or end states that an individual wants to achieve.
D9	**Innovation**	Any characteristics of the innovation that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behavior.
D10	**Socio-political context**	Any characteristics of the socio-political context that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behavior.
D11	**Organisation**	Any characteristics of the organization that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behavior.
D12	**Patient**	Any characteristics of the patient that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behavior.
D13	**Innovation strategy**	Any characteristics of the innovation strategy that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behavior.
D14	**Social influences**	Those interpersonal processes that can cause individuals to change their thoughts, feelings, or behaviors.
D15	**Positive emotions**	A complex positive reaction pattern, involving experiential, behavioral, and physiological elements, by which the individual attempts to deal with a personally significant matter or event.
D16	**Negative emotions**	A complex negative reaction pattern, involving experiential, behavioral, and physiological elements, by which the individual attempts to deal with a personally significant matter or event.
D17	**Behavioural reguations**	Anything aimed at managing or changing objectively observed or measured actions.
D18	**Nature oft he behaviours**	The nature of the aggregate of all responses made by an individual in any situation.

[*] The education corresponds to the German education system and has been arranged accordingly.

[**] No actors from: Berlin, Brandenburg, Bremen, Hamburg, Lower Saxony, Mecklenburg-Western Pomerania, Saarland, Saxony, Thuringia

Additional file 2: CIBQ.

A1. Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune

Erläuterungen/ Abkürzungen

In dem vorliegenden Fragebogen geht es um die Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune. Um Missverständnisse zu vermeiden, werden im Folgenden die wichtigsten Begriffe definiert bzw. mit Beispielen versehen:

Implementierung & AkteurInnen in der Kommune = Im Kontext dieses Fragebogens ist „Implementierung“ als die Umsetzung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune zu verstehen. Der Prozess der Implementierung reicht hierbei von der Initiierung und Planung bis hin zur aktiven Gestaltung oder Durchführung der Maßnahme. Auch die kommunalpolitische Rahmung sowie das Schaffen von Möglichkeitsräumen für die Altenhilfe sind Teil der Implementierung, da sie die Entwicklung und Umsetzung von Unterstützungsmaßnahmen möglich machen. Dies geschieht durch die Übernahme von Verantwortlichkeiten, einer wertschätzenden Kommunikation sowie eine offene Haltung gegenüber den Bedürfnissen pflegender Angehöriger. Somit sind AkteurInnen unterschiedlicher Bereiche und Positionen (BürgermeisterInnen, DezernentInnen, SeniorInnenberaterInnen, Pflegekräfte, ÄrztInnen, Kulturschaffende, ÜbungsleiterInnen, Ehrenamtliche, uvm.) an den Implementierungsprozessen beteiligt.

Unterstützungsmaßnahmen in der Kommune = Im Kontext dieses Fragebogens zählen unterschiedliche Maßnahmen, Angebote und Interventionen, die in der Kommune initiiert sowie umgesetzt werden, zu den sogenannten „Unterstützungsmaßnahmen in der Kommune“. Hierzu gehören beispielsweise Flyer mit relevanten Adressen/ Angeboten, Informationsbroschüren, Informationsveranstaltungen, Betreuungsangebote, Angehörigengruppen, die Schaffung spezifischer Stellen, Arbeitskreise, Kampagnen, Etablierung von Nachbarschaftshilfen, Schulungsangebote, Sportangebote, Bildungsangebote, Wohnangebote, Kulturangebote uvm.

Pflegende Angehörige = Unter pflegenden Angehörigen sind in diesem Kontext nicht ausschließlich Angehörige zu verstehen, die die körpernahe Pflege des Menschen mit Demenz übernehmen. Vielmehr ist hier die ganzheitliche Betreuung im Alltag der zu pflegenden Person gemeint.

Rathausgespräche = Rathausgespräche sind Teil des Town Hall - Projektes "Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben" des Instituts für Gerontologie der Universität Heidelberg. In diesem Projekt werden pflegende Angehörige von Menschen mit Demenz in sog. Rathausgesprächen in den Dialog mit unterschiedlichen AkteurInnen (s.o.) aus ihrer Kommune gebracht, um sich über Bedürfnisse und bestehende/mögliche Unterstützungsmöglichkeiten auszutauschen. Diese Rathausgespräche

A2. **Haben Sie an einem sogenannten Rathausgespräch in Ihrer Kommune zum Thema "Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben" teilgenommen?**

Ja, als DiskutatIn. ☐
Ja, als ZuhörerIn bzw. ZuschauerIn. ☐
Nein. ☐

B1. **Welches Geschlecht haben Sie?**

Weiblich ☐
Männlich ☐
Divers ☐

B2. **Wie alt sind Sie?**

unter 20 Jahre ☐
20 – unter 25 Jahre ☐
25 – unter 30 Jahre ☐
30 – unter 35 Jahre ☐
35 – unter 40 Jahre ☐
40 – unter 45 Jahre ☐
45 – unter 50 Jahre ☐
50 – unter 55 Jahre ☐
55 – unter 60 Jahre ☐
60 – unter 65 Jahre ☐
65 – unter 70 Jahre ☐
70 – unter 75 Jahre ☐
75 – unter 80 Jahre ☐
80 Jahre und mehr ☐

B3. Welchen höchsten beruflichen Bildungsabschluss haben Sie?

Lehre/Berufsausbildung im dualen System ☐
Fachschulabschluss ☐
Fachschulabschluss in der ehemaligen Deutsche Demokratische Republik (DDR) ☐
Bachelor ☐
Master ☐
Diplom ☐
Fachhochschulabschluss ☐
Hochschulabschluss ☐
Promotion ☐
Ohne Angabe zur Art des Abschlusses ☐
Ohne beruflichen Bildungsabschluss ☐

B4. Sind Sie selbst pflegendeR AngehörigeR?

Ja ☐
Nein ☐

C1. In welchem Bundesland sind Sie als "AkteurIn" in Ihrer Kommune (hauptsächlich) tätig?

Unter einer Tätigkeit als AkteurIn in einer Kommune sind u.a. Betätigungen in den Bereichen Kommunalverwaltung, (SeniorInnen)Beratung, Pflege, Ärzteschaft, Apotheke, Kirche, Bildung, Kultur, Sport, Ehrenamt, Wohnen uvm. zu verstehen.

Bitte beziehen Sie sich mit Ihrer Antwort auf die Kommune, in der Sie hauptsächlich tätig sind.

Falls Sie an einem Rathausgespräch teilgenommen haben, beziehen Sie sich mit Ihrer Antwort bitte auf die Kommune, in der das Rathausgespräch stattgefunden hat.

Baden-Württemberg ☐
Bayern ☐
Berlin ☐
Brandenburg ☐
Bremen ☐
Hamburg ☐
Hessen ☐
Mecklenburg-Vorpommern ☐
Niedersachsen ☐
Nordrhein-Westfalen ☐
Rheinland-Pfalz ☐
Saarland ☐
Sachsen ☐
Sachsen-Anhalt ☐
Schleswig-Holstein ☐
Thüringen ☐

C2. Wie viele EinwohnerInnen hat die Gemeinde/ Kommune in der Sie als "AkteurIn" (hauptsächlich) tätig sind?

Unter einer Tätigkeit als AkteurIn in einer Kommune sind u.a. Betätigungen in den Bereichen Kommunalverwaltung, (SeniorInnen)Beratung, Pflege, Ärzteschaft, Apotheke, Kirche, Bildung, Kultur, Sport, Ehrenamt, Wohnen uvm. zu verstehen.

Bitte beziehen Sie sich mit Ihrer Antwort auf die Kommune, in der Sie hauptsächlich tätig sind.

Falls Sie an einem Rathausgespräch teilgenommen haben, beziehen Sie sich mit Ihrer Antwort bitte auf die Kommune, in der das Rathausgespräch stattgefunden hat.

5.000 - <10.000 Einwohner ☐
10.000 - <20.000 Einwohner ☐
20.000 - <50.000 Einwohner ☐
50.000 - <100.000 Einwohner ☐
100.000 - 500.000 Einwohner ☐
>500.000 Einwohner ☐

C3. In welchem der folgenden Bereiche sind Sie als "AkteurIn" in Ihrer Kommune tätig?

Mehrfachangaben sind möglich.

Unter einer Tätigkeit als AkteurIn in einer Kommune sind u.a. Betätigungen in den Bereichen Kommunalverwaltung, (SeniorInnen)Beratung, Pflege, Ärzteschaft, Apotheke, Kirche, Bildung, Kultur, Sport, Ehrenamt, Wohnen uvm. zu verstehen.

Bitte beziehen Sie sich mit Ihrer Antwort auf die Kommune, in der Sie hauptsächlich tätig sind.

Falls Sie an einem Rathausgespräch teilgenommen haben, beziehen Sie sich mit Ihrer Antwort bitte auf die Kommune, in der das Rathausgespräch stattgefunden hat.

Kommunalverwaltung - politische EntscheidungsträgerIn z.B. (Ober)BürgermeisterIn/ DezernentIn ☐
Kommunalverwaltung - Bereich Altenhilfe z.B. Seniorenberatung/ Pflegestützpunkt ☐
Beratung/Betreuung ☐
Pflege ☐
Ehrenamt ☐
Ärzteschaft ☐
Apotheke ☐
Kirche ☐
Sport ☐
Bildung ☐
Kultur ☐
Wohnen ☐
Sonstiges ☐ ▼

Sonstiges

C4. Wie sind Sie in diesem Bereich tätig?

Unter einer Tätigkeit als AkteurIn in einer Kommune sind u.a. Betätigungen in den Bereichen Kommunalverwaltung, (SeniorInnen)Beratung, Pflege, Ärzteschaft, Apotheke, Kirche, Bildung, Kultur, Sport, Ehrenamt, Wohnen uvm. zu verstehen.

Bitte beziehen Sie sich mit Ihrer Antwort auf die Kommune, in der Sie hauptsächlich tätig sind.

Falls Sie an einem Rathausgespräch teilgenommen haben, beziehen Sie sich mit Ihrer Antwort bitte auf die Kommune, in der das Rathausgespräch stattgefunden hat.

Hauptberuflich ☐
Nebenberuflich ☐
Ehrenamtlich ☐

Sonstiges ☐

Sonstiges

☐

C5. Seit wie vielen Jahren führen Sie diese Tätigkeit als "AkteurIn" in Ihrer Kommune bereits aus?

Unter einer Tätigkeit als AkteurIn in einer Kommune sind u.a. Betätigungen in den Bereichen Kommunalverwaltung, (SeniorInnen)Beratung, Pflege, Ärzteschaft, Apotheke, Kirche, Bildung, Kultur, Sport, Ehrenamt, Wohnen uvm. zu verstehen.

Bitte beziehen Sie sich mit Ihrer Antwort auf die Kommune, in der Sie hauptsächlich tätig sind.

Falls Sie an einem Rathausgespräch teilgenommen haben, beziehen Sie sich mit Ihrer Antwort bitte auf die Kommune, in der das Rathausgespräch stattgefunden hat.

0 - 2 Jahre ☐

>2 - 5 Jahre ☐

> 5 - 10 Jahre ☐

> 10 Jahre ☐

D1. Inwiefern waren Sie bereits an einer Implementierung/Umsetzung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in Ihrer Kommune beteiligt?

Mehrfachangaben sind möglich.

Unter einer Tätigkeit als AkteurIn in einer Kommune sind u.a. Betätigungen in den Bereichen Kommunalverwaltung, SeniorInnenberaterInnen, Pflegekräfte, ÄrztInnen, Kulturschaffende, ÜbungsleiterInnen, Ehrenamtliche, VirchenvertreterInnen uvm. zu verstehen.

Bitte beziehen Sie sich mit Ihrer Antwort auf die Kommune, in der Sie hauptsächlich tätig sind.

Falls Sie an einem Rathausgespräch teilgenommen haben, beziehen Sie sich mit Ihrer Antwort bitte auf die Kommune, in der das Rathausgespräch stattgefunden hat.

Beteiligung an der Planung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune. ☐

Beteiligung an der Entwicklung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune. ☐

Beteiligung an der Identifikation von Barrieren bei der Umsetzung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune. ☐

Beteiligung an der Anwendung von Strategien, zur Lösung der Barrieren bei der Umsetzung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune. ☐

Beteiligung an der Planung der Umsetzung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune. ☐

Beteiligung an der Umsetzung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune. ☐

Beteiligung an der Evaluation bzw. Bewertung der Umsetzung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune. ☐

Gar keine Beteiligung. ☐

D2. **Wie viel Prozent Ihrer Arbeitszeit als "AkteurIn" in Ihrer Kommune haben Sie in den letzten 2 Jahren mit der Implementierung/Umsetzung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in Ihrer Kommune verbracht?**

Unter einer Tätigkeit als AkteurIn in einer Kommune sind u.a. Betätigungen in den Bereichen Kommunalverwaltung, (SeniorInnen)Beratung, Pflege, Ärzteschaft, Apotheke, Kirche, Bildung, Kultur, Sport, Ehrenamt, Wohnen uvm. zu verstehen.

Bitte beziehen Sie sich mit Ihrer Antwort auf die Kommune, in der Sie hauptsächlich tätig sind.

Falls Sie an einem Rathausgespräch teilgenommen haben, beziehen Sie sich mit Ihrer Antwort bitte auf die Kommune, in der das Rathausgespräch stattgefunden hat.

0% ☐
> 0% - unter 1% ☐
1% - unter 5% ☐
5% - unter 10% ☐
10% - unter 20% ☐
20% - unter 30% ☐
30% - unter 40% ☐
40% - unter 50% ☐
50% - unter 60% ☐
60% - unter 70% ☐
70% - unter 80% ☐
80% - unter 90% ☐
90% - 100% ☐

D3. **Falls Sie schon einmal Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in Ihrer Kommune implementiert/umgesetzt haben:**

Wie viele Angeboten sind/waren das in den vergangenen zwei Jahren? (Bitte geben Sie eine Zahl an)

Unter einer Tätigkeit als AkteurIn in einer Kommune sind u.a. Betätigungen in den Bereichen Kommunalverwaltung, SeniorInnenberaterInnen, Pflegekräfte, ÄrztInnen, Kulturschaffende, ÜbungsleiterInnen, Ehrenamtliche, VirchenvertreterInnen uvm. zu verstehen.

Bitte beziehen Sie sich mit Ihrer Antwort auf die Kommune, in der Sie hauptsächlich tätig sind.

Falls Sie an einem Rathausgespräch teilgenommen haben, beziehen Sie sich mit Ihrer Antwort bitte auf die Kommune, in der das Rathausgespräch stattgefunden hat.

D4. Welchen Stellenwert hat die Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune für ...

