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**Leaving and Staying with the Employer in Later Working Life –
Consequences for Work, Health, and Work Ability**

Dissertation

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“What do you fear, lady?” he asked.

“A cage,” she said. “To stay behind bars, until use and old age accept them, and all chance of doing great deeds is gone beyond recall or desire.”

J.R.R. Tolkien¹

The PhD thesis can be quoted as follows:

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¹ Tolkien, J.R.R. (1999). *The Lord of the Rings - The Return of the King*. Boston: Houghton Mifflin.

Abstract

In the context of extended working lives, strategies that have the potential to increase the employment participation of older workers gain in importance. One strategy proposed is an employer change at higher working age, which may improve the fit between older workers and their work regarding working conditions, motivation, work ability and health - and therefore to extend the personal working life. By changing on their own initiative, older workers have the opportunity to leave unsuitable and psychologically or physically demanding jobs. However, voluntary employer changes are not an opportunity for every older worker as diverse obstacles such as employer provided pension systems, assured income, job security, or poor health prevent such changes. The group of older workers characterized by the personal inability to change or the lack of alternatives, although they would prefer to change, constitutes more of a risk group to employment participation.

Therefore, the aim of the present thesis is to shed light on actual and desired employer changes among older workers, their proportion, antecedents and consequences on work, health and work ability. The model on *motivational states of staying and leaving* by Hom, Mitchell, Lee, and Griffeth (2012) form a theoretical basis for this thesis as four groups of workers were distinguished: The *enthusiastic leavers* who want to and can leave, the *reluctant leavers* who have to leave because they are forced to, the *reluctant stayers* who do not change although they would prefer to and the *enthusiastic stayers*, who want to stay and feel no external pressure to leave. This thesis consists of three studies published in international peer-reviewed journals. All studies are based on data from the German lidA Cohort Study, which is a representative cohort study of socially insured older employees in Germany born in either 1959 or 1965. The analyses included data from the first three waves of the study, 2011 (n=6585), 2014 (n=4244) and 2018 (n=3586).

Study I gives an overview on the topic of occupational change at higher working age including frequencies, reasons for actual and desired changes and characterizations of the four change groups. Changes of employer are differentiated from two other forms of occupational change: the change of work tasks and the change of profession. The analyses are based on data from the second and third wave of the lidA-study. The results showed that the most common occupational changes were changes of work tasks (45.1%), followed by changes of employer (13.4%) and profession (10.5%). Multinomial logistic regression analyses revealed that *enthusiastic leavers*, *reluctant leavers* and *reluctant stayers* differ from the *enthusiastic stayers* in terms of socio-demographic factors, health measures, and job factors.

Study II focuses on employer changes and the short-term consequences of voluntary, involuntary and desired changes for health, work ability and several psychosocial working conditions. The analyses are also based on data from the second and third wave of the lidA-study. Repeated Measures ANOVAs

revealed that the groups differ significantly in terms of health, work ability, and psychosocial work factors. While *enthusiastic leavers* reported significant improvements in mental health, work ability, leadership quality, work-family conflict, possibilities for development and quantitative demands, *reluctant stayers* reported deteriorations while staying with their employer. *Reluctant leavers* reported, on the one hand, improvements in work ability, leadership quality and support from colleagues, and on the other hand, deteriorations in influence at work.

In study III, the long-term consequences of voluntary employer changes on the older workers' work ability were investigated. With data from the first three waves of the lidA-study, changers and stayers were tracked and compared over seven years. Fixed effects regression analyses, including lag and lead variables, showed that the work ability of participants, who changed between 2011 and 2014, initially improved following the change and then considerably deteriorated while staying with the new employer. This phenomenon is called a honeymoon-hangover effect (Boswell, Boudreau, & Tichy, 2005).

Overall, the three studies showed that employer changes at higher working age help to maintain health and work ability and can significantly improve adverse psychosocial working conditions. Although a honeymoon-hangover effect for work ability was investigated and found, long-term consequences for a higher employment participation are to be expected. Older workers who do not want to stay with the employer are a risk group for adverse working conditions, poor health, low work ability, and early exit from work. Consequences on an organizational and national level can be derived from the results. More research is needed on the long-term consequences of voluntary and involuntary staying and leaving at higher working age on employment participation and on the obstacles which keep older workers at undesired workplaces.

Keywords: *employer change; job lock; older workers; health; work ability*

Abstract (German)

Im Kontext verlängerter Erwerbsbiographien gewinnen Strategien, die dabei unterstützen können ältere Arbeitnehmer im Erwerbsleben zu halten, an Relevanz. Eine Strategie kann ein Arbeitgeberwechsel im höheren Erwerbsalter sein. Dieser ermöglicht es eine bessere Passung zwischen den Arbeitsanforderungen und den Arbeitnehmern zu schaffen sowie körperlich oder psychisch belastende Arbeitsplätze zu verlassen. Arbeitgeberwechsel können sich dadurch positiv auf die Arbeitsbedingungen, Arbeitsmotivation, Arbeitsfähigkeit und Gesundheit auswirken und möglicherweise das persönliche Erwerbsleben verlängern. Für manche älteren Arbeitnehmer sprechen jedoch diverse Hinderungsgründe gegen einen Wechsel, obwohl sie sich einen Wechsel wünschen würden. Wer dadurch unfreiwillig bei seinem Arbeitgeber bleibt, verlässt möglicherweise eher früher als später das Erwerbsleben.

Ziel dieser Dissertation ist, die Häufigkeiten, Gründe und Determinanten sowie die Auswirkungen von tatsächlichen und gewünschten Arbeitgeberwechseln auf Arbeit, Gesundheit und Arbeitsfähigkeit von älteren Arbeitnehmern quantitativ zu untersuchen und zu diskutieren. Das Model der *motivational states of staying and leaving* von Hom et al. (2012) bildet dabei eine theoretische Basis. Dieses unterscheidet vier Gruppen von Arbeitnehmern in Bezug auf Arbeitgeberwechsel: Die *enthusiastic leavers* (freiwillig wechseln), die gerne wechseln würden und dies auch können, die *reluctant leavers* (unfreiwillig wechseln), die wechseln müssen, weil sie ihren Arbeitsplatz verloren haben, die *reluctant stayers* (unfreiwillig bleiben), die nicht wechseln, obwohl sie es gerne würden und die *enthusiastic stayers* (freiwillig bleiben), die gerne bei ihren Arbeitgeber bleiben möchten und dies auch können. Diese Dissertation ist eine kumulative Dissertation und setzt sich aus drei Artikeln zusammen, die in international anerkannten Fachzeitschriften mit wissenschaftlicher Qualitätskontrolle erschienen sind. Datengrundlage für die Artikel ist die lidA-Studie, eine Kohortenstudie, die für die deutsche ältere Erwerbsbevölkerung der Geburtsjahrgänge 1959 und 1965 repräsentativ ist. In den Analysen werden die Daten der ersten drei Befragungswellen der lidA-Studie genutzt, die 2011 (n=6585), 2014 (n=4244) und 2018 (n=3586) durchgeführt wurden.

Artikel I gibt einen Überblick über berufliche Wechsel im höheren Erwerbsalter, wobei zwischen Berufs-, Arbeitgeber- und Tätigkeitswechsel unterschieden wurde. Häufigkeiten und Gründe für tatsächliche und gewünschte Wechsel werden dargestellt und die Wechselgruppen wurden charakterisiert. Für die Analysen wurden die Daten der zweiten und dritten Welle der lidA-Studie verwendet. Die Ergebnisse zeigen, dass Tätigkeitswechsel am häufigsten bei älteren Arbeitnehmern vorkommen (45.1%), gefolgt von Arbeitgeber- (13.4%) und Berufswechseln (10.5%). Multinominale logistische Regressionsanalysen haben ergeben, dass sich die Gruppen *enthusiastic leavers*, *reluctant*

leavers und *reluctant stayers* von der Gruppe der *enthusiastic stayers* im Hinblick auf soziodemografische Faktoren, Gesundheit und Arbeitsfaktoren unterscheiden.

Artikel II fokussiert die unmittelbaren Auswirkungen von freiwilligen, unfreiwilligen und gewünschten Arbeitgeberwechseln auf psychosoziale Arbeitsbedingungen, Gesundheit und Arbeitsfähigkeit. Die Analysen basieren ebenfalls auf den Daten der zweiten und dritten Welle der lidA-Studie. Repeated Measures ANOVAs zeigten, dass sich die Gruppen deutlich in Hinblick auf psychosoziale Arbeitsbedingungen, Gesundheit und Arbeitsfähigkeit unterscheiden. Wer freiwillig wechselte, berichtete von deutlichen Verbesserungen der psychischen Gesundheit, Arbeitsfähigkeit, Führungsqualität, Entwicklungsmöglichkeiten, quantitativen Anforderungen und des Arbeit-Privatleben Konflikts. Wer dagegen unfreiwillig blieb, berichtete von Verschlechterungen über die Zeit. Die unfreiwilligen Wechsler berichteten sowohl von Verbesserungen, zum Beispiel bei der Arbeitsfähigkeit, Führungsqualität oder Unterstützung von Kollegen, als auch von Verschlechterungen in Bezug auf den Einfluss bei der Arbeit.

In Artikel III wurden die Langzeitauswirkungen von freiwilligen Arbeitgeberwechseln auf die Arbeitsfähigkeit in den Blick genommen. Die Daten der erste drei Wellen der lidA-Studie erlaubten es die Arbeitnehmer über sieben Jahre hinweg zu untersuchen. Fixed effects Regressionen mit Einschluss von lag und lead Variablen wurden durchgeführt. Die Analysen zeigen, dass Arbeitnehmer, die zwischen 2011 und 2014 zunächst ihren Arbeitgeber wechselten und dann bei ihrem neuen Arbeitgeber blieben, zunächst von einer deutlichen Verbesserung der Arbeitsfähigkeit berichteten, welche aber mit der Zeit wieder stark sank. Dieses Phänomen wird auch *honeymoon-hangover effect* genannt (Boswell et al., 2005).

Insgesamt zeigten die Analysen der drei Artikel, dass Arbeitgeberwechsel tatsächlich das Potenzial haben die Gesundheit und Arbeitsfähigkeit älterer Arbeitnehmer zu erhalten und schlechte psychosoziale Arbeitsbedingungen zu verbessern. Obwohl für die Arbeitsfähigkeit ein sogenannter *honeymoon-hangover effect* identifiziert wurde, kann davon ausgegangen werden, dass Arbeitgeberwechsel zu einer höheren Erwerbsbeteiligung älterer Arbeitnehmer beitragen können. Arbeitnehmer, die jedoch unfreiwillig bei ihrem Arbeitgeber bleiben, stellen eher eine Risikogruppe für schlechte Arbeitsbedingungen, schlechte Gesundheit, niedrige Arbeitsfähigkeit und einen vorzeitigen Ausstieg aus dem Erwerbsleben dar. Hier zeigen die Ergebnisse Handlungsbedarf auf betrieblicher und nationaler Ebene auf. Weitere Forschung zu den Langzeitauswirkungen von freiwilligem und unfreiwilligem Wechseln und Bleiben auf die Erwerbsbeteiligung von älteren Arbeitnehmern ist nötig. Ebenfalls sollte die zukünftige Forschung die Hinderungsgründe für Arbeitgeberwechsel in den Fokus nehmen.