	1 - Gar keinen	2	3	4	5	6	7 - Einen sehr großen
...Ihr Tätigkeitsfeld?	☐	☐	☐	☐	☐	☐	☐
...Sie persönlich?	☐	☐	☐	☐	☐	☐	☐

E1. Ich weiß, ...

	1 - Stimme gar nicht zu	2	3	4	5	6	7 - Stimme voll und ganz zu
... warum die Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune wichtig ist.	☐	☐	☐	☐	☐	☐	☐
... welche Ziele bei der Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune verfolgt werden.	☐	☐	☐	☐	☐	☐	☐
... was bei der Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune von mir erwartet wird.	☐	☐	☐	☐	☐	☐	☐

F1.

	1 - Stimme gar nicht zu	2	3	4	5	6	7 - Stimme voll und ganz zu
Ich wurde (z.B. im Rahmen von Ausbildung/ Fortbildung/ Einarbeitung etc.) auf die Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune vorbereitet.	☐	☐	☐	☐	☐	☐	☐
Ich habe die Kompetenzen bzw. das notwendige Wissen, Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune zu implementieren.	☐	☐	☐	☐	☐	☐	☐
Ich bin erfahren darin, Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune zu implementieren.	☐	☐	☐	☐	☐	☐	☐

G1.

	1 - Stimme gar nicht zu	2	3	4	5	6	7 - Stimme voll und ganz zu
Die Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune ist Teil meiner Tätigkeitsbeschreibung bzw. meines Verantwortungsbereichs.	☐	☐	☐	☐	☐	☐	☐
Ich sehe es als Teil meines Aufgabenbereichs, Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune zu implementieren.	☐	☐	☐	☐	☐	☐	☐
Meine Rolle in der Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune ist für mich klar definiert.	☐	☐	☐	☐	☐	☐	☐

H1. Ich bin überzeugt, dass ich Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune ...

	1 - Stimme gar nicht zu	2	3	4	5	6	7 - Stimme voll und ganz zu
... implementieren kann.	☐	☐	☐	☐	☐	☐	☐
... implementieren kann, auch wenn Hindernisse auftreten.	☐	☐	☐	☐	☐	☐	☐
... implementieren kann, auch wenn pflegende Angehörige von Menschen mit Demenz nicht motiviert sind.	☐	☐	☐	☐	☐	☐	☐

I1.

	1 - Stimme gar nicht zu	2	3	4	5	6	7 - Stimme voll und ganz zu
Wenn ich Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune implementiere, wird die Zusammenarbeit in meinem Arbeitsumfeld gestärkt.	☐	☐	☐	☐	☐	☐	☐
Die Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune ist eine zufriedenstellende Aufgabe für mich.	☐	☐	☐	☐	☐	☐	☐
Wenn ich Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune implementiere, hilft es pflegenden Angehörigen von Menschen mit Demenz, besser versorgt zu sein.	☐	☐	☐	☐	☐	☐	☐

J1.

	1 - Stimme gar nicht zu	2	3	4	5	6	7 - Stimme voll und ganz zu
Im Rahmen meines Tätigkeitsfeldes ist eines meiner Ziele die Umsetzung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune.	☐	☐	☐	☐	☐	☐	☐
Ich setze mir realistische kurzfristige Ziele bezüglich der Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune.	☐	☐	☐	☐	☐	☐	☐
Ich setze mir realistische langfristige Ziele bezüglich der Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune.	☐	☐	☐	☐	☐	☐	☐

K1.

	1 - Stimme gar nicht zu	2	3	4	5	6	7 - Stimme voll und ganz zu
Mit der Unterstützung von Bund, Ländern und Kommunen ist es möglich, Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune zu implementieren.	☐	☐	☐	☐	☐	☐	☐
Mit der Unterstützung der Pflegekassen ist es möglich, Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune zu implementieren.	☐	☐	☐	☐	☐	☐	☐
Mit den (mir) gegebenen Ressourcen (z.B. Personal/ Finanzierung) ist es möglich, Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune zu implementieren.	☐	☐	☐	☐	☐	☐	☐

L1.

	1 - Stimme gar nicht zu	2	3	4	5	6	7 - Stimme voll und ganz zu
Die meisten Menschen, die mir wichtig sind, befürworten, dass ich Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune implementiere.	☐	☐	☐	☐	☐	☐	☐
Personen aus meinem Arbeitsumfeld implementieren (ebenfalls) Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune.	☐	☐	☐	☐	☐	☐	☐
Personen aus meinem Arbeitsumfeld sind hilfsbereit in Bezug auf die Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune.	☐	☐	☐	☐	☐	☐	☐

M1. Wenn ich Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune implementiere, ...

	1 - Stimme gar nicht zu	2	3	4	5	6	7 - Stimme voll und ganz zu
... bin ich optimistisch.	☐	☐	☐	☐	☐	☐	☐
... fühle ich mich wohl.	☐	☐	☐	☐	☐	☐	☐
... bin ich nicht unsicher.	☐	☐	☐	☐	☐	☐	☐
... bin ich nicht frustriert.	☐	☐	☐	☐	☐	☐	☐

N1. Wenn ich Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune implementiere, ...

	1 - Stimme gar nicht zu	2	3	4	5	6	7 - Stimme voll und ganz zu
... wird das durch pflegende Angehörige von Menschen mit Demenz wertgeschätzt.	☐	☐	☐	☐	☐	☐	☐
... erhalte ich Anerkennung von meinem Arbeitsumfeld.	☐	☐	☐	☐	☐	☐	☐
... erhalte ich Anerkennung von meinem privaten Umfeld.	☐	☐	☐	☐	☐	☐	☐

O1. Die Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune ist ...

	1 - Stimme gar nicht zu	2	3	4	5	6	7 - Stimme voll und ganz zu
... etwas, das selbstverständlich für mich (persönlich) ist.	☐	☐	☐	☐	☐	☐	☐
... etwas, das ich aus eigenem Antrieb verfolge (auch unabhängig von meiner Tätigkeitsbeschreibung/Verantwortungbereich).	☐	☐	☐	☐	☐	☐	☐
... wichtig für mich.	☐	☐	☐	☐	☐	☐	☐

Vielen Dank für Ihre Teilnahme!

Die Umfrage ist nun beendet. Die angegebenen Daten wurden erfolgreich gespeichert.

Herzliche Grüße

Maren Wittek

Wissenschaftliche Mitarbeiterin Universität Heidelberg Institut für Gerontologie Bergheimer Straße 20 69115 Heidelberg 06221 54 - 8171 Maren.Wittek@gero.uni-heidelberg.de

Additional file 3: E-Mail invitation for study participants of the CIBQ (original version - German).[9]

Sehr {FIRSTNAME},

wir bedanken uns noch einmal sehr herzlich für Ihre Teilnahme an unserem Town Hall-Projekt „Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben“.

Zum vollständigen Abschluss des Town Hall – Projektes führt das Institut für Gerontologie der Universität Heidelberg derzeit eine Umfrage zur Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune durch. Der Titel der Umfrage ist "Community Implementation Behaviour".

Zu dessen Teilnahme laden wir Sie sehr herzlich ein.

In einem ca. **10 minütigen Onlinefragebogen** möchten wir etwas über Ihre Einstellungen und Ihre persönlichen Voraussetzungen (unabhängig von strukturellen Ressourcen) bzgl. der Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune erfahren. Dies ist essentiell für eine adäquate Betrachtung der Ergebnisse des Town Hall – Projektes.

Folgender Link führt Sie zu **weiterführenden Informationen** zu Inhalt, Ablauf und Begrifflichkeiten des Fragebogens:

https://heibox.uni-heidelberg.de/d/6f28bde7209b4fcd8e9c/?p=%2F

Um an dieser Umfrage teilzunehmen, klicken Sie bitte auf den folgenden Link:

{SURVEYURL}

Bitte füllen Sie die Umfrage innerhalb der nächsten 14 Tage aus.

Im Voraus besten Dank für Ihre Unterstützung und Ihr Engagement.

Herzliche Grüße

Maren Wittek

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[9] This is an automatically personalized mail. The information in the curly brackets is thus adjusted according to the people who have been entered in the participant list in limesurvey. Each participant will then receive a personalized link.

Maren Wittek
Wissenschaftliche Mitarbeiterin im Projekt Town Hall
Universität Heidelberg
Institut für Gerontologie
Bergheimer Straße 20
69115 Heidelberg

Tel. +49 6221 54 - 8171
Fax +49 6221 54 – 5961

Klicken Sie hier um die Umfrage zu starten:
{SURVEYURL}

Wenn Sie an diese Umfrage nicht teilnehmen und keine weiteren Erinnerungen erhalten möchten, klicken Sie bitte auf den folgenden Link:
{OPTOUTURL}

Wenn Sie geblockt sind, jedoch wieder teilnehmen und weitere Einladungen erhalten möchten, klicken Sie bitte auf den folgenden Link:
{OPTINURL}

Additional file 4: Welcome and explanation for study participants about data protection of the CIBQ (original version - German).

Liebe Teilnehmerinnen und liebe Teilnehmer,

zum vollständigen Abschluss des Town Hall - Projektes führt das Institut für Gerontologie der Universität Heidelberg derzeit eine Umfrage durch, welche die Einstellungen und Voraussetzungen von Akteuren aus der Kommune im Implementierungsprozess von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune untersucht.

Die Bearbeitung des Fragebogens dauert ca. 10 Minuten. Es gibt keine richtigen oder falschen Antworten, sondern Ihre persönliche Einschätzung ist von Interesse. Es nehmen viele Personen an der Befragung teil, die sich bzgl. ihrer Funktion und Tätigkeit unterscheiden. Daher sind die Fragen sehr allgemein formuliert. Einiges wird weniger gut, anderes besonders gut auf Sie zutreffen. Der Vollständigkeit halber erhalten alle Teilnehmenden dieselben Fragen.

Die Auswertung der Daten erfolgt anonym unter Einhaltung der gesetzlichen Vorschriften des Datenschutzes gemäß Art. 13 der EU-Datenschutzgrundverordnung (DS-GVO).

Vielen Dank für Ihr Interesse und Ihre Teilnahme an der folgenden Befragung.

Herzliche Grüße

Maren Wittek

Informationen zur Verarbeitung personenbezogener Daten

bei der Teilnahme und Durchführung des Forschungsprojekts „CIB(Q)-Community Implementation Behaviour“ des Instituts für Gerontologie der Universität Heidelberg

Sehr geehrte Teilnehmerin, sehr geehrter Teilnehmer,
vielen Dank für Ihr Interesse an dem o.g. Forschungsprojekt. Bitte lesen Sie die Information zum Forschungsprojekt sorgfältig durch. Sie erhalten im Folgenden Informationen zur Verarbeitung Ihrer personenbezogenen Daten durch die Universität Heidelberg gemäß Art. 13 der EU-Datenschutzgrundverordnung (DS-GVO). Die Erhebung und weitere Verarbeitung Ihrer personenbezogenen Daten ist zur Durchführung des Forschungsprojektes „CIB(Q)-Community Implementation Behaviour“ erforderlich.

I. Informationen anlässlich der Datenerhebung

1. Verantwortlicher, Datenschutzbeauftragter

Verantwortlich für die Datenverarbeitung im Sinne der DS-GVO sowie weiterer datenschutzrechtlicher Bestimmungen ist die

Universität Heidelberg
Grabengasse 1
69117 Heidelberg
Deutschland

E-Mail: rektor@rektorat.uni-heidelberg.de
Website: www.uni-heidelberg.de

Die Kontaktdaten des Datenschutzbeauftragten lauten:
Seminarstr. 2
69117 Heidelberg
Tel: +49 6221 54-12070
E-Mail: datenschutz@uni-heidelberg.de

2. Zweck der Verarbeitung

Wir verarbeiten Ihre personenbezogenen Daten ausschließlich für den mit dem Projekt „CIB(Q)-Community Implementation Behaviour“ verfolgten wissenschaftlichen Forschungszweck.

- Teilnahme und Abwicklung des Forschungsprojekts: Am Institut für Gerontologie der Universität Heidelberg werden im Rahmen des Forschungsprojektes „CIB(Q)-Community Implementation Behaviour“ die Merkmale und das Verhalten von Akteuren der Kommune in Bezug auf die Implementierung von Unterstützungsangeboten für pflegende Angehörige von Menschen mit Demenz untersucht. Das Beantworten eines online Fragebogens ist für die Durchführung des Forschungsprojekts „CIB(Q)-Community Implementation Behaviour“ erforderlich. Nachteile im Falle einer Nicht-Teilnahme entstehen nicht.

In dem Fall, in dem einzelne oder mehrere der vorstehenden (zusätzlichen) Einwilligungen nicht erteilt werden, entstehen keine Nachteile.

3. Rechtsgrundlagen der Verarbeitung

Die Rechtsgrundlage für die Verarbeitung Ihrer personenbezogenen Daten ist, sofern und soweit Sie diese erteilen, Ihre Einwilligung gem. Art. 6 Abs. 1 UAbs. 1 lit. a DS-GVO.

4. Kategorien personenbezogener Daten

Außer den in dem online Fragebogen für Sie offensichtlich erhobenen personenbezogenen Daten (in Form von Alter, Geschlecht, Funktion in der Kommune …) werden bei der Projektteilnahme Ihr Name sowie Ihre Kontaktdaten gespeichert. Dies dient allerdings nicht der Datenauswertung, sondern ausschließlich der Kommunikation mit Ihnen und der Zusendung des Links zur Umfragen-Teilnahme. Für den online Fragebogen wird die Online-Umfrage-Software LimeSurvey genutzt. Diese speichert keine Ihrer personenbezogenen Daten.

5. Empfänger

Die im Falle der Erteilung einer Einwilligung verarbeiteten personenbezogenen Daten werden innerhalb der Universität Heidelberg ausschließlich an einen festgelegten Kreis an Mitarbeiterinnen und Mitarbeitern, die am o.g. Forschungsvorhaben mitwirken und deren Kenntnis von Ihren personenbezogenen Daten erforderlich ist, übermittelt. Hierzu zählen die Projektleitung, wissenschaftliche Mitarbeitende und studentische Hilfskräfte.

Die Online-Umfrage-Software LimeSurvey erhält Ihre personenbezogenen Daten nicht.

Ihre personenbezogenen Daten werden nicht an Dritte übermittelt. Eine Übermittlung Ihrer personenbezogenen Daten an Dritte erfolgt nur ausnahmsweise und ausschließlich in den Fällen, in denen die Universität Heidelberg zur Übermittlung gesetzlich verpflichtet.