Keywords: *Arbeitgeberwechsel; ältere Arbeitnehmer; Gesundheit; Arbeitsfähigkeit*

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List of abbreviations

AAA	Job A, Job A, Job A
AAB	Job A, Job A, Job B
ABB	Job A, Job B, Job B
ABC	Job A, Job B, Job C
ANOVA.....	analysis of variance
BHPS	British Household Panel Survey
COPSOQ.....	Copenhagen Psychosocial Questionnaire
EL	enthusiastic leavers
ES	enthusiastic stayers
GLM	General Linear Models
HHE.....	honeymoon-hangover effect
HILDA.....	Household, Income and Labour Dynamics in Australia
HMH	Hans Martin Hasselhorn
lidA.....	leben in der Arbeit
NG.....	Nina Garthe
RL.....	reluctant leavers
RS.....	reluctant stayers
SF-12	Short Form (12) Health Survey

Preface

This thesis consists of a general introduction and discussion and three studies published in international peer-reviewed scientific journals:

- (I) Garthe, N. & Hasselhorn, H.M. (2021a). Changes of profession, employer and work tasks in later working life - An empirical overview of staying and leaving. *Ageing & Society*, 1-21. doi: 10.1017/S0144686X21000088
- (II) Garthe, N. & Hasselhorn, H.M. (2020). Leaving and staying with the employer - Changes in work, health and work ability among older workers. *International Archives of Occupational and Environmental Health*, 94(1), 85-93. doi: 10.1007/s00420-020-01563-0
- (III) Garthe, N. & Hasselhorn, H.M. (2021b). The relationship between voluntary employer change and work ability among older workers: Investigating the honeymoon-hangover effect. *Journal for Labour Market Research*, 55(12), 1-12. doi: 10.1186/s12651-021-00294-0

1. General Introduction

This section provides a general introduction to the topic of the thesis and consists of a description of the background (1.1), relevant underlying theoretical approaches (1.2), previous empirical findings (1.3.), and the aim and scope of the thesis (1.4). The introduction is followed by a summary of the studies (section 2) and a general discussion of the results (section 3).

1.1 Background

The demographic change in Germany leads to an aging and shrinking workforce. With fewer young workers available on the labor market, employers need to rely more on older workers. A consequence for the older workers is the extension of their working lives, due to an increased statutory retirement age. This may constitute a challenge specifically for older workers for different reasons.

Firstly, the fit between the older workers and their jobs may decrease as health, work ability, and motivation often decrease or change with age (Frerichs, 2015). Secondly, the work and labor markets are changing constantly. Digitalization, globalization and flexibilization cause faster and unforeseen changes in work such as rapid successive introductions of new digital systems to which the employers and the older workers have to adapt to (Szydlík, 2008). Professions and work requirements are also changing and they may no longer correspond to the qualifications of the older employees (Blossfeld, 1985). Finally, a range of jobs goes along with adverse working conditions such as physically demanding work, work with environmental influences (e. g., heat, wet, noise) or work with psychosocial strain which pose a particular challenge for workers at higher working age (Eurofound, 2016; Zieschang, Bräunig, & Buschner, 2015).

This raises the question on how older employees can manage to work sustainably until or possibly for longer than the statutory retirement age. One strategy proposed is an employer change at higher working age. Such a change may include the potential to improve the fit between the older workers and their work, with regard to working conditions, qualifications, motivation, work ability, and health (Behrens, 1999; Jahn & Ulbricht, 2011; Morschhäuser, 2002a; Zieschang et al., 2015). By changing on their own initiative, employees have the opportunity to leave unsuitable and psychologically or physically demanding jobs. This strategy could enable older workers to extend the personal working life if they want or need to.

Nevertheless, such employer changes at higher working age may not only offer chances, but also bear risks. Low reemployment rates of older workers, age-stereotypes, poor health, high qualification requirements, and high rates of long-term unemployment at higher working age are some of the obstacles keeping older employees in their present jobs (Bailey & Hansson, 1995). Low motivation to keep working and low self-esteem may also contribute to the employees' preference to rather exit earlier from work than to change jobs (Moen, Kojola, Kelly, & Karakaya, 2016). In times of extended

working life policies, staying involuntarily in inappropriate working situations may not only lead to an earlier exit from the labor market, but also bear the risk for further worsening health and work ability.

1.1.1 Change of Employer in Contrast to Other Occupational Changes

A *change of employer* can be defined as a change from one employer to another, typically while continuing to practice the same profession. Depending on the discipline, researchers use alternative terms such as turnover, transition, (external) job mobility, or career change (Alcover & Topa, 2018; Hom et al., 2012; Morris, 2009; Trevor, 2001). Other forms of occupational change can be distinguished from a change of employer such as the change of profession and the change of work tasks. A *change of profession* can be defined as a change from one profession to another which is often accompanied by a change of position, retraining, or further education and may end in a changed professional identity. Examples are a change from seller to bus driver or a change from research assistant to professor. A *change of work tasks* can be described as a change of the work tasks within the workplace without changing profession or employer, for example by adding, omitting, or modifying tasks.

Research and theory assume that occupational changes often cannot be clearly separated as different definitions and forms of measurement exist. Also, there is likely to be a variance in how respondents understand the survey questions on occupational change. Hecker (2000) mentioned that some study participants may classify changes in work tasks or technological changes as changes in profession. Furthermore, the different forms of occupational change may coincide as depicted in figure 1. Thus, a change of employer can, but does not have to, go along with a change of profession or work tasks. The potential overlap should be considered when interpreting the results of changes of employer. In the analyses, the three forms of occupational change are differentiated (study I, Garthe & Hasselhorn, 2021a). The focus of this thesis, however, is the change of employer as this change is probably the smallest obstacle for older employees with simultaneously having the greatest impact compared to a change of profession or work tasks. It can also be well investigated in empirical studies and has a clear definition.



Figure 1. The overlap of occupational changes

1.1.2 The Context of the Thesis

This thesis aims to provide an interdisciplinary perspective on the topic changes of employer as these are examined in various disciplines such as Economics, Psychology, and Sociology. The *Occupational Science* (German: Arbeitswissenschaft), however, forms a common basis for this thesis. Occupational Science is a young discipline in Germany and can be compared internationally with the disciplines Ergonomics or Human Factors. The aim of Occupational Science is to organize work humanely as well as effectively and efficiently. This takes into account that technical, organizational, and social working conditions are designed in such a way that the work does not endanger health, is feasible, offers the opportunity to further develop the personality, and that the work content and work environment are designed appropriately (Schlick, Bruder, & Luczak, 2018).

A range of further disciplines deal with work, each from their own perspective, and allow Occupational Science to view work in an interdisciplinary manner. Relevant disciplines for this thesis are Occupational Medicine, Sociology, Work and Organizational Psychology and Occupational Safety. The following passage gives a brief insight into the subject matter of these disciplines.

The focus of *Occupational Medicine* is the prevention, promotion and maintenance of health as well as work ability and employability. It examines the interrelationships between working conditions, the organization of work, health, and work ability taking into account physical, psychological, and social processes and their short-term and long-term consequences (Schlick et al., 2018). In this context, *Sociology* deals with the workers as parts of a social system within an organization, their job satisfaction and work motivation as well as the effects of changes in organizational structures. Here, the focus is on the worker as a social being as well as the workers' relationships, role, and career development (Schlick et al., 2018). The *Work and Organizational Psychology* looks at the experiences and behavior of workers in organizations depending on their working conditions and work tasks. The individual is perceived as a working person with individual motives, needs, goals, and plans. The effects

of leadership quality and membership in an organization are also examined (Schlick et al., 2018). The aim of *Occupational Safety* is to maintain and improve the safety and health protection of employees at work. Occupational Safety is based on the German Safety and Health at Work Act which states that measures to prevent accidents at work, work-related health risks, and measures for the human-friendly organization of work must be taken. The work must be designed in such a way that a risk to physical and mental health is avoided as far as possible (Gesetz über die Durchführung von Maßnahmen des Arbeitsschutzes zur Verbesserung der Sicherheit und des Gesundheitsschutzes der Beschäftigten bei der Arbeit, 1996).

1.2 Theoretical Approaches

Theory on voluntary changes of employer dates back to 1958 when March and Simon published the first turnover model. The model's purpose was to explain how job dissatisfaction leads to voluntary employee turnover (March & Simon, 1958). General job availability and individual attributes, referred to as the movement capital, influence this relationship (Trevor, 2001). Other early and established models are *Mobley's turnover model* from 1977, *Mobley's expanded turnover model* from 1979 (Mobley, 1977; Mobley, Griffeth, Hand, & Meglino, 1979), and *the causal model of turnover* (Price & Mueller, 1981). The focus of these models is on the psychological processes that play a role when an employee changes employer. They were designed in the context of an economic perspective which should help employers to explain, predict, and influence the change of their employees and which emphasizes the advantages and disadvantages of the change for the employers.

Over time, theory and models became more differentiated and also included paths other than voluntary change such as alternative forms of withdrawal behavior or involuntary change as it is depicted in the *push model* by Jackofsky (1984). From a theoretical point of view, it is important to distinguish between voluntary and involuntary employer changes as different processes and mechanisms take place. Most change models describe the process of changing employer that ends with the action of change and do not describe the consequences of the employer change.

However, the models also show that this process does not necessarily have to result in a change. Most change models include the option of voluntary and/or involuntary staying with the employer, for example due to a lack of opportunities to change, such as *March and Simon's turnover model* (1958), *Mobley's expanded turnover model* (1979), *the causal model of turnover* (Price & Mueller, 1981), and the *Model of Job Satisfaction, Determinants of Actual Ease of Movement, and Voluntary Turnover* (Trevor, 2001). The latest theories explicitly focus on involuntary staying such as the theory on *job lock* or *stuck at work* (Huyse-Gaytandjieva, Groot, & Pavlova, 2013a) and even voluntary staying such as the theory on *job embeddedness* (Lee, Burch, & Mitchell, 2014).

Table 1 gives a short overview of the most relevant and established theories and models on changes of employer and indicates if the theory or model covers voluntary or involuntary leaving and staying with the employer. In relation to the context of this thesis, it is noticeable that no theory or model has been developed specifically for older workers. Few theories like *Mobley's expanded turnover model* (1979) include the aspect of age.