6. Speicherdauer

Ihre personenbezogenen Daten werden vorbehaltlich eines Widerrufs der Einwilligung spätestens 10 Jahre nach dem Abschluss des o.g. Forschungsvorhabens gelöscht. Ihre Kontaktdaten (Name, Adresse, Telefonnummer, E-Mail-Adresse) werden bereits nach Projektende gelöscht, ebenso die Audio- und Videoaufzeichnungen. Sofern gesetzliche Aufbewahrungspflichten bestehen, werden die Daten mit Ende dieser Aufbewahrungspflichten gesperrt oder gelöscht.

7. Widerrufsrecht bei Einwilligung

Die Einwilligung zur Verarbeitung Ihrer personenbezogenen Daten kann jederzeit mit Wirkung für die Zukunft widerrufen werden. Die Rechtmäßigkeit der aufgrund der Einwilligung bis zum Widerruf erfolgten Datenverarbeitung wird durch diesen nicht berührt. Bitte richten Sie Ihren Widerruf an:
Universität Heidelberg
Institut für Gerontologie
Ansprechpartner für EDV
Bergheimer Straße 20
69115 Heidelberg
edv@gero.uni-heidelberg.de

8. Betroffenenrechte

Sie haben folgende Rechte in Bezug auf Sie betreffende personenbezogene Daten:

- Recht auf Bestätigung, ob Sie betreffende Daten verarbeitet werden und auf Auskunft über die verarbeiteten Daten, auf weitere Informationen über die Datenverarbeitung sowie auf Kopien der Daten (Art. 15 DS-GVO),
- Recht auf Berichtigung oder Vervollständigung unrichtiger bzw. unvollständiger Daten (Art. 16 DS-GVO),
- Recht auf unverzügliche Löschung der Sie betreffenden Daten (Art. 17 DS-GVO),
- Recht auf Einschränkung der Verarbeitung (Art. 18 DS-GVO),
- Recht auf Erhalt der Sie betreffenden und von Ihnen bereitgestellten Daten sowie auf Übermittlung dieser Daten an andere Verantwortliche (Art. 20 DS-GVO),

Sie haben zudem das Recht, sich bei der Aufsichtsbehörde über die Verarbeitung der Sie betreffenden personenbezogenen Daten durch die Universität Heidelberg zu beschweren (Art. 77 DS-GVO). Aufsichtsbehörde im Sinne des Artikels 51 Abs. 1 DS-GVO über die Universität Heidelberg ist gemäß § 25 Abs. 1 LDSG:
Der Landesbeauftragte für den Datenschutz und die Informationsfreiheit Baden-Württemberg

Hausanschrift:
Königstrasse 10a
70173 Stuttgart

Postanschrift:
Postfach 10 29 32
70025 Stuttgart
Tel.: 0711/615541-0
Fax: 0711/615541-15
E-Mail: poststelle@lfdi.bwl.de

II. Informationen über Ihr Widerspruchsrecht nach Art. 21 Abs. 1 DS-GVO
Sie haben das Recht, aus Gründen, die sich aus Ihrer besonderen Situation ergeben, jederzeit gegen die Verarbeitung Sie betreffender Daten, die aufgrund von Art. 6 Abs.1 lit. e DS-GVO (Datenverarbeitung im öffentlichen Interesse) erfolgt, Widerspruch einzulegen.

Additional file 5: Additional information for study participants of the CIBQ (original version - German).

Informationsblatt für Teilnehmende der Onlinebefragung

Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune

Erläuterungen

In dem vorliegenden Fragebogen geht es um die Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune. Um Missverständnisse zu vermeiden, werden im Folgenden die wichtigsten Begriffe definiert bzw. mit Beispielen versehen:

Implementierung & AkteurInnen in der Kommune

Im Kontext dieses Fragebogens ist „Implementierung“ als die Umsetzung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune zu verstehen. Der Prozess der Implementierung reicht hierbei von der Initiierung und Planung bis hin zur aktiven Gestaltung oder Durchführung der Maßnahme. Auch die kommunalpolitische Rahmung sowie das Schaffen von Möglichkeitsräumen für die Altenhilfe sind Teil der Implementierung, da sie die Entwicklung und Umsetzung von Unterstützungsmaßnahmen möglich machen. Dies geschieht durch die Übernahme von Verantwortlichkeiten, einer wertschätzenden Kommunikation sowie eine offene Haltung gegenüber den Bedürfnissen pflegender Angehöriger. Somit sind **AkteurInnen** unterschiedlicher Bereiche und Positionen (BürgermeisterInnen, DezernentInnen, SeniorInnenberaterInnen, Pflegekräfte, ÄrztInnen, Kulturschaffende, ÜbungsleiterInnen, Ehrenamtliche, uvm.) an den Implementierungsprozessen beteiligt.

Unterstützungsmaßnahmen in der Kommune

Im Kontext dieses Fragebogens zählen unterschiedliche Maßnahmen, Angebote und Interventionen, die in der Kommune initiiert sowie umgesetzt werden, zu den sogenannten „Unterstützungsmaßnahmen in der Kommune“. Hierzu gehören beispielsweise Flyer mit relevanten Adressen/ Angeboten, Informationsbroschüren, Informationsveranstaltungen, Betreuungsangebote, Angehörigengruppen, die Schaffung spezifischer Stellen, Arbeitskreise, Kampagnen, Etablierung von Nachbarschaftshilfen, Schulungsangebote, Sportangebote, Bildungsangebote, Wohnangebote, Kulturangebote uvm.

Pflegende Angehörige

Unter pflegenden Angehörigen sind in diesem Kontext nicht ausschließlich Angehörige zu verstehen, die die körpernahe Pflege des Menschen mit Demenz übernehmen. Vielmehr ist hier die ganzheitliche Betreuung im Alltag der zu pflegenden Person gemeint.

Rathausgespräche

Rathausgespräche sind Teil des Town Hall-Projektes „Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben“ des Instituts für Gerontologie der Universität Heidelberg. In diesem Projekt werden pflegende Angehörige von Menschen mit Demenz in sog. Rathausgesprächen in den Dialog mit unterschiedlichen AkteurInnen (s.o.) aus ihrer Kommune gebracht, um sich über Bedürfnisse und bestehende/mögliche Unterstützungsmöglichkeiten auszutauschen. Diese Rathausgespräche finden in unterschiedlichen Kommunen in Deutschland statt.

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SEIT 1386

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INFORMATIONEN ZUR STUDIENTEILNAHME

„Implementierung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune“

Sehr geehrte Studieninteressierte,

aktuell leben 1,7 Millionen Menschen mit Demenz in Deutschland – mit steigender Tendenz. Die meisten werden dabei zu Hause von Familienangehörigen betreut, was in der Regel sehr belastend ist. Aufgrund der mit der Pflege und Betreuung von Menschen mit Demenz verbundenen Herausforderungen, wie der erwarteten Zunahme der Pflegequote sowie des Rückgangs professioneller Pflegekräfte haben pflegende Angehörige ein hohes Risiko für physische und psychische Erkrankungen. Zahlreiche Studien zeigen, dass durch Unterstützungsmöglichkeiten das Wohlbefinden und die Lebensqualität von pflegenden Angehörigen und Menschen mit Demenz verbessert werden kann. **Die erfolgreiche Implementierung von Unterstützungsmaßnahmen[1] für diese vulnerable Gruppe in der Kommune ist somit von zentraler Bedeutung.** Um diese genauer zu untersuchen, führt das Institut für Gerontologie der Universität Heidelberg eine **Online-Umfrage** durch.

Was ist das Ziel der Studie?

Ziel der Studie ist es, die Einstellungen und persönlichen Voraussetzungen (unabhängig von strukturellen Gegebenheiten/ Ressourcen) unterschiedlicher Akteure im Implementierungsprozess von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune zu untersuchen und Möglichkeiten der positiven Beeinflussung einer erfolgreichen Maßnahmenumsetzung abzuleiten.

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[1] Flyer mit Adressen/ Angeboten, Informationsbroschüren, Informationsveranstaltungen, Betreuungsangebote, Angehörigengruppen, die Schaffung spezifischer Stellen, Arbeitskreise, Kampagnen, Etablierung von Nachbarschaftshilfen, Schulungsangebote, Sportangebote, Bildungsangebote, Wohnangebote, Kulturangebote uvm.

Was kommt bei einer Teilnahme auf Sie zu?

Sie füllen als VertreterIn Ihrer Kommune und Ihres jeweiligen Tätigkeitsfeldes (Pflege/ Ehrenamt/ Bürgermeister/ Kommunalbehörde/ Kirche/ Ärzteschaft/ Pharmazie/ Bildung/ Sport/ Kultur/ Wohnen) **einmalig** einen **10-minütigen Onlinefragebogen** aus. Hierzu erhalten Sie einen **Link**, dem Sie bitte innerhalb der nächsten 14 Tage folgen. Thema des Fragebogens werden bspw. Ihre beruflichen Möglichkeiten und persönlichen Einstellungen in Bezug auf die Umsetzung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune sein. Strukturelle Gegebenheiten sowie zur Verfügung stehende Ressourcen spielen hierbei lediglich eine geringfügige Rolle.

Welchen Nutzen hat Ihre Teilnahme?

Die Umfrage ist essentiell für eine adäquate Betrachtung der Ergebnisse des Town Hall – Projektes. Sie leisten einen wertvollen Beitrag für die Weiterentwicklung von Konzepten für eine erfolgreiche Umsetzung von Unterstützungsmaßnahmen für pflegende Angehörige von Menschen mit Demenz in der Kommune. Von den Ergebnissen der Studie können Sie in Ihrem Alltag als Akteur in Ihrer Kommune profitieren.

Was geschieht mit Ihren persönlichen Informationen?

Die Teilnahme an der Online-Befragung ist **freiwillig.** Es ist jederzeit möglich, die Teilnahme abzubrechen, ohne dass Ihnen dadurch Nachteile entstehen. Gewonnene Daten werden pseudonymisiert[2] und unterliegen den Bestimmungen des Bundesdatenschutzgesetzes. Alle Projektmitarbeitenden unterliegen der Schweigepflicht. Rückschlüsse auf Ihre Person sind nicht möglich. Die Daten werden so lange aufbewahrt, wie es die Auswertung und Dokumentation der Studie erfordert. Anschließend werden alle Daten gelöscht. Ihre Daten werden unter keinen Umständen an andere, nicht an der Studie beteiligte Personen, weitergegeben.

Ich freue mich auf Ihre Teilnahme. Gerne stehe ich Ihnen für weitere Fragen zur Verfügung.

Im Voraus bereits vielen herzlichen Dank für Ihr Interesse und Ihre Mitarbeit.
Mit freundlichen Grüßen,

M. Wittek

Maren Wittek (wissenschaftliche Mitarbeiterin)

Institut für Gerontologie
Bergheimer Str. 20
69115 Heidelberg
E-Mail: maren.wittek@gero.uni-heidelberg.de
Telefon: 06221/54-8171

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[2] Bei der Pseudonymisierung wird der Name oder ein anderes Identifikationsmerkmal durch ein Pseudonym (zumeist eine mehrstellige Buchstaben- oder Zahlenkombination, auch Code genannt) ersetzt, um die Feststellung der Identität der Person auszuschließen oder wesentlich zu erschweren.

Additional file 6: Vote of the Ethics Committee

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FAKULTÄT
FÜR VERHALTENS-
UND EMPIRISCHE
KULTURWISSENSCHAFTEN

- ETHIKKOMMISSION -

Ethikkommission der Fakultät für Verhaltens- und Empirische Kulturwissenschaften ▪ Voßstr. 2, Geb. 4370 ▪ 69115 Heidelberg

Ethikkommission der Fakultät
für Verhaltens- und Empirische
Kulturwissenschaften
Voßstr. 2, Geb. 4370
69115 Heidelberg
Tel.: 06221/54-2894
Fax.: 06221/54-3650
dekanat@verkult.uni-heidelberg.de
www.verkult.uni-heidelberg.de

Herrn
Prof. Dr. Dr. h.c. Andreas Kruse
Institut für Gerontologie
Bergheimer Str. 20

69115 Heidelberg

24.02.2021

AZ Krus 2021 1/1-A1

Stellungnahme der Ethikkommission der Fakultät für Verhaltens- und Empirische Kulturwissenschaften der Universität Heidelberg

Forschungsvorhaben: Amendment zum Antrag *„Giving a Voice to Caring Relatives of people with dementia" - Das Town-Hall Projekt*

Antragsteller: Prof. Dr. Dr. h.c. Andreas Kruse

Sehr geehrter Herr Prof. Kruse,

die Ethikkommission hat das Amendment zu Ihrem im Jahre 2019 positiv evaluierten Ethikantrag geprüft und es grundsätzlich als ethisch unbedenklich bewertet.

Das Amendment dient dem Schutz Ihrer Probanden und ist in der gegenwärtigen Pandemiesituation unbedingt erforderlich. Die Maßnahmen, die Sie für eine Durchführung von face-to-face Interviews vorsehen (FFP2 Masken, Abstand, Einhaltung von Hygienevorschriften und Corona-Schnelltests), sind mit den Hygienevorschriften der Universität Heidelberg kompatibel. Wir empfehlen, dass Sie zusätzlich für eine regelmäßige Raumdurchlüftung sorgen.

Allerdings bitten wir Sie, in der Einverständniserklärung (S. 21) die Zustimmung der Probanden zu diesen strengen Maßnahmen auch **explizit** einzuholen. Dies dient dem Schutz aller Beteiligten.

Wir wünschen weiter viel Erfolg bei der Realisierung Ihres Forschungsvorhabens.

Mit freundlichen Grüßen

Prof. Dr. Ursula Christmann
Vorsitzende der Ethikkommission

Additional file 7: Explanation for study participants about content, aim and data protection of the Town Hall Project.

There are numerous documents and files about the recruiting and clarification of participants in the Town Hall Project. As the Town Hall Project was conducted before and during different phases of the Covid-19 pandemic, the information materials as well as the data protection sheets differ from phase to phase. In the following examples of the corresponding documents is attached. Additional files and versions can be read in the final report of the Town Hall Project [126].

Informationen zur Verarbeitung personenbezogener Daten

bei der Teilnahme und Durchführung des Forschungsprojekts „Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben: das Town Hall - Projekt" des Instituts für Gerontologie der Universität Heidelberg

Sehr geehrte Teilnehmerin, sehr geehrter Teilnehmer,

vielen Dank für Ihr Interesse an unserem Forschungsprojekt. Bitte lesen Sie die Information zu unserem Forschungsprojekt sorgfältig durch. Sie erhalten im Folgenden Informationen zur Verarbeitung Ihrer personenbezogenen Daten durch die Universität Heidelberg gemäß Art. 13 der EU-Datenschutzgrundverordnung (DS-GVO). Die Erhebung und weitere Verarbeitung Ihrer personenbezogenen Daten ist zur Durchführung des Forschungsprojektes „Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben: das Town Hall - Projekt" erforderlich.

I. Informationen anlässlich der Datenerhebung

1. Verantwortlicher, Datenschutzbeauftragter

Verantwortlich für die Datenverarbeitung im Sinne der DS-GVO sowie weiterer datenschutzrechtlicher Bestimmungen ist die

Universität Heidelberg
Grabengasse 1
69117 Heidelberg
Deutschland

E-Mail: rektor@rektorat.uni-heidelberg.de
Website: www.uni-heidelberg.de

Die Kontaktdaten des Datenschutzbeauftragten lauten:

Seminarstr. 2
69117 Heidelberg
Tel: +49 6221 54-12070
E-Mail: datenschutz@uni-heidelberg.de

2. Zweck der Verarbeitung

Wir verarbeiten Ihre personenbezogenen Daten ausschließlich für den mit dem Projekt „Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben: das Town Hall - Projekt" verfolgten wissenschaftlichen Forschungszweck.

- Teilnahme und Abwicklung des Forschungsprojekts

Am Institut für Gerontologie der Universität Heidelberg wird im Rahmen des Forschungsprojektes „Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben: das Town Hall – Projekt" die Lebenssituation pflegender Angehöriger von Menschen mit Demenz untersucht. Dazu gehört auch, wie Akteure aus einer Kommune die Situation pflegender Angehöriger wahrnehmen und in ihrem beruflichen und/oder persönlichen Kontext darauf Bezug nehmen. Die Evaluation Ihrer Erwartungen an die Rathausgespräche, die Teilnahme an der Veranstaltung und Evaluation der Veranstaltung im Nachklang, sowie die Teilnahme an einem abschließenden Reflexionsgespräch sind für die Durchführung des Forschungsprojekts „Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben: das Town Hall - Projekt" erforderlich. Nachteile im Falle einer Nicht-Teilnahme entstehen nicht.

- Bei entsprechender Einwilligung: Videoaufzeichnungen (mit Bild und Ton) von den Rathausgesprächen sowie Tonaufzeichnungen der Reflexionsgespräche. Das Datenmaterial dient nicht zur Veröffentlichung in wissenschaftlichen Fachzeitschriften, lediglich zur Unterstützung der Auswertung der erhobenen Daten.

In dem Fall, in dem einzelne oder mehrere der vorstehenden (zusätzlichen) Einwilligungen nicht erteilt werden, entstehen keine Nachteile.

3. Rechtsgrundlagen der Verarbeitung

Die Rechtsgrundlage für die Verarbeitung Ihrer personenbezogenen Daten ist, sofern und soweit Sie diese erteilen, Ihre Einwilligung gem. Art. 6 Abs. 1 UAbs. 1 lit. a DS-GVO.

4. Kategorien personenbezogener Daten

Außer den in den Evaluationsfragebögen bzw. Interviews für Sie offensichtlich erhobenen personenbezogenen Daten (in Form von Name, Vorname, Alter, Geschlecht, E-Mail, Beruf, Telefonnummer, Funktion in der Kommune …) werden bei der Projektteilnahme Videoaufzeichnungen der Rathausgespräche (mit Ton) sowie Tonaufzeichnungen der Reflexionsgespräche im Anschluss (nach ca. 4 Wochen) an die Rathausgespräche angefertigt. Dies erfolgt bei den Rathausgesprächen über die Software OBS Studio. Die Aufnahme wird dabei ausschließlich auf einer lokalen Festplatte gespeichert. Die Reflexionsgespräche werden mittels einen Aufnahmegeräts aufgenommen. Die Audiodateien der Rathausgespräche und der Reflexionsgespräche werden anschließend transkribiert, also nach bestimmten Regeln verschriftlicht.

Wir nutzen für die digitalen Rathausgespräche den Videokonferenzdienst ZOOM. Hierdurch werden neben Ihrem Anmeldenamen auch Metadaten an Zoom übermittelt (Ort, Zeitpunkt, Dauer, Chat-Status, IP-Adresse, weitere Meeting Metadaten wie bspw. Kameratyp, Mikrofon oder Lautsprecher). Die bei Zoom verfügbare Aufmerksamkeitsüberwachung ist deaktiviert. Zudem nutzen wir die Verschlüsselung der Verbindung bei ZOOM.

5. Empfänger

Die im Falle der Erteilung einer Einwilligung verarbeiteten personenbezogenen Daten werden innerhalb der Universität Heidelberg ausschließlich an einen festgelegten Kreis an Mitarbeiterinnen und Mitarbeitern, die am o.g. Forschungsvorhaben mitwirken und deren Kenntnis von

Ihren personenbezogenen Daten erforderlich ist, übermittelt. Hierzu zählen die Projektleitung, wissenschaftliche Mitarbeitende und studentische Hilfskräfte.
Außerhalb der Universität Heidelberg erhält die Audiodateien der Rathausgespräche und der Reflexionsgespräche, ausschließlich Transkripto, Zuider Kerkedijk 206, 3079 PB – Rotterdam, Niederlande. Das Transkriptionsbüro wurde seitens der Universität mit der Verarbeitung der Daten bzw. der Verschriftlichung der Audiodatei der Rathausgespräche und der Reflexionsgespräche der Studie beauftragt. Es ist vertraglich und in tatsächlicher Hinsicht sichergestellt, dass Transkripto Ihre o.g. personenbezogenen Daten datenschutzkonform verarbeitet.
Der Videokonferenz-Dienst Zoom, über den das digitale Rathausgespräch sowie die Reflexionsgespräche stattfinden, erhält Ihren Anmeldenamen sowie Meeting Metadaten (Datum, Dauer, Beginn und Ende der Teilnahme von Personen, Name und Beschreibung des Meetings, IP-Adressen der verwendeten Endgeräte Geräte-/Hardware-Informationen).

Ihre personenbezogenen Daten werden nicht an Dritte übermittelt. Eine Übermittlung Ihrer personenbezogenen Daten an Dritte erfolgt nur ausnahmsweise und ausschließlich in den Fällen, in denen die Universität Heidelberg zur Übermittlung gesetzlich verpflichtet.

6. Speicherdauer

Ihre personenbezogenen Daten werden vorbehaltlich eines Widerrufs der Einwilligung spätestens 10 Jahre nach dem Abschluss des o.g. Forschungsvorhabens gelöscht. Ihre Kontaktdaten (Name, Adresse, Telefonnummer, E-Mail-Adresse) werden bereits nach Projektende gelöscht, ebenso die Audio- und Videoaufzeichnungen. Sofern gesetzliche Aufbewahrungspflichten bestehen, werden die Daten mit Ende dieser Aufbewahrungspflichten gesperrt oder gelöscht.

7. Widerrufsrecht bei Einwilligung

Die Einwilligung zur Verarbeitung Ihrer personenbezogenen Daten kann jederzeit mit Wirkung für die Zukunft widerrufen werden. Die Rechtmäßigkeit der aufgrund der Einwilligung bis zum Widerruf erfolgten Datenverarbeitung wird durch diesen nicht berührt. Bitte richten Sie Ihren Widerruf an:

Universität Heidelberg
Institut für Gerontologie
Ansprechpartner für EDV
Bergheimer Straße 20
69115 Heidelberg
edv@gero.uni-heidelberg.de

8. Betroffenenrechte

Sie haben folgende Rechte in Bezug auf Sie betreffende personenbezogene Daten:

- Recht auf Bestätigung, ob Sie betreffende Daten verarbeitet werden und auf Auskunft über die verarbeiteten Daten, auf weitere Informationen über die Datenverarbeitung sowie auf Kopien der Daten (Art. 15 DS-GVO),

- Recht auf Berichtigung oder Vervollständigung unrichtiger bzw. unvollständiger Daten (Art. 16 DS-GVO),
- Recht auf unverzügliche Löschung der Sie betreffenden Daten (Art. 17 DS-GVO),
- Recht auf Einschränkung der Verarbeitung (Art. 18 DS-GVO),
- Recht auf Erhalt der Sie betreffenden und von Ihnen bereitgestellten Daten sowie auf Übermittlung dieser Daten an andere Verantwortliche (Art. 20 DS-GVO),

Sie haben zudem das Recht, sich bei der Aufsichtsbehörde über die Verarbeitung der Sie betreffenden personenbezogenen Daten durch die Universität Heidelberg zu beschweren (Art. 77 DS-GVO). Aufsichtsbehörde im Sinne des Artikels 51 Abs. 1 DS-GVO über die Universität Heidelberg ist gemäß § 25 Abs. 1 LDSG:

Der Landesbeauftragte für den Datenschutz und die Informationsfreiheit Baden-Württemberg
Hausanschrift:
Königstrasse 10 a
70173 Stuttgart
Postanschrift: Postfach 10 29 32
70025 Stuttgart
Tel.: 0711/615541-0
Fax: 0711/615541-15
E-Mail: poststelle@lfdi.bwl.de

II. Informationen über Ihr Widerspruchsrecht nach Art. 21 Abs. 1 DS-GVO

Sie haben das Recht, aus Gründen, die sich aus Ihrer besonderen Situation ergeben, jederzeit gegen die Verarbeitung Sie betreffender Daten, die aufgrund von Art. 6 Abs.1 lit. e DS-GVO (Datenverarbeitung im öffentlichen Interesse) erfolgt, Widerspruch einzulegen.

Einwilligung zur Verarbeitung personenbezogener Daten im Forschungsvorhaben

„Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben: das Town Hall - Projekt"

Hiermit willige ich in die Verarbeitung meiner personenbezogenen Daten im Rahmen des o.g. Forschungsvorhabens durch die Universität Heidelberg, namentlich durch das Institut für Gerontologie, ein. Von dieser Einwilligung sind folgende personenbezogene Daten umfasst:

- Personenbezogene Daten, wie Name, (Dienst-)Anschrift, (Dienst-)Telefonnummer, (Dienst-)E-Mail-Adresse, Geschlecht, Alter, höchster Bildungsabschluss, Berufstätigkeit, Pflegetätigkeit, falls zutreffend Ihre Beziehung zum Pflegebedürftigen
- Aufgabenbereich/Funktion innerhalb einer Kommune
- Erwartungen an das Rathausgespräch/Bewertung des Rathausgesprächs im Anschluss
- Ton- und Videomittschnitte der Rathausgespräche
- Tonmitschnitte der Reflexionsgespräche
- Metadaten und Anmeldedaten des Videokonferenzdienstes ZOOM

Ferner willige ich in die Übermittlung der folgenden personenbezogenen Daten an folgende Dienstleister / Anbieter ein:

1. Transkripto, Zuider Kerkedijk 206, 3079 PB – Rotterdam, Niederlande:

   Bei Transkripto handelt es sich um ein professionelles Transkriptionsbüro, welches die Audiodateien der Rathausgespräche und der Reflexionsgespräche erhält und für die weitere Auswertung transkribiert. Ihre Kontaktdaten werden selbstverständlich nicht weitergegeben. Sollten Sie während der Veranstaltung über sich, Ihre Funktion in der Kommune und ihre persönliche Situation sprechen, ist es aber durchaus möglich, dass auch personenbezogene Daten von Ihnen aufgenommen und anschließend transkribiert werden. Die Audiodateien und die fertigen Transkripte werden von Seiten Transkriptos gelöscht, sobald die Transkripte über eine sichere Webseite von Seiten der Projektleitung heruntergeladen wurden.

2. Zoom Video Communications, Inc, San Jose Headquarters, 55 Almaden Boulevard, Suite 400, 500, 600, San Jose, CA 95113 USA:
   Bei Zoom handelt es sich um einen Anbieter, um u.a. Videokonferenzen zu planen und abzuhalten. Die Rathausgespräche finden über diese Online-Plattform statt. Im Zuge Ihrer Teilnahme an der Veranstaltung werden folgende Daten an Zoom übermittelt: der Name unter dem Sie sich registrieren und an der Veranstaltung teilnehmen sowie Meeting Metadaten (Datum, Dauer, Beginn und Ende der Teilnahme von Personen, Name und Beschreibung des Meetings, IP-Adressen der verwendeten Endgeräte Geräte-/Hardware-Informationen). Aufzeichnungen der Veranstaltung direkt über Zoom finden nicht statt.

Die Erteilung der vorliegenden Einwilligung erfolgt freiwillig. Soweit die Einwilligung nicht widerrufen wird, gilt sie zeitlich unbeschränkt.

Die Einwilligung kann jederzeit mit der Wirkung für die Zukunft widerrufen werden. Sie kann auch auf einzelne Daten bezogen widerrufen werden. Wirkung für die Zukunft bedeutet, dass durch einen Widerruf der Einwilligung die Rechtmäßigkeit der aufgrund der Einwilligung bis zum Widerruf erfolgten Verarbeitung nicht berührt wird. Der Widerruf der Einwilligung ist zu richten an:

Universität Heidelberg
Institut für Gerontologie
Ansprechpartner für EDV
Bergheimer Straße 20
69115 Heidelberg
edv@gero.uni-heidelberg.de

Wird die Einwilligung verweigert oder widerrufen, entstehen keine Nachteile.

________________, den ___________________
(Ort) *(Datum)*

____
(Vor- und Nachname der/des Einwilligenden in Druckbuchstaben)

____
(Unterschrift)

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INFORMATIONEN FÜR KOMMUNALE TEILNEHMERINNEN UND TEILNEHMER ZUM PROJEKT
„Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben“

Sehr geehrte Projektteilnehmerin, sehr geehrter Projektteilnehmer,

wir freuen uns über Ihr Interesse und Ihre Bereitschaft, an dem Projekt *„Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben: das Town Hall Projekt*“ im Rahmen der digitalen Rathausgespräche teilzunehmen.

Warum wird dieses Projekt durchgeführt?

Aktuell leben 1,7 Millionen Menschen mit Demenz in Deutschland – mit steigender Tendenz. Die meisten werden dabei zu Hause von Familienangehörigen betreut, was in der Regel sehr belastend ist. Vor dem Hintergrund des demografischen Wandels, veränderter Familienstrukturen und gestiegener Arbeitsplatzmobilität nehmen diese familiären Ressourcen kontinuierlich ab, was die Betreuung und Versorgung von Menschen mit Demenz in der häuslichen Umgebung vor große Herausforderungen stellt. Die Corona Pandemie hat diese Situation zusätzlich erschwert und pflegende Angehörige vor weitere und neue Herausforderungen gestellt.