Table 1. Overview of relevant theories and models on changes of employer

Theory/Model	Summary	(In)voluntary staying/leaving	Type of model
Motivational states of staying and leaving (Hom et al., 2012)	The two dimensions (a) desired staying or leaving and (b) high or low perceived control of this preference were combined. This results in four motivational states of staying and leaving: Enthusiastic leavers, reluctant leavers, enthusiastic stayers and reluctant stayers.	Voluntary and involuntary staying and leaving	Group definitions
March and Simon's turnover model (1958)	Job dissatisfaction leads to desired employee turnover when the possibilities and alternatives are given.	Voluntary leaving	Process model
Mobley's 'expanded' turnover model (Mobley, 1977; Mobley et al., 1979)	Turnover is a process based on the joint contribution of job satisfaction, job attraction and the attraction of alternatives. It is influenced by individual differences of perceptions, expectations and values on the present work situation.	Voluntary leaving, involuntary staying	Process model
Lee and Mitchell's unfolding model of voluntary turnover (1999)	There are five different paths of turnover employees take after experiencing a 'shock'.	Voluntary leaving	Process model
A causal model of turnover (Price & Mueller, 1981)	Eleven determinants contribute to voluntary leaving, however, the possibility to stay is included.	Voluntary leaving	Process model
A model of voluntary employee turnover (Steers & Mowday, 1979)	The model describes "the psychological and behavioral mechanisms used by employees to accommodate the decision to stay or leave once this decision has been made." (Steers & Mowday, 1979, 1)	Voluntary leaving	Process model
Model of Job Satisfaction, Determinants of Actual Ease of Movement, and Voluntary Turnover (Trevor, 2001)	Job satisfaction is connected to voluntary turnover and mediated by the general job availability and the movement capital.	Voluntary leaving	Process model
Profiles in quitting (Maertz & Campion, 2004)	There are four different types of quitting depending on having or not having job offers and plans.	Voluntary leaving	Group definitions
The push model of turnover (Jackofsky, 1984)	Employees are pushed out the organization due to their job performance. Low performers by poor future prospects and reduced job security. High performers by lucrative, external employment alternatives.	Voluntary and involuntary leaving	Process model
A process model for understanding victim responses to worksite/function closure (Blau, 2006)	Based on the grieving stages by Kübler-Ross (1969) the process model describes victim responses to worksite/function closure which can be clustered into two general grieving categories (negative [denial, anger, bargaining depression] and positive [exploration, acceptance]).	Involuntary leaving	Process model
Job embeddedness (Lee et al., 2014; Mitchell, Holtom, Lee, Sablynski, & Erez, 2001)	Three dimensions indicate the level of connection between employee and employer (links, fit, sacrifice).	Voluntary and involuntary staying	Description of work situation
Job lock (Huyse-Gaytandjieva et al., 2013a)	Employees find themselves tied to their employees due to external factors.	Involuntary staying	Description of work situation
Stuck at work (Huyse-Gaytandjieva et al., 2013a)	Employees find themselves tied to their employees due to personal relationships to the job.	Involuntary staying	Description of work situation

One model stands out because it includes both voluntary and involuntary leaving and staying. In their model on *motivational states of staying and leaving* Hom et al. (2012) deliver a description of four employee groups. The authors combine the two dimensions (a) desired staying or leaving and (b) high or low perceived control of this preference. This results in four motivational states: The *enthusiastic leavers* are those who want to and can leave, *reluctant leavers* have to leave because they are forced to, for example due to layoffs, plant closures, company mergers, or reorganization, *reluctant stayers* who are characterized by the personal inability or the lack of alternatives to change although they would prefer to and *enthusiastic stayers*, who want to stay and feel no external pressure to leave (see table 2). This model forms an important basis for this thesis as these four groups are also differentiated in the empirical studies.

Table 2. The motivational states of staying and leaving by Hom et al. (2012)

		(b) perceived control	
		low	high
(a) desire	leave	reluctant stayers	enthusiastic leavers
	stay	reluctant leavers	enthusiastic stayers

The majority of further theories focuses on only one of the four motivational states, but describing the state in depth. Some theories cover several states such as voluntary and involuntary leaving (see table 1). One key model or theory referred to in this thesis is described below for each of the four states: *Mobley's 'expanded' turnover model* (voluntary/enthusiastic leaving), the *push model of turnover* (involuntary/reluctant leaving), the theory on *job lock* and *stuck at work* (involuntary/reluctant staying) and the theory on *job embeddedness* (voluntary/enthusiastic staying).

1.2.1 Leaving

In *Mobley's first turnover model* from 1977 job dissatisfaction is the important cause of employer change, which is similar to the first turnover model by March and Simon (1958). In contrast to March and Simon, Mobley described following stages of a decision making process resulting in actual turnover: evaluation of existing job, experienced job (dis)satisfaction, thinking of quitting, evaluation of expected utility of search and cost of quitting, intention to search for alternatives, search for alternatives, evaluation of alternatives, comparison of alternatives versus present job, intention to quit or stay, and finally quit or stay (Mobley, 1977). He first created a model where a change of employer is described as a process and included the opportunity to stay rather than leave.

In 1979 Mobley and colleagues expanded the model by adding different distal causes of turnover turning the view from the *how* to the *why* employees change (Hom, Lee, Shaw, & Hausknecht, 2017).

They added antecedents to the intention to quit (see figure 2): (1) *Job satisfaction* as affective response to the evaluation of the present job. It is determined by individual values, perceptions, and expectations which are shaped by individual occupational factors such as the skill level or status and personal factors such as age, tenure, education, personality, or family responsibility. (2) The *evaluation of the present job* which is for example shaped by organizational policies, rewards, working conditions, and climate. Additionally, (3) the *evaluation of alternatives* which is for example shaped by the perceptions of the labor market, unemployment rates, recruiting levels, and vacancy rates. Furthermore, the intention to quit is influenced by the centrality of non-work values and the expectation of non-work consequences of quitting. The model also includes the option of involuntary staying for example due to a contract bound (Mobley et al., 1979).

The complex expanded model helps to better understand the process of voluntary employer change and how different drivers and obstacles may be shaped by individual circumstances such as age, tenure, or status. For example, older workers may have fewer opportunities to find another job due to low recruiting levels of older workers and age stereotypes. They may be treated differently in their present job than younger employees (e. g., due to organizational policies or the social climate). Certain working conditions are also less suitable for older employees. Moreover, older workers may experience non-work consequences of quitting in a different way than younger workers, such as consequences on health and may remain in their present job due to contractual constraints, such as an employer-related pension fund participation. Finally, the expanded model shows the differences between the intention to search, the intention to quit, and the action of change as different parts of a change process.