Ziel des Projekts ist es, zu untersuchen, wie pflegende Angehörige ihre Lebenssituation wahrnehmen, welche Belastungen sie erleben und über welche Bewältigungsstrategien und Ressourcen sie verfügen. Wir wollen aber vor allem danach fragen, wie Kommunalbehörden, Gesundheits- und Pflegeeinrichtungen, kirchliche Einrichtungen, Ärzte, Ehrenamtsinitiativen, Bildungseinrichtungen und Vereine einen Beitrag zur familiären Pflege von Menschen mit Demenz leisten können.

Hierfür soll in einem digitalen Rathausgespräch in Ihrer Kommune (Town Hall) pflegenden Angehörigen von Menschen mit Demenz das erforderliche Mitspracherecht eingeräumt und ihnen die Möglichkeit gegeben werden, mit kommunalen Entscheidungsträgern und der Bürgerschaft über ihre Lebenssituation, ihre Bedarfe und die Etablierung neuartiger Unterstützungsstrukturen in Form „sorgender Gemeinschaften“ zu diskutieren. Aufgrund der Corona Pandemie und zum Schutz der Bürgerinnen und Bürger finden die Rathausgespräche als online Veranstaltung statt.

Was kommt bei einer Teilnahme auf Sie zu?

Sie nehmen als Vertreter Ihrer Kommune an moderierten Gesprächsrunden teil und diskutieren mit anderen kommunalen Akteuren und pflegenden Angehörigen von Menschen mit Demenz zur genannten Thematik. Sie erhalten die Möglichkeit, gemeinsam mit den pflegenden

Angehörigen innovative Ideen für die Etablierung und/oder Stärkung von Sorgestrukturen in Ihrer Kommune zu generieren und vertiefend zu reflektieren. Es werden Ton- und Bildaufnahmen der Diskussion angefertigt.
Ungefähr 4-6 Wochen nach dem digitalen Rathausgespräch nehmen Sie an einer abschließenden digitalen Gruppendiskussion mit den anderen kommunalen Akteuren aus den Gesprächsrunden teil, die von Mitarbeitenden des Instituts für Gerontologie moderiert und ebenfalls aufgezeichnet wird. Diese abschließende Diskussion soll dazu dienen, das Rathausgespräch zu evaluieren und sich mit möglichen Entwicklungen mit Blick auf Unterstützungs- und Pflegeformen, die durch die Rathausgespräche angestoßen wurden, erneut intensiv auseinanderzusetzen. Auch diese Diskussionsrunde wird als online Veranstaltung stattfinden.

Was geschieht mit Ihren persönlichen Informationen?

Die Teilnahme am digitalen Rathausgespräch und der Gruppendiskussion im Anschluss sind freiwillig. Es ist jederzeit möglich, die Teilnahme abzubrechen, ohne dass Ihnen dadurch Nachteile entstehen. Gewonnene Daten werden pseudonymisiert[1] und unterliegen den Bestimmungen des Bundesdatenschutzgesetzes. Alle Projektmitarbeitenden unterliegen der Schweigepflicht. Rückschlüsse auf Ihre Person sind nicht möglich. Die Daten werden so lange aufbewahrt, wie es die Auswertung und Dokumentation der Studie erfordert. Anschließend werden alle Daten gelöscht. Ihre Daten werden unter keinen Umständen an andere, nicht an der Studie beteiligte Personen, weitergegeben. Sie können jederzeit die Löschung Ihrer Daten verlangen.

Wenn Sie Interesse an einer freiwilligen Teilnahme an dem Projekt haben, kontaktieren Sie bitte telefonisch oder per Email unsere Projektmitarbeiterin Frau Wittek.
Wir freuen uns auf Ihre Teilnahme. Gerne stehen wir Ihnen für weitere Fragen zum Projektverlauf zur Verfügung.

Für Ihr Interesse und Ihre Mitarbeit bedanken wir uns bereits im Voraus recht herzlich.
Mit freundlichen Grüßen

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Telefon: 06221/54-8171

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[1] Bei der Pseudonymisierung wird der Name oder ein anderes Identifikationsmerkmal durch ein Pseudonym (zumeist eine mehrstellige Buchstaben- oder Zahlenkombination, auch Code genannt) ersetzt, um die Feststellung der Identität der Person auszuschließen oder wesentlich zu erschweren.

Was erwartet Sie als teilnehmender kommunaler Akteur?

Ein kurzer Überblick zu den digitalen Rathausgesprächen

1. Ablauf der Veranstaltung

Wir freuen uns, dass Sie Interesse haben, am digitalen Rathausgespräch in **Musterstadt** am **Wochentag, den x. Monat 2021 um xx:00 Uhr** teilzunehmen. Einige Tage vor dem digitalen Ratshausgespräch werden wir Sie telefonisch kontaktieren, um den Ablauf der Gesprächsrunden noch einmal mit Ihnen zu besprechen und Ihnen wenige **Fragen zu Ihren Erwartungen an das Rathausgespräch** zu stellen. Auch werden wir Ihnen dann noch weitere Informationen zur **Abschlussdiskussion am xx. Monat 2021** um **xx:00 Uhr** bekanntgeben.

Das digitale Rathausgespräch wird sich wie folgt zeitlich strukturieren:

Uhrzeit	Thema
16:00-16:15	**Begrüßung, Vorstellung und Ablauf der Veranstaltung**
16:15-17:00	**Gespräch I: Pflegende Angehörige**
17:00-17:15	*PAUSE*
17:15-17:45	**Gespräch II: Kommunale Akteure**
17:45-18:00	*PAUSE*
18:00-18:30	**Gespräch III: Pflegende Angehörige und kommunale Akteure im Dialog**
18:30-18:45	**Offene Diskussion mit Bürgerinnen und Bürgern, die sich über den Online Chat einbringen können**
18:45-19:00	Ausklang und Feedback

2. Ablauf der Gespräche

Es werden insgesamt 3 aufeinanderfolgende Gesprächs- bzw. Diskussionsgruppen gebildet.

In der 1. Diskussionsrunde befinden sich ausschließlich pflegende Angehörige. Wir möchten Sie dazu ermutigen, zunächst über die Anforderungen und auch über die guten Seiten bei der Pflege von Menschen mit Demenz zu sprechen. Wir möchten weiter von Ihnen erfahren, welche Art von Unterstützung Sie von unterschiedlichen Personen erwarten. Auch möchten wir mit Ihnen darüber diskutieren, inwieweit die Thematik „häusliche Pflege von Menschen mit Demenz“ in Ihrer Kommune Aufmerksamkeit findet. Sie als kommunaler Akteur sowie das Publikum hören den pflegenden Angehörigen gespannt zu.

In der 2. Diskussionsrunde diskutieren Sie als kommunaler Akteur ebenso wie die pflegenden Angehörigen zu bestimmten Themen wie z. B. der Frage nach der Bedeutung bürgerschaftlichen Engagements, nach Möglichkeiten der Förderung von Ehrenamt und Nachbarschaftshilfe oder nach zukünftigen Strategien zur Unterstützung pflegender Angehöriger und im Umgang mit dem demografischen Wandel. Hier hören Ihnen die pflegenden Angehörigen und das Publikum gespannt zu.

In der 3. Diskussionsrunde findet der Dialog zwischen Ihnen und den pflegenden Angehörigen in einer gemischten Gesprächsrunde statt. Hier möchten wir alle Teilnehmenden noch einmal dazu ermutigen, die bereits angesprochenen Themen nochmals aufzugreifen und gemeinsam Ideen und Strategien für neuartige Pflegeformen sowie förderliche und hinderliche Rahmenbedingungen zu diskutieren. In dieser Gruppe ist es uns wichtig, dass Sie mit den pflegenden Angehörigen in einen intensiven Austausch zur Thematik treten.

Am Ende des digitalen Rathausgesprächs lassen wir zudem noch das Publikum über den online Chat zu Wort kommen. Fragen und Anregungen seitens der Bürgerschaft werden aufgenommen und mit allen Beteiligten diskutiert.

Ein wichtiger Hinweis

Die Gespräche und damit Diskussionsbeiträge während des digitalen Rathausgesprächs werden aus forschungstechnischen Gründen elektronisch aufgezeichnet, transkribiert (= schriftliche Übertragung) und anschließend ausgewertet. Daher bitten wir Sie, sich während der Diskussionen stets per Handzeichen zu melden und nur zu sprechen, wenn Sie das Wort erhalten. Bei der Datenauswertung wird Ihr Name durch ein Pseudonym ersetzt.

3. Feedback

Nach Abschluss der Veranstaltung erhalten Sie per Mail einen Feedbackbogen. Wir bitten Sie, diesen schnellstmöglich, im besten Fall gleich im Anschluss an das Rathausgespräch auszufüllen und an uns zurückzusenden. Ihre Meinung zu dem Format des „digitalen Rathausgespräches" ist uns sehr wichtig! Wir möchten herausfinden, inwieweit eine solche Bürgerversammlung eine innovative sowie sinnvolle Methode darstellt und welche wichtigen gesundheits- bzw. pflegepolitische Themen zu beleuchten und zu diskutieren sind.

4. Moderatoren und Begleitperson der Veranstaltung

Die Moderatoren und Moderatorinnen des Rathausgesprächs sind Frau Dr. Stefanie Wiloth (Projektleitung) oder Herr Prof. Dr. Dr. h.c. Andreas Kruse (Direktor des Instituts für Gerontologie der Universität Heidelberg).

Wir freuen uns auf eine ertragreiche und anregende Veranstaltung!

Ihr Projektteam des Instituts für Gerontologie

Additional file 8: Codebook of qualitative analyses.

Code	Definition	Coding rule	Example	Note
Knowledge	This includes text passages that describe the knowledge of actors from the community about the care and caring relatives of people with dementia and their circumstances.	→ (What) do actors from the community know about the relevance of caring relatives and people with dementia? → To what extent are actors from the community familiar with the life and living conditions of caring relatives of people with dementia? → What do actors from the community know about care, caring relatives and dementia in general?	"Without you, without the relatives, our system would completely collapse." (10)	Deductively generated code
Goals	This includes text passages that describe the goals that actors from the community have in supporting caring relatives of people with dementia.	→ What kind of short-/ long-term goals do actors from the community have in supporting caring relatives of people with dementia? → What kind of plans and ideas do actors from the community have in supporting caring relatives of dementia?	"The neighbourhood assistance no longer exists in the way we had. We are in the process of rebuilding it, which unfortunately is not that easy and we need a lot of patience. However, that is our goal." (4)	Deductively generated code
Sociopolitical context	This includes text passages in which actors from the community describe the socio-political system in relation to caring relatives of people with dementia.	→ How do actors from the community describe socio-political factors concerning caring relatives of people with dementia? → What kind of socio-political factors name actors from the community as relevant concerning caring relatives of people with dementia?	"One can either like or dislike the fact that there are responsibilities with the city, some with the district, and some with the payers. That does not make it easy for the carers […]. Too much bureaucracy, too many phone calls back and forth." (12)	Deductively generated code
Concrete effects & planned changes	This includes text passages that describe effects and changes (after the town hall talk) initiated by actors from the community in supporting caring relatives of people with dementia.	→ What kind of changes and effects did the actors from the community initiated or achieved concerning caring relatives of people with dementia? → What plans do actors from the community have to support caring relatives of people with dementia and to positively influence their daily life?	"There will be daycare on Saturdays once a month on a trial basis for 6 months next year. Depending on how this is accepted, it can be continued." (6)	Deductively generated code

Additional file 9: R-Code/ Script of quantitative analyses.

```
#install.packages("openxlsx")
library(openxlsx)

#install.packages("dplyr")
library(dplyr)

#Daten einlesen

####frequencies

####means domains
##D1
data3 = mutate(data3, D1 = (D1a+D1b+D1c)/3)
mean(data3$D1, na.rm = TRUE)

## [1] 5.461847

sd(data3$D1, na.rm = TRUE)

## [1] 1.189552

length(which(is.na(data3$D1)))

## [1] 16

range(data3$D1, na.rm=TRUE)

## [1] 1.333333 7.000000

##D2 till D11 as D1
##D_sum_new
data3 = mutate(data3, D_sum_new = (D1+D2+D3+D4+D5+D6+D8+D9+D10+D11)/10)
mean(data3$D_sum_new, na.rm = TRUE)

## [1] 4.330077

sd(data3$D_sum_new, na.rm = TRUE)

## [1] 1.250762

length(which(is.na(data3$D_sum_new)))

## [1] 31

range(data3$D_sum_new, na.rm=TRUE)

## [1] 1.533333 6.966667

#install.packages("psych")
library(psych)

# Principle Component Analysis
PCA <- pca(r = data3[,c(75:80,82:85)], rotate = "none")
PCA

## Principal Components Analysis
## Call: principal(r = r, nfactors = nfactors, residuals = residuals,
##     rotate = rotate, n.obs = n.obs, covar = covar, scores = scores,
##     missing = missing, impute = impute, oblique.scores = oblique.scores,
##     method = method, use = use, cor = cor, correct = 0.5, weight = NULL)
## Standardized loadings (pattern matrix) based upon correlation matrix
##      PC1   h2   u2 com
## D1  0.64 0.42 0.58   1
## D2  0.78 0.61 0.39   1
## D3  0.83 0.70 0.30   1
## D4  0.79 0.62 0.38   1
```