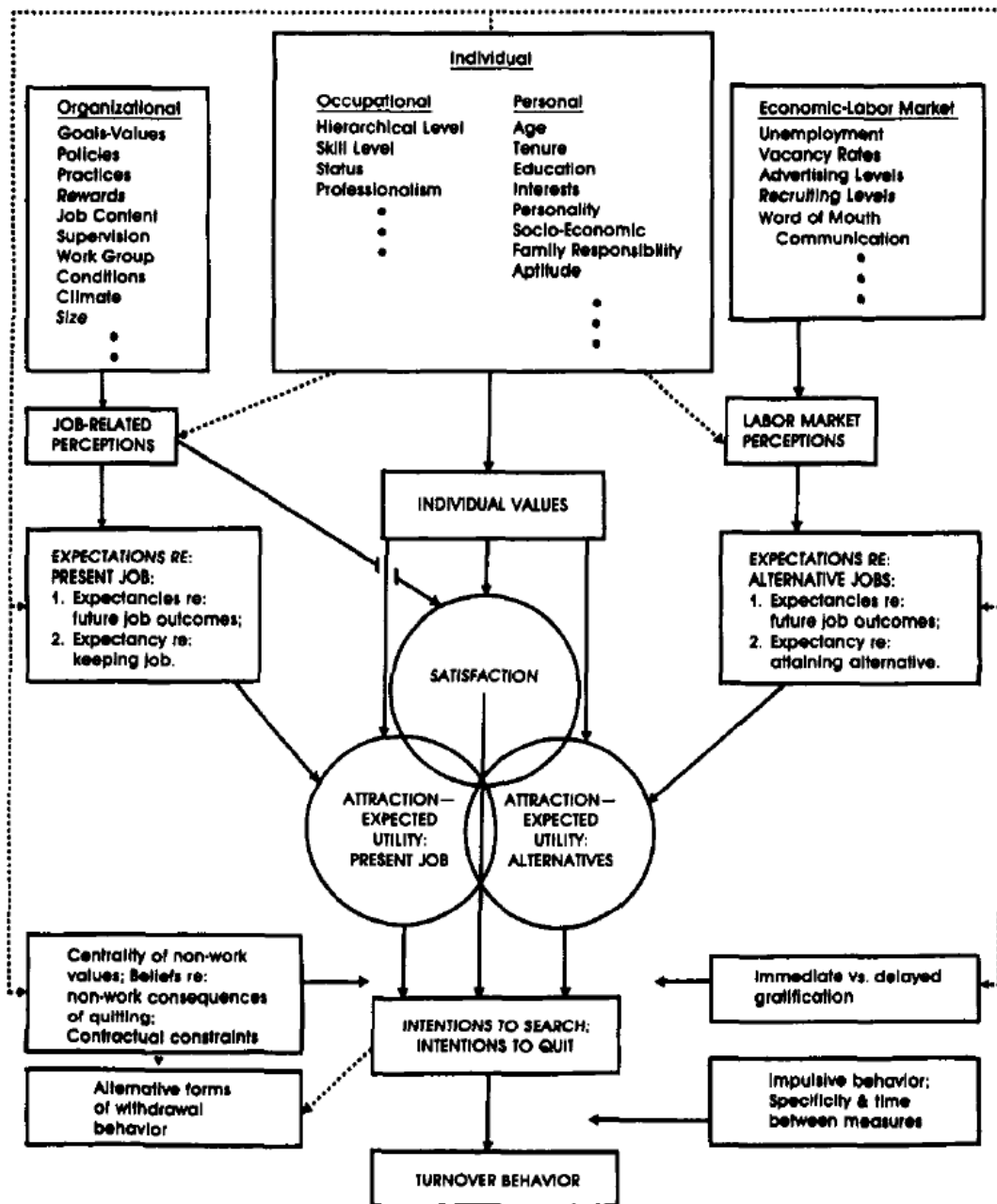


Figure 2. Mobley's 'expanded' turnover model (Mobley et al., 1979, 517)

A decision making process as it is indicated for voluntary leaving in *Mobley's expanded turnover model* cannot be expected for involuntary leaving. This aspect, however, is covered by the *push model of turnover* describing different processes for voluntary and involuntary leaving based on the job performance level (Becker & Cropanzano, 2011; Jackofsky, 1984). In short, the author depicts three processes resulting in turnover: (1) High job performance leading to a higher ease and desirability of movement, because employees with high job performance may receive a greater number of possibly better alternative job offers. This situation leads to the intention to quit and results in a voluntary job turnover. (2) A low job performance of the employee precedes the action of the company to fire,

demote, or transfer the employee resulting in an involuntary job turnover. (3) The employee perceives the threat of dismissal because of low job performance and quits on his or her own initiative, but involuntarily to save their own reputation. This process may represent a mutual agreement.

The two models described illustrate that neither employer changers nor voluntary changers may be considered as a homogeneous group. No single model can represent all possible processes and reasons for changing employers. The models also show that there are many reasons and determinants for changing employer, not all of them are work-related or avoidable.

1.2.2 Staying

Beside the theory on changes of employer, researchers explore what keeps employees with their current employers, even though they are dissatisfied. Two different but very similar concepts have been established: *Job lock* and *stuck at work*. The term *job lock* is more common among economists who describe employees in a locked situation because of external factors, for example, the contract, an employer-related pension fund participation, or a health insurance. The term *stuck at work* is more common among psychologists. They describe that employees feel stuck at work due to personality factors, such as aspects of commitment, job investments, the fit between the job and other aspects in life, or the connection to colleagues (Huyse-Gaytandjieva et al., 2013a, 2013b). Huyse-Gaytandjieva et al. (2013a) sum up four specific subgroups of factors why employees can feel stuck at work: socio-demographic features, personality attributes, employment conditions, and work-related contextual factors. They discuss different negative consequences of feeling stuck at work over a longer period of time such as lateness, decreased performance, absenteeism, and decreased health. The risk of being in a locked situation or being stuck at work differs between occupational groups. Jobs with a clear career ladder for example bear lower risks because the opportunity to change is included in the career concept. Employees with low self-esteem, for whom a change may be riskier than staying with the employer, prefer more passive forms of adaptation such as change of work tasks or other forms of job crafting (Huyse-Gaytandjieva et al., 2013a, 2013b). The theories of job lock and stuck at work do not include employees who are highly committed to their job and want to stay with the employer.

This aspect is highlighted in the theory on *job embeddedness*. The job embeddedness theory focusses from a more positive point of view on why employees stay with their employer. In short, the three dimensions (1) links, (2) fit and (3) sacrifice determine how strongly employees are embedded in the current work situation: “(1) The extent to which people have links to other people or activities, (2) the extent to which their jobs and communities are similar to or fit with the other aspects in their life spaces, and (3) the ease with which links can be broken—what they would give up if they left, especially if they had to physically move to other cities or homes.” (Lee et al., 2014, 201) In differentiation to the theory on job lock or stuck at work, the theory of job embeddedness emphasizes

the importance to distinguish between employees who want to stay with the employer (enthusiastic stayers) and the employees who do not want to stay, but do not manage to change (reluctant stayers) (Hom et al., 2012).

These theories illustrate that stayers must also be viewed in a differentiated manner. Involuntary stayers pose a special group of stayers that need to be separated from voluntary stayers in empirical studies. However, the theories also show that the reasons why employees stay are multifaceted and often not clearly self- or externally determined.

1.3 Previous Empirical Findings

1.3.1 Leaving

Older workers

Today a large body of research on employee turnover exists, however, the employer changes of older workers have rarely been investigated. Research often focuses on younger workers (e. g., Nouri & Parker, 2013), deliberately excluding older workers because their changes are assumed to follow different patterns (e. g., Adams, 2004), or include all age groups (e. g., Boswell et al., 2005). Yet, many psychological and practical obstacles for changing employer at higher working age are discussed (e. g., Bailey & Hansson, 1995). Indeed, findings of several studies confirm that older employees are less likely to change or report less intentions to leave the employer than younger employees (Blau, 2000; Carless & Arnup, 2011; Simon, Müller, & Hasselhorn, 2010). Overall, employer changes among older workers tend to be low in the German labor market, especially in comparison to economically liberal countries, although an increase was noted (Buchholz, 2008).

Measurement

Certain approaches are common in previous research on employer changes. Particularly common are cross-sectional studies, the use of samples of specific occupational groups, or employees of a particular organization (e. g., Allen, Hancock, Vardaman, & McKee, 2014; Asakura, Asakura, Satoh, Watanabe, & Hara, 2020; Fernet, Trépanier, Demers, & Austin, 2017; Liljegren & Ekberg, 2008; Mantler, Godin, Cameron, & Horsburgh, 2015; Ofei-Dodoo et al., 2020; Oh & Kim, 2019; Reineholm, Gustavsson, Liljegren, & Ekberg, 2012). In many of these studies indicators such as *willingness* or *intention to leave* or *job search* were used as a proxy or alternative measure for employer change (e. g., Alcover & Topa, 2018; Dousin, Collins, Bartram, & Stanton, 2021; Kersting & Pfeifer, 2013; Mantler et al., 2015; Nouri & Parker, 2013; Otto, Dette-Hagenmeyer, & Dalbert, 2009; Weng & McElroy, 2012; Wolff & Moser, 2010; Yang, Liu, Liu, & Zhang, 2015). However, these concepts should be differentiated from actual changes. In line with theory, desires, willingness, or intentions and actual changes may

constitute different concepts or phases of the change process. For example, Mobley's 'expanded' turnover model (1979) emphasizes that one phase can follow the other but that this is not always the case. Swider, Boswell, and Zimmerman (2011) confirmed that job search behavior is not necessarily followed by a change of employer.

Another aspect is investigated in few studies only. When investigating employer changes, voluntary and involuntary changes need to be differentiated. While a voluntary change is often a planned transition, losing one's job may often be unexpected and can lead to unemployment. This may constitute a substantial challenge, especially for older workers (Brauer & Clemens, 2010), and might bear health risks rather than benefits. However, comparative research on consequences of voluntary and involuntary changes is rare, often only voluntary changes were examined (e. g., Chadi & Hetschko, 2014; Wagenaar, Kompier, Houtman, van den Bossche, & Taris, 2012).

Determinants and consequences

When it comes to the determinants and consequences of employer changes, research has so far mainly focused on the determinants such as job satisfaction, performance, health, leadership quality (Rombaut & Guerry, 2021; Rubenstein, Eberly, Lee, & Mitchell, 2018), and work ability (Rongen et al., 2014). Qualitative studies with older workers have shown that many employees with poor health first change employers when they can no longer carry out their work (Jahn & Ulbricht, 2011). The focus on determinants of voluntary employer changes, in contrast to consequences, was often due to limitations of the data which did allow researchers to trace employees up to the change but not subsequently. Thus, in research, employer change was often the outcome and was rarely investigated as a determinant for other outcomes.

The few previous studies on the consequences of employer changes confirm that voluntary employer changes have a positive effect on mental health (Liljegren & Ekberg, 2009) and job satisfaction (Chadi & Hetschko, 2014). Furthermore, several working conditions improved after voluntary changing, such as increased job security, reduced working hours (Carless & Arnup, 2011), better salary, better possibilities for development, and more appropriate work tasks (Grund, 2009). However, these studies were conducted among younger employees. Overall, the potential of occupational changes, be it small changes in the workplace such as through job crafting (Tims, Bakker, & Derks, 2013) or major changes such as changes of employer or occupation (Behrens, 1999) became clear.