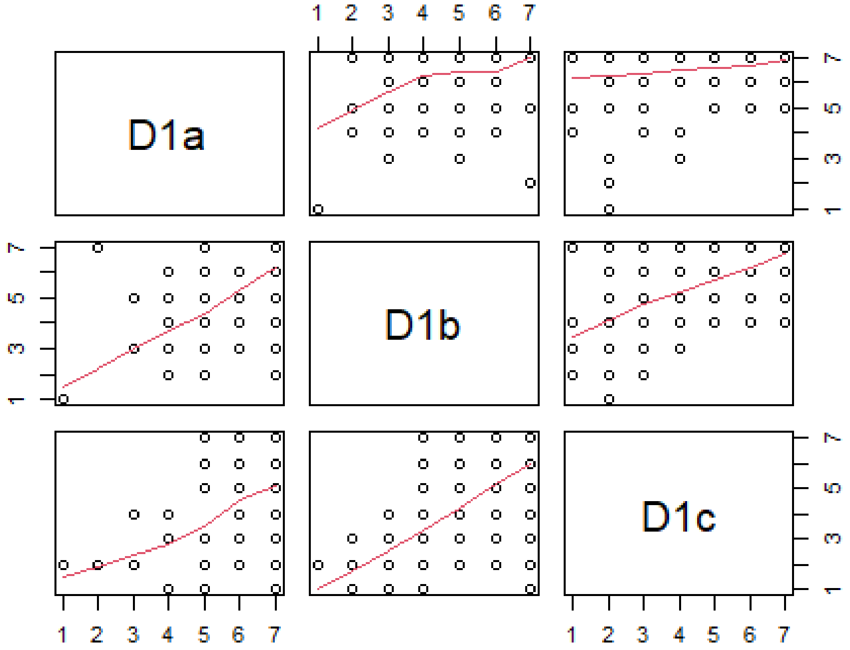
```
## D5  0.85 0.73 0.27   1
## D6  0.88 0.77 0.23   1
## D8  0.82 0.67 0.33   1
## D9  0.76 0.58 0.42   1
## D10 0.69 0.47 0.53   1
## D11 0.82 0.67 0.33   1
##
##                  PC1
## SS loadings    6.24
## Proportion Var 0.62
##
## Mean item complexity =  1
## Test of the hypothesis that 1 component is sufficient.
##
## The root mean square of the residuals (RMSR) is  0.07
##  with the empirical chi square  87.87  with prob <  1.9e-06
##
## Fit based upon off diagonal values = 0.98

PCA1 <- pca(r = data3[,c(75:80,82:85)], nfactors = 3, rotate = "none")
PCA1

## Principal Components Analysis
## Call: principal(r = r, nfactors = nfactors, residuals = residuals,
##     rotate = rotate, n.obs = n.obs, covar = covar, scores = scores,
##     missing = missing, impute = impute, oblique.scores = oblique.scores,
##     method = method, use = use, cor = cor, correct = 0.5, weight = NULL)
## Standardized loadings (pattern matrix) based upon correlation matrix
##      PC1   PC2   PC3   h2   u2 com
## D1  0.64  0.46  0.17 0.66 0.34 2.0
## D2  0.78  0.24 -0.37 0.81 0.19 1.6
## D3  0.83  0.31 -0.15 0.81 0.19 1.3
## D4  0.79  0.24  0.23 0.73 0.27 1.4
## D5  0.85 -0.10 -0.15 0.76 0.24 1.1
## D6  0.88  0.07  0.03 0.78 0.22 1.0
## D8  0.82 -0.14 -0.20 0.73 0.27 1.2
## D9  0.76 -0.22  0.47 0.85 0.15 1.8
## D10 0.69 -0.57 -0.19 0.84 0.16 2.1
## D11 0.82 -0.29  0.19 0.79 0.21 1.4
##
##                        PC1  PC2  PC3
## SS loadings           6.24 0.92 0.59
## Proportion Var        0.62 0.09 0.06
## Cumulative Var        0.62 0.72 0.77
## Proportion Explained  0.81 0.12 0.08
## Cumulative Proportion 0.81 0.92 1.00
##
## Mean item complexity =  1.5
## Test of the hypothesis that 3 components are sufficient.
##
## The root mean square of the residuals (RMSR) is  0.06
##  with the empirical chi square  50.94  with prob <  5.4e-05
##
## Fit based upon off diagonal values = 0.99

PCs <- data.frame(PC = as.matrix(data3[,c(75:80,82:85)]) %*% PCA1$weights[,1])
head(PCs)

##         PC
## 1 7.599032
## 2 6.064933
## 3       NA
## 4 3.322723
## 5 6.213303
## 6       NA
```

```
data3$PC = PCs$PC

PCA1$loadings

##
## Loadings:
##     PC1    PC2    PC3   
## D1   0.645  0.459  0.175
## D2   0.784  0.239 -0.367
## D3   0.835  0.308 -0.147
## D4   0.789  0.240  0.233
## D5   0.853        -0.145
## D6   0.879              
## D8   0.817 -0.138 -0.202
## D9   0.762 -0.217  0.467
## D10  0.689 -0.572 -0.190
## D11  0.817 -0.295  0.186
##
##                   PC1   PC2   PC3
## SS loadings    6.240 0.915 0.593
## Proportion Var 0.624 0.092 0.059
## Cumulative Var 0.624 0.716 0.775

PCA1$weights

##           PC1         PC2        PC3
## D1  0.1032860  0.50204664  0.2945594
## D2  0.1255668  0.26063640 -0.6185955
## D3  0.1337954  0.33611730 -0.2484351
## D4  0.1264632  0.26273379  0.3930902
## D5  0.1367532 -0.10549456 -0.2443447
## D6  0.1408089  0.08192214  0.0490674
## D8  0.1309457 -0.15131872 -0.3411268
## D9  0.1221801 -0.23677882  0.7876376
## D10 0.1104167 -0.62453790 -0.3197390
## D11 0.1308746 -0.32232227  0.3134677

reg_model_PC = glm(formula = data3$ss_sum_new ~  data3$PC + data3$prof +
                     data3$age + data3$edu_stud, data=data3, family = "binomial")
summary(reg_model_PC)

##
## Call:
## glm(formula = data3$ss_sum_new ~ data3$PC + data3$prof + data3$age +
##     data3$edu_stud, family = "binomial", data = data3)
##
## Deviance Residuals:
##     Min       1Q   Median       3Q      Max
## -2.1018  -0.8699   0.3964   0.8749   2.0887
##
## Coefficients:
##                 Estimate Std. Error z value Pr(>|z|)
## (Intercept)    -6.92988    1.53192  -4.524 6.08e-06 ***
## data3$PC         0.66860    0.14875   4.495 6.96e-06 ***
## data3$prof       0.89624    0.40769   2.198   0.0279 *
## data3$age        0.03908    0.01864   2.097   0.0360 *
## data3$edu_stud  0.96533    0.54861   1.760   0.0785 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 202.15  on 145  degrees of freedom
## Residual deviance: 155.21  on 141  degrees of freedom
##   (36 Beobachtungen als fehlend gelöscht)
## AIC: 165.21
```

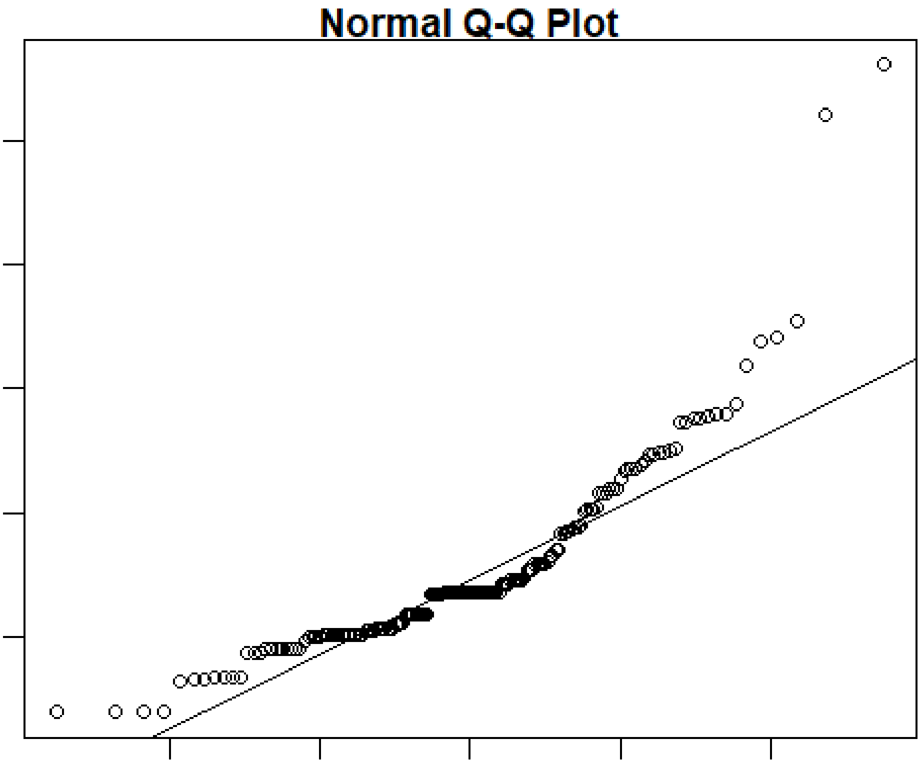
```
##
## Number of Fisher Scoring iterations: 4

#Omnibus-Test'
modelchi = reg_model_PC$null.deviance - reg_model_PC$deviance
chidf = reg_model_PC$de.null - reg_model_PC$df.residual
chisqp = 1-pchisq(modelchi, chidf)
#OR & CI
exp(cbind(OR = coef(reg_model_PC), confint(reg_model_PC)))

## Waiting for profiling to be done...

##                          OR      2.5 %     97.5 %
## (Intercept)    0.0009781172 0.00003928 0.01652109
## data3$PC       1.9515092750 1.47979349 2.66091873
## data3$prof     2.4503642538 1.10380990 5.49982899
## data3$age      1.0398584147 1.00317595 1.07976298
## data3$edu_stud 2.6256607302 0.91504855 8.01917015

#R2
n=length(reg_model_PC$residuals)
R2cs = 1-exp((reg_model_PC$deviance-reg_model_PC$null.deviance)/n)
R2n = R2cs/(1-exp(-(reg_model_PC$null.deviance/n)))
summary(R2n)

##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.3668  0.3668  0.3668  0.3668  0.3668  0.3668

##########Confirmatory Factor Analysis#########
######Cronbachs Alpha = Internal Consistency/ Reliability
#install.packages("psych")
library(psych)

alpha(subset(data3, select=c(D1a, D1b, D1c)))

##
## Reliability analysis
## Call: alpha(x = subset(data3, select = c(D1a, D1b, D1c)))
##
##   raw_alpha std.alpha G6(smc) average_r S/N   ase mean  sd median_r
##       0.72      0.74    0.67      0.48 2.8 0.032  5.5 1.2     0.48
##
##     95% confidence boundaries
##          lower alpha upper
## Feldt     0.64  0.72  0.78
## Duhachek  0.66  0.72  0.78
##
##  Reliability if an item is dropped:
##     raw_alpha std.alpha G6(smc) average_r S/N alpha se var.r med.r
## D1a      0.73      0.75    0.60      0.60 3.0    0.038    NA  0.60
## D1b      0.50      0.55    0.38      0.38 1.2    0.063    NA  0.38
## D1c      0.63      0.65    0.48      0.48 1.8    0.052    NA  0.48
##
##  Item statistics
##       n raw.r std.r r.cor r.drop mean  sd
## D1a 166  0.69  0.76  0.55   0.47  6.3 1.1
## D1b 166  0.85  0.85  0.76   0.65  5.5 1.4
## D1c 166  0.87  0.81  0.68   0.59  4.6 1.8
##
## Non missing response frequency for each item
##        1    2    3    4    5    6    7 miss
## D1a 0.01 0.01 0.01 0.05 0.08 0.25 0.60 0.09
## D1b 0.01 0.03 0.07 0.14 0.20 0.23 0.33 0.09
## D1c 0.05 0.11 0.18 0.13 0.15 0.19 0.19 0.09

##D2 till D11 as D1
```

```
######Correlations Inter-Item
###within the domains

cor.test(data3$D1a, data3$D1b, use = "complete.obs", method = c("pearson", "kendall", "spea
rman"))

##
##  Pearson's product-moment correlation
##
## data:  data3$D1a and data3$D1b
## t = 6.9461, df = 164, p-value = 8.376e-11
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.3498685 0.5865081
## sample estimates:
##       cor
## 0.4767812

cor.test(data3$D1a, data3$D1c, use = "complete.obs", method = c("pearson", "kendall", "spea
rman"))

##
##  Pearson's product-moment correlation
##
## data:  data3$D1a and data3$D1c
## t = 5.2732, df = 164, p-value = 4.181e-07
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.2424960 0.5038531
## sample estimates:
##       cor
## 0.3807535

cor.test(data3$D1c, data3$D1b, use = "complete.obs", method = c("pearson", "kendall", "spea
rman"))

##
##  Pearson's product-moment correlation
##
## data:  data3$D1c and data3$D1b
## t = 9.5112, df = 164, p-value < 2.2e-16
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.4882680 0.6862411
## sample estimates:
##       cor
## 0.5962446

##D2 till D11 as D1

###Check Requirements for CFA
#install.packages("sjPlot")
#install.packages("MVN")
#install.packages("psych")
#install.packages("lavaan")
#install.packages("semPlot")
library(sjPlot)

library(MVN)

library(psych)
library(lavaan)
library(semPlot)

knowledge_data3=data3[,c(41,42,43)]
skills_data3=data3[,c(44,45,46)]
socialprofessionalroleandidentity_data3=data3[,c(47,48,49)]
```

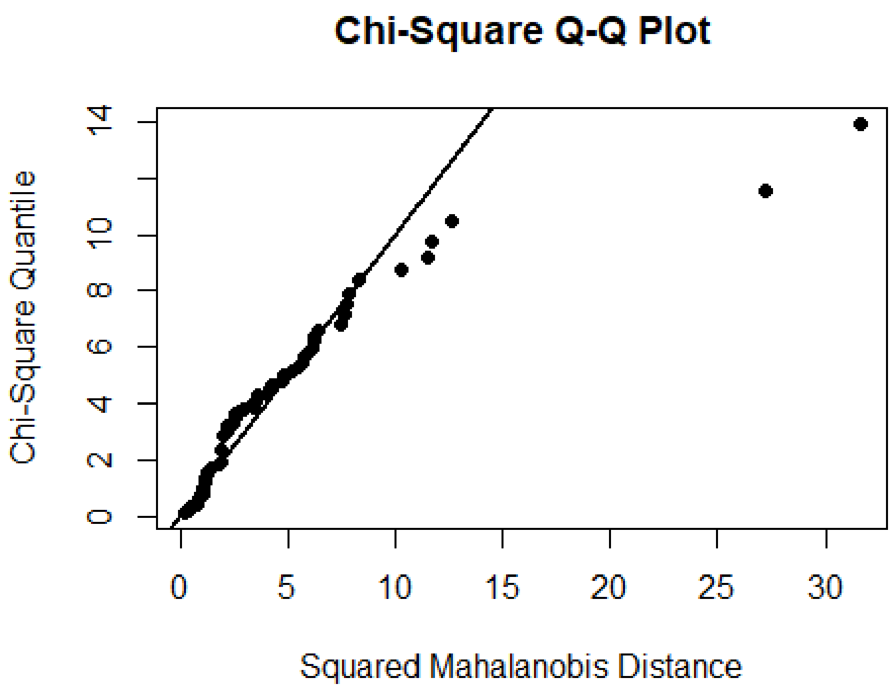
```
beliefsaboutcapabilities_data3=data3[,c(50,51,52)]
beliefsaboutconsequences_data3=data3[,c(53,54,55)]
goals_data3=data3[,c(56,57,58)]
sociopoliticalcontext_data3=data3[,c(59,60,61)]
socialinfluences_data3=data3[,c(62,63,64)]
emotions_data3=data3[,c(65,66,67,68)]
reinforcement_data3=data3[,c(69,70,71)]
natureofthebehaviour_data3=data3[,c(72,73,74)]

##Linear Relations?
#D1

pairs(knowledge_data3, panel=panel.smooth)
```



```
##D2 till D11 as D1

##Multivariate Normal Distribution of the different variables
#D1

par(mar=c(1, 1, 1, 1))
psych::mardia(knowledge_data3, na.rm = TRUE, plot=TRUE)
```



```
## Call: psych::mardia(x = knowledge_data3, na.rm = TRUE, plot = TRUE)
##
## Mardia tests of multivariate skew and kurtosis
## Use describe(x) the to get univariate tests
## n.obs = 166   num.vars =  3
## b1p =  5.39   skew =  149.13  with probability  <=  5.6e-27
##  small sample skew =  153.21  with probability <=  8.2e-28
## b2p =  22.86   kurtosis =  9.25  with probability <=  0

##D2 till D11 as D1

#D1

knowledge_data3 = filter(knowledge_data3, !is.na(D1a), !is.na(D1b), !is.na(D1c))
MVN::mvn(knowledge_data3,  mvnTest = "mardia", multivariatePlot = "qq")
```



```
##D2 till D11 as D1

#CFA
#install.packages("lavaan")
library(lavaan)

data3.model1<-'knowledge=~D1a+D1b+D1c
              skills=~D2a+D2b+D2c
              social professional role and identity=~D3a+D3b+D3c
              beliefs about capabilities=~D4a+D4b+D4c
              beliefs about consequences=~D5a+D5b+D5c
              goals=~D6a+D6b+D6c
              sociopolitical context=~D7a+D7b+D7c
              social influences=~D8a+D8b+D8c
              emotions=~D9a+D9b+D9c+D9d
              reinforcement=~D10a+D10b+D10c
              nature of the behaviour=~D11a+D11b+D11c'


fit.D = cfa(model=data3.model1, data=data3, estimator="MLR")

summary(fit.D, fit.measures=T, standardized=T)

## lavaan 0.6.16 ended normally after 171 iterations
##
##   Estimator                                         ML
##   Optimization method                           NLMINB
##   Number of model parameters                       123
##
##                                                   Used       Total
##   Number of observations                           151         182
##
## Model Test User Model:
##                                               Standard      Scaled
##   Test Statistic                               862.909     800.852
##   Degrees of freedom                               472         472
##   P-value (Chi-square)                           0.000       0.000
##   Scaling correction factor                                  1.077
```

```
##     Yuan-Bentler correction (Mplus variant)
##
## Model Test Baseline Model:
##
##   Test statistic                              4298.563    3749.085
##   Degrees of freedom                               561         561
##   P-value                                        0.000       0.000
##   Scaling correction factor                                  1.147
##
## User Model versus Baseline Model:
##
##   Comparative Fit Index (CFI)                    0.895       0.897
##   Tucker-Lewis Index (TLI)                       0.876       0.877
##
##   Robust Comparative Fit Index (CFI)                         0.903
##   Robust Tucker-Lewis Index (TLI)                            0.885
##
## Loglikelihood and Information Criteria:
##
##   Loglikelihood user model (H0)              -8499.487   -8499.487
##   Scaling correction factor                                  1.279
##       for the MLR correction
##   Loglikelihood unrestricted model (H1)      -8068.033   -8068.033
##   Scaling correction factor                                  1.119
##       for the MLR correction
##
##   Akaike (AIC)                               17244.974   17244.974
##   Bayesian (BIC)                             17616.100   17616.100
##   Sample-size adjusted Bayesian (SABIC)      17226.817   17226.817
##
## Root Mean Square Error of Approximation:
##
##   RMSEA                                          0.074       0.068
##   90 Percent confidence interval - lower         0.066       0.060
##   90 Percent confidence interval - upper         0.082       0.076
##   P-value H_0: RMSEA <= 0.050                    0.000       0.000
##   P-value H_0: RMSEA >= 0.080                    0.106       0.005
##
##   Robust RMSEA                                               0.071
##   90 Percent confidence interval - lower                     0.062
##   90 Percent confidence interval - upper                     0.079
##   P-value H_0: Robust RMSEA <= 0.050                         0.000
##   P-value H_0: Robust RMSEA >= 0.080                         0.030
##
## Standardized Root Mean Square Residual:
##
##   SRMR                                           0.088       0.088
##
## Parameter Estimates:
##
##   Standard errors                             Sandwich
##   Information bread                           Observed
##   Observed information based on                Hessian
##
data3.model<-'knowledge=~D1a+D1b+D1c
              skills=~D2a+D2b+D2c
              social professional role and identity=~D3a+D3b+D3c
              beliefs about capabilities=~D4a+D4b+D4c
              beliefs about consequences=~D5a+D5b+D5c
              goals=~D6a+D6b+D6c
              social influences=~D8a+D8b+D8c
              emotions=~D9a+D9b+D9c+D9d
              reinforcement=~D10a+D10b+D10c
              nature of the behaviour=~D11a+D11b+D11c'
```

```
fit.D = cfa(model=data3.model, data=data3, estimator="MLR")
summary(fit.D, fit.measures=T, standardized=T)

## lavaan 0.6.16 ended normally after 109 iterations
##
##   Estimator                                         ML
##   Optimization method                           NLMINB
##   Number of model parameters                       107
##
##                                                   Used       Total
##   Number of observations                           151         182
##
## Model Test User Model:
##                                               Standard      Scaled
##   Test Statistic                               696.708     632.567
##   Degrees of freedom                               389         389
##   P-value (Chi-square)                           0.000       0.000
##   Scaling correction factor                                  1.101
##     Yuan-Bentler correction (Mplus variant)
##
## Model Test Baseline Model:
##
##   Test statistic                              3987.915    3408.807
##   Degrees of freedom                               465         465
##   P-value                                        0.000       0.000
##   Scaling correction factor                                  1.170
##
## User Model versus Baseline Model:
##
##   Comparative Fit Index (CFI)                    0.913       0.917
##   Tucker-Lewis Index (TLI)                       0.896       0.901
##
##   Robust Comparative Fit Index (CFI)                         0.922
##   Robust Tucker-Lewis Index (TLI)                            0.907
##
## Loglikelihood and Information Criteria:
##
##   Loglikelihood user model (H0)              -7703.459   -7703.459
##   Scaling correction factor                                  1.272
##       for the MLR correction
##   Loglikelihood unrestricted model (H1)      -7355.104   -7355.104
##   Scaling correction factor                                  1.138
##       for the MLR correction
##
##   Akaike (AIC)                               15620.917   15620.917
##   Bayesian (BIC)                             15943.766   15943.766
##   Sample-size adjusted Bayesian (SABIC)      15605.122   15605.122
##
## Root Mean Square Error of Approximation:
##
##   RMSEA                                          0.072       0.064
##   90 Percent confidence interval - lower         0.064       0.056
##   90 Percent confidence interval - upper         0.081       0.073
##   P-value H_0: RMSEA <= 0.050                    0.000       0.004
##   P-value H_0: RMSEA >= 0.080                    0.074       0.001
##
##   Robust RMSEA                                               0.068
##   90 Percent confidence interval - lower                     0.058
##   90 Percent confidence interval - upper                     0.077
##   P-value H_0: Robust RMSEA <= 0.050                         0.002
##   P-value H_0: Robust RMSEA >= 0.080                         0.014
##
## Standardized Root Mean Square Residual:
##
##   SRMR                                           0.053       0.053
##
## Parameter Estimates:
```

```
##
##   Standard errors                                Sandwich
##   Information bread                              Observed
##   Observed information based on                   Hessian
##
##############Correlations###########
#PC

cor.test(data3$PC, data3$D1, use = "complete.obs", method = c("pearson", "kendall", "spearm
an"))

##
##  Pearson's product-moment correlation
##
## data:  data3$PC and data3$D1
## t = 9.7269, df = 149, p-value < 2.2e-16
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.5147026 0.7120462
## sample estimates:
##       cor
## 0.6231964

##domains and all other variables as PC

##############Stepwise Regression Analysis##########
#install.packages("MASS")
library(MASS)

data3 = filter(data3, !is.na(ss_sum_new), !is.na(PC), !is.na(sex),
               !is.na(edu_stud), !is.na(prof), !is.na(work_.),
               !is.na(extent), !is.na(ew_new), !is.na(work_exp),
               !is.na(age), !is.na(import_area), !is.na(import_pers))

full.model = glm(ss_sum_new~PC + sex + age + edu_stud + prof +
                   extent + work_. + work_exp + import_area + import_pers +
                   ew_new, data3, family= "binomial")
summary(full.model)

##
## Call:
## glm(formula = ss_sum_new ~ PC + sex + age + edu_stud + prof +
##     extent + work_. + work_exp + import_area + import_pers +
##     ew_new, family = "binomial", data = data3)
##
## Deviance Residuals:
##     Min       1Q   Median       3Q      Max
## -2.2643  -0.8709   0.3511   0.7877   2.2468
##
## Coefficients:
##             Estimate Std. Error z value Pr(>|z|)
## (Intercept) -7.80162    2.10798  -3.701 0.000215 ***
## PC           0.77503    0.20857   3.716 0.000202 ***
## sex         -0.27849    0.48067  -0.579 0.562329
## age          0.03599    0.02367   1.521 0.128317
## edu_stud     1.10075    0.67358   1.634 0.102221
## prof         0.91290    0.49310   1.851 0.064120 .
## extent      -0.09936    0.64348  -0.154 0.877288
## work_.       1.25256    1.22702   1.021 0.307339
## work_exp     0.03904    0.07759   0.503 0.614854
## import_area -0.18487    0.14782  -1.251 0.211085
## import_pers  0.03298    0.15454   0.213 0.831033
## ew_new       0.44367    0.40058   1.108 0.268041
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
```

```
##
##     Null deviance: 185.90  on 134  degrees of freedom
## Residual deviance: 136.72  on 123  degrees of freedom
## AIC: 160.72
##
## Number of Fisher Scoring iterations: 5
```

```
# Stepwise regression model
step.model <- stepAIC(full.model, direction = "both",
                      trace = TRUE)
```

```
## Start:  AIC=160.72
## ss_sum_new ~ PC + sex + age + edu_stud + prof + extent + work_. +
##     work_exp + import_area + import_pers + ew_new
##
##               Df Deviance    AIC
## - extent       1   136.74 158.74
## - import_pers  1   136.76 158.76
## - work_exp     1   136.97 158.97
## - sex          1   137.06 159.06
## - ew_new       1   137.96 159.96
## - work_.       1   137.97 159.97
## - import_area  1   138.34 160.34
## <none>             136.72 160.72
## - age          1   139.09 161.09
## - edu_stud     1   139.53 161.53
## - prof         1   140.20 162.20
## - PC           1   154.75 176.75
##
## Step:  AIC=158.74
## ss_sum_new ~ PC + sex + age + edu_stud + prof + work_. + work_exp +
##     import_area + import_pers + ew_new
##
##               Df Deviance    AIC
## - import_pers  1   136.79 156.79
## - work_exp     1   136.99 156.99
## - sex          1   137.08 157.08
## - ew_new       1   137.96 157.96
## - work_.       1   137.99 157.99
## - import_area  1   138.36 158.36
## <none>             136.74 158.74
## - edu_stud     1   139.53 159.53
## - age          1   139.73 159.73
## - prof         1   140.29 160.29
## + extent       1   136.72 160.72
## - PC           1   154.75 174.75
##
## Step:  AIC=156.79
## ss_sum_new ~ PC + sex + age + edu_stud + prof + work_. + work_exp +
##     import_area + ew_new
##
##               Df Deviance    AIC
## - work_exp     1   137.05 155.05
## - sex          1   137.09 155.09
## - work_.       1   138.02 156.02
## - ew_new       1   138.07 156.07
## - import_area  1   138.38 156.38
## <none>             136.79 156.79
## - edu_stud     1   139.53 157.53
## - age          1   139.79 157.79
## - prof         1   140.31 158.31
## + import_pers  1   136.74 158.74
## + extent       1   136.76 158.76
## - PC           1   159.41 177.41
##
## Step:  AIC=155.05
## ss_sum_new ~ PC + sex + age + edu_stud + prof + work_. + import_area +
```

```
##     ew_new
##
##               Df Deviance    AIC
## - sex          1   137.46 153.46
## - ew_new       1   138.16 154.16
## - work_.       1   138.30 154.30
## - import_area  1   138.64 154.64
## <none>             137.05 155.05
## - edu_stud     1   139.60 155.60
## + work_exp     1   136.79 156.79
## + import_pers  1   136.99 156.99
## - prof         1   141.00 157.00
## + extent       1   137.03 157.03
## - age          1   141.58 157.58
## - PC           1   159.61 175.61
##
## Step:  AIC=153.46
## ss_sum_new ~ PC + age + edu_stud + prof + work_. + import_area +
##     ew_new
##
##               Df Deviance    AIC
## - ew_new       1   138.57 152.57
## - work_.       1   138.66 152.66
## - import_area  1   139.09 153.09
## <none>             137.46 153.46
## - edu_stud     1   140.31 154.31
## + sex          1   137.05 155.05
## + work_exp     1   137.09 155.09
## - prof         1   141.16 155.16
## + import_pers  1   137.45 155.45
## + extent       1   137.46 155.46
## - age          1   142.63 156.63
## - PC           1   159.80 173.80
##
## Step:  AIC=152.57
## ss_sum_new ~ PC + age + edu_stud + prof + work_. + import_area
##
##               Df Deviance    AIC
## - import_area  1   139.90 151.90
## - work_.       1   140.27 152.27
## <none>             138.57 152.57
## + ew_new       1   137.46 153.46
## + sex          1   138.16 154.16
## - edu_stud     1   142.16 154.16
## - prof         1   142.19 154.19
## + work_exp     1   138.41 154.41
## + import_pers  1   138.53 154.53
## + extent       1   138.57 154.57
## - age          1   143.60 155.60
## - PC           1   160.48 172.48
##
## Step:  AIC=151.9
## ss_sum_new ~ PC + age + edu_stud + prof + work_.
##
##               Df Deviance    AIC
## - work_.       1   141.05 151.05
## <none>             139.90 151.90
## + import_area  1   138.57 152.57
## - prof         1   142.78 152.78
## + ew_new       1   139.09 153.09
## + sex          1   139.47 153.47
## - edu_stud     1   143.69 153.69
## + work_exp     1   139.71 153.71
## + import_pers  1   139.89 153.89
## + extent       1   139.90 153.90
## - age          1   144.43 154.43
## - PC           1   161.67 171.67
```

```
##
## Step:  AIC=151.05
## ss_sum_new ~ PC + age + edu_stud + prof
##
##               Df Deviance    AIC
## <none>              141.05 151.05
## + ew_new       1   139.86 151.86
## + work_.       1   139.90 151.90
## + import_area  1   140.27 152.27
## - edu_stud     1   144.31 152.31
## - prof         1   144.42 152.42
## + sex          1   140.70 152.70
## + work_exp     1   140.88 152.88
## + import_pers  1   141.03 153.03
## + extent       1   141.05 153.05
## - age          1   145.77 153.77
## - PC           1   165.15 173.15
```

```
summary(step.model)
```

```
##
## Call:
## glm(formula = ss_sum_new ~ PC + age + edu_stud + prof, family = "binomial",
##     data = data3)
##
## Deviance Residuals:
##     Min       1Q   Median       3Q      Max
## -2.1589  -0.8952   0.3903   0.8700   2.0728
##
## Coefficients:
##             Estimate Std. Error z value Pr(>|z|)
## (Intercept) -7.24478    1.63317  -4.436 9.16e-06 ***
## PC           0.70800    0.16213   4.367 1.26e-05 ***
## age          0.04173    0.01957   2.133   0.0329 *
## edu_stud     1.07141    0.60366   1.775   0.0759 .
## prof         0.79733    0.43419   1.836   0.0663 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 185.90  on 134  degrees of freedom
## Residual deviance: 141.05  on 130  degrees of freedom
## AIC: 151.05
##
## Number of Fisher Scoring iterations: 4
```

```
## Regressions
#D1
reg_model_D1 = glm(formula = data3$ss_sum_new ~  data3$D1 + data3$prof +
                     data3$age + data3$edu_stud, data=data3, family = "binomial")
#Omnibus-Test'
modelchi = reg_model_D1$null.deviance - reg_model_D1$deviance
chidf = reg_model_D1$de.null - reg_model_D1$df.residual
chisqp = 1-pchisq(modelchi, chidf)
#OR & CI
exp(cbind(OR = coef(reg_model_D1), confint(reg_model_D1)))
```

```
## Waiting for profiling to be done...
```

```
##                       OR        2.5 %   97.5 %
## (Intercept)    0.0139951 0.0008056296 0.191529
## data3$D1       1.2880775 0.9353993461 1.801016
## data3$prof     3.7577508 1.7657978765 8.254888
## data3$age      1.0318775 0.9969876182 1.069335
## data3$edu_stud 2.1928826 0.7556564652 6.645194
```

```
#R2
n=length(reg_model_D1$residuals)
R2cs = 1-exp((reg_model_D1$deviance-reg_model_D1$null.deviance)/n)
R2n = R2cs/(1-exp(-(reg_model_D1$null.deviance/n)))
summary(R2n)

##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.2107  0.2107  0.2107  0.2107  0.2107  0.2107

##D2 till D11 as D1
```