Some studies showed that the positive effects found following the employer change faded over time (Boswell et al., 2005; Boswell, Shipp, Payne, & Culbertson, 2009; Chadi & Hetschko, 2014). Boswell et al. (2005) called this phenomenon the honeymoon-hangover effect (HHE). The HHE after voluntary leaving was confirmed for job satisfaction in three different studies (Boswell et al., 2005;

Boswell et al., 2009; Chadi & Hetschko, 2014). For employees, who changed due to dismissal or plant closure, no HHE was found. One of the authors' conclusions was that further outcomes should be investigated with respect to the occurrence of an HHE.

1.3.2 Staying

Older workers

Overall, and particularly with respect to older workers, there is less research on staying with the employer than on leaving the employer. Research on *job lock* or *stuck at work* cover desired but unfulfilled changes due to a lack of alternatives (Huyse-Gaytandjieva et al., 2013a; Stengård, Bernhard-Oettel, Berntson, Leineweber, & Aronsson, 2016). A study by Huyse-Gaytandjieva et al. (2013b) showed that older workers are more likely to enter a long-term job lock state than younger workers. Another American study found that parents aged 55-66 delayed retirement to take advantage of an employer-related health insurance which is linked to their children (Shi, 2020). Though, in a study by Canivet et al. (2017) younger workers (18-34 years) reported the highest job lock rates (53%) while employees in the oldest age group (45-54 years) were the least likely to be in a locked situation (22%).

Measurement

Researchers used different measurements for involuntary staying or job lock, respectively. Some linked the measurement to job dissatisfaction as Huyse-Gaytandjieva and colleagues (2013b) who defined job lock as dissatisfied and immobile. In contrast, Stengård and colleagues (2016) investigated employees being in a non-preferred workplace while at the same time perceiving low employability. Others asked whether the employees wanted to stay in their jobs (e. g., Canivet et al., 2017).

Determinants and consequences

Additional demographic factors than age, increase the risk of being locked-in, such as employees who are married, working full-time, with low self-esteem, or living in a region with high unemployment rates (Huyse-Gaytandjieva et al., 2013b).

When it comes to the consequences, one main finding on the group of employees, who are stuck at their work, is that they pose a risk group for poor well-being, poor health, procrastination, low motivation, and low employment participation (Canivet et al., 2017). Staying in a locked situation also has long-term consequences. A study by Stengård et al. (2016) showed that employees of all ages who were locked-in over a longer period of time reported poorer well-being than employees whose situation changed from being locked-in to non-locked-in and vice versa. Changes towards non-locked-in led to improvements in well-being, and changes towards locked-in led to deteriorations in well-

being. Therefore, in the context of the consequences of leaving and staying with the employer, this group of employees need special scientific attention.

In conclusion, although there is a lot of research on leaving and staying with the employer, research gaps are evident. Employer change research uses small and specific samples and, most notably, different concepts of change which, however, do need to be distinguished. Above all, there is a lack of research on the short-term and long-term consequences of voluntary, involuntary and desired changes for the older workers' health, work ability, and employment perspective. Moreover, the voluntariness is considered in only a few studies on employer changes. So far, an empirical overview and comparison of voluntary and involuntary employer changes, their underlying reasons, and the differentiation between merely desired and actual changes among older workers is missing.

1.4 Aim and Scope of the Thesis

1.4.1 Aim

This thesis aims to shed light on the role of employer changes for older workers by providing evidence on the determinants of leaving and staying with the employer, as well as short-term and long-term consequences of leaving and staying for the older workers' health, work ability, and working conditions. The consequences for the older workers' employment perspective are discussed. As proposed by the theory on the four *motivational states of staying and leaving* by Hom et al. (2012), voluntary and involuntary staying, as well as voluntary and involuntary leaving are distinguished.

1.4.2 Research questions

The thesis covers (a) an exploration of the topic leaving and staying with the employer at higher working age, (b) research on the determinants and (c) the consequences of such changes. The following research questions are answered:

- (a) Which occupational changes take place at higher working age and which are wanted? How many older workers change voluntarily and involuntarily? Who does change and who does not?
- (b) What are the main reasons for the actual and the desired occupational changes?
- (c) How does voluntary and involuntary leaving and staying with the employer affect the older workers' health, work ability, working conditions, and employment perspective? Are there only short-term effects or even long-term effects?

1.4.3 Data and method

To answer the research questions, quantitative analyses of the data from the German lidA (leben in der Arbeit) Cohort Study were conducted. The lidA-study is a representative cohort study of socially insured older employees in Germany (www.lida-studie.de). The aim of lidA is to investigate work and employment in the aging workforce. Since 2011, participants born in either 1959 or 1965 have been interviewed in their homes every three to four years (computer-assisted personal interviewing, CAPI). For the analyses, data from the first three waves of the study, 2011 (n=6585), 2014 (n=4244) and 2018 (n=3586), were used. In 2018, the participants were 53 and 59 years old. Hasselhorn et al. (2014) and Rauch, Burghardt, Eggs, Tisch, and Tophoven (2015) gave a detailed description of the lidA-study and its design.

1.4.4 Studies

This thesis consists of three studies published in international peer-reviewed journals (see appendix).

- (I) Garthe, N. & Hasselhorn, H.M. (2021a). Changes of profession, employer and work tasks in later working life - An empirical overview of staying and leaving. *Ageing & Society*, 1-21. doi: 10.1017/S0144686X21000088
- (II) Garthe, N. & Hasselhorn, H.M. (2020). Leaving and staying with the employer - Changes in work, health and work ability among older workers. *International Archives of Occupational and Environmental Health*, 94(1), 85-93. doi: 10.1007/s00420-020-01563-0
- (III) Garthe, N. & Hasselhorn, H.M. (2021b). The relationship between voluntary employer change and work ability among older workers: Investigating the honeymoon-hangover effect. *