Additional file 10: Curriculum vitae

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68161 Mannheim

Maren Wittek

Berufliche Erfahrungen

Referentin

Referat - Quartiersentwicklung | seit 02/11/2022

Ministerium für Soziales, Gesundheit und Integration Baden-Württemberg

- Landesstrategie Quartier 2030
- Seniorenpolitik

Wissenschaftliche Mitarbeiterin

Zentrum für Präventivmedizin und Digitale Gesundheit | *01/07/2022 – 30/06/2023*

Universität Heidelberg, Medizinische Fakultät Mannheim

- Kompetenznetzwerk Präventivmedizin
- Schwerpunkte:
    - Präventive Maßnahmen der Kommunen in BW
    - Vernetzung Kommunen bzgl. präventiver Maßnahmen

Institut für Gerontologie | *15/03/2020 – 30/09/2022*

Universität Heidelberg, Fakultät für Verhaltens- und Empirische Kulturwissenschaften

- Forschungsprojekt: „Pflegenden Angehörigen von Menschen mit Demenz eine Stimme geben: das Town Hall Projekt"
- Schwerpunkte:
    - Partizipation pflegender Angehöriger von Menschen mit Demenz
    - Förderung angehörigen- und demenzsensibler Kommunen
    - Implementierungswissenschaft und –verhalten in der Kommune

Dozentin

Zentrum für Präventivmedizin und Digitale Gesundheit | *01/01/2023 – 30/06/2023*

Universität Heidelberg, Medizinische Fakultät Mannheim

- Seminar „Psychische Belastung am Arbeitsplatz" – Sozialmedizin – Modul Gesellschaft & Gesundheit für Medizinstudierende

Institut für Gerontologie | *09/11/2020 – 30/09/2022*

Universität Heidelberg

- Seminar „Wissenschaft verstehen: Fit für die Haus- und Abschlussarbeit" des B.A. & M.Ed. Gerontologie, Gesundheit und Care

Berufsschule Fachbereich Pflege | *seit 2020 – 2022*

Augusta-Bender-Schule Mosbach

- Workshop: Rückengerechtes Arbeiten (90min)
- Workshop: Vorstellung Town Hall-Projekt (90min)

Praktikum und Masterarbeit

AOK Baden-Württemberg | *01/03/2019 – 28/02/2020*

Hauptverwaltung; Fachbereich Gesundheitsförderung

- Erstellung der Masterarbeit
- Mitarbeit in der Weiterentwicklung eines Instrumentes zur Qualitätssicherung in der Gesundheitsförderung
- Vorbereitung und Durchführung von Workshops

Engagement

Seit Wintersemester 2021/22
Mitglied der Heidelberger
Graduiertenschule für Geistes- und Sozialwissenschaften

Sprachkenntnisse

Deutsch – Muttersprache
●●●●●

Englisch – Sehr gute Kenntnisse
●●●●○

Französisch – Gute Kenntnisse
●●○○○

Spanisch – Grundkenntnisse
●○○○○

IT - Kenntnisse

MS Office – Sehr gute Kenntnisse
●●●●○

MAXQDA – Sehr gute Kenntnisse
●●●●○

SPSS – Sehr gute Kenntnisse
●●●●○

R – Gute Kenntnisse
●●●○○

Physiotherapeutin
Praxis für Physiotherapie | seit *11/2020*
Physio Center | Mannheim

Praxis für Krankengymnastik | *12/2016 – 02/2019*
M1-Die Fitmacher | Mannheim

Workshopleitung
29./30. Tag der Allgemeinmedizin| 18/05/2019 & 19/10/2019
Universitätsklinikum Heidelberg

- Workshop für MFAs (90min)
- „Wenn der Schmerz im Nacken sitzt: Theorie & Praxis zur Schmerzprävention und -linderung"

Forschungspraktikum
Universität zu Lübeck | *19/03/2018 – 13/04/2018*
Institut für Sozialmedizin und Epidemiologie | Lübeck

Pflegepraktikum
Auslandspraktikum | *22/10/2012 – 17/12/2012*
St. Theresa's Hospital | Charandura | Simbabwe

Gynäkologie & Unfallchirurgie | *16/07/2012 – 17/09/2012*
St. Hedwig Klinik | Mannheim

Fort-/ und Weiterbildung

Baden-Württemberg - Zertifikat für Hochschuldidaktik
Hochschul Didaktik Zentrum | *02/2021 – 11/2022*
Universitäten Baden-Württemberg

Summer School | "Empirical Approaches on Aging Research" 2021
Universität Vechta | *16/08/2021 – 20/08/2021*

Internationale Summer School | Humboldt Reloaded SummerSchool 2018
Universität Hohenheim | *12/09/2018 – 21/09/2018*
"Is health nature or nurture?" | Englisch

SPSS – Kurs
Universität Heidelberg | *3. Semester M.Sc.*

Manuelle Lymphdrainage
Kurpfalz ML-Schule | *Mannheim* | *11/2016*

Rückenschullehrer-Lizenz
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Ausbildung

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Publikationen

Wittek M, Manke-Reimers F, Schmitt E (2023): Communities' implementation behaviour regarding caring relatives of people with dementia – a quantitative study among German communities. *Z Gerontol Geriat*. [Accepted].

Wittek M, Manke-Reimers F, Schmitt E (2022): Development and psychometric properties of the Community Implementation Behaviour Questionnaire (CIBQ) in the context of supporting caring relatives of people with dementia. *Int. J. Environ. Res. Public Health*. 19:16198. DOI: 10.3390/ijerph192316198.

Wittek M, Voß H, Kiefer A, Wiloth S, Schmitt E (2022): Community support for caring relatives of people with dementia: qualitative analysis using the Theoretical Domains Framework. *J Public Health (Berl.).* DOI: 10.1007/s10389-022-01744-w.

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Wittek M (2022, Oktober). „Entwicklung und psychometrische Eigenschaften des Community Implementation Behaviour Questionnaire (CIBQ): Im Kontext der Unterstützung pflegender Angehöriger von Menschen mit Demenz“ (Vortrag). 21. Deutscher Kongress für Versorgungsforschung 2022, Potsdam.

Wittek M (2022, September). „Versorgung pflegender Angehöriger von Menschen mit Demenz in der Kommune: Qualitative Analyse unter Verwendung des Theoretical Domains Frameworks.“ (Vortrag). Gerontologie und Geriatrie Kongress 2022, Frankfurt am Main.

Wittek M (2022, September). „Unterstützung pflegender Angehöriger von Menschen mit Demenz - Entwicklung des Community Implementation Behaviour Questionnaire (CIBQ).“ (Posterpräsentation). Gerontologie und Geriatrie Kongress 2022, Frankfurt am Main.

Kiefer A & **Wittek M** (2022, April). „Schöne Momente in der Pflege und Begleitung von Menschen mit Demenz – Auch in schwierigen Zeiten.“ (Präsentation). 6. Demenzwoche im Rhein-Erft-Kreis „Pflege für die Pflegenden – die Situation von pflegenden Angehörigen auch bei Demenz“. Bergheim.

Kiefer A & **Wittek M** (2022, März). „Innovative Hilfen für Pflegende: Berührende Momente auch in schwierigen Zeiten“ (Präsentation). Gerontologischer Studientag der Evangelischen Erwachsenenbildung Baden 2022 „Altern in gesellschaftlichen Veränderungsprozessen“. Heidelberg.

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M. Wittek

Mannheim, 20. August 2023

Personal Contribution to the Publications of this Cumulative Dissertation

1st Publication

Wittek M, Kiefer A, Kramer B, Wiloth S (2022): Implementation of communal support services - Determinants of the implementation of measures for caring relatives of people with dementia. *Pflege & Gesellschaft*. 1, 67-81.

Conceptualisation: MW; Methodology: MW; Software: n/a; Validation: MW, AK and BK; Formal Analysis: MW, AK and BK; Investigation: MW; Resources: n/a; Data Curation: MW; Writing - Original Draft Preparation: MW; Writing - Review and Editing: MW, AK, BK and SW; Visualisation: MW; Supervision: MW; Project Administration: MW; Funding Acquisition: SW. All authors have read and agreed to the published version of the manuscript.

2nd Publication

Wittek M, Voß H, Kiefer A, Wiloth S, Schmitt E (2022): Community support for caring relatives of people with dementia: qualitative analysis using the Theoretical Domains Framework. *J Public Health (Berl.)*. https://doi.org/10.1007/s10389-022-01744-w

Conceptualisation: MW; Methodology: MW; Software: MW, AK and HV; Validation: MW, AK and HV; Formal Analysis: MW, AK and HV; Investigation: MW; Resources: n/a; Data Curation: MW; Writing - Original Draft Preparation: MW; Writing - Review and Editing: MW, AK, HV, SW and ES; Visualisation: MW; Supervision: ES; Project Administration: MW and SW; Funding Acquisition: SW. All authors have read and agreed to the published version of the manuscript.

3rd Publication

Wittek M, Manke-Reimers F, Schmitt E (2022): Development and psychometric properties of the Community Implementation Behaviour Questionnaire (CIBQ) in the context of supporting caring relatives of people with dementia. *Int. J. Environ. Res. Public Health.* 19(23), 16198. https://doi.org/10.3390/ijerph192316198

Conceptualisation: MW; Methodology: MW, FM-R and ES; Software: MW and FM-R; Validation: MW, FM-R and ES; Formal Analysis: MW, FM-R and ES; Investigation: MW; Resources: n/a; Data Curation: MW; Writing - Original Draft Preparation: MW; Writing - Review and Editing: MW, FM-R and ES; Visualisation: MW; Supervision: ES; Project Administration: MW; Funding Acquisition: n/a. All authors have read and agreed to the published version of the manuscript.

4th Publication

Wittek M, Manke-Reimers F, Schmitt E (2023): Factors associated with communities' implementation behaviour regarding caring relatives of people with dementia – a quantitative study among German communities. *ZfGG.* [in Press].

Conceptualisation: MW; Methodology: MW, FM-R and ES; Software: MW and FM-R; Validation: MW, FM-R and ES; Formal Analysis: MW, FM-R and ES; Investigation: MW; Resources: n/a; Data Curation: MW; Writing - Original Draft Preparation: MW; Writing - Review and Editing: MW, FM-R and ES; Visualisation: MW; Supervision: ES; Project Administration: MW; Funding Acquisition: n/a. All authors have read and agreed to the published version of the manuscript.

Declaration in accordance to § 8 (1) c) and d) of the doctoral degree regulation of the Faculty

Promotionsausschuss der Fakultät für Verhaltens- und Empirische Kulturwissenschaften der Ruprecht-Karls-Universität Heidelberg / Doctoral Committee of the Faculty of Behavioural and Cultural Studies of Heidelberg University

Erklärung gemäß § 8 (1) c) der Promotionsordnung der Universität Heidelberg für die Fakultät für Verhaltens- und Empirische Kulturwissenschaften / Declaration in accordance to § 8 (1) c) of the doctoral degree regulation of Heidelberg University, Faculty of Behavioural and Cultural Studies

Ich erkläre, dass ich die vorgelegte Dissertation selbstständig angefertigt, nur die angegebenen Hilfsmittel benutzt und die Zitate gekennzeichnet habe. / I declare that I have made the submitted dissertation independently, using only the specified tools and have correctly marked all quotations.

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Ich erkläre, dass ich die vorgelegte Dissertation in dieser oder einer anderen Form nicht anderweitig als Prüfungsarbeit verwendet oder einer anderen Fakultät als Dissertation vorgelegt habe. / I declare that I did not use the submitted dissertation in this or any other form as an examination paper until now and that I did not submit it in another faculty.

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Unterschrift / Signature	Dem Dekanat der Fakultät für Verhaltens- und Empirische Kulturwissenschaften liegt eine unterschriebene Version dieser Erklärung vom 05.09.2023 vor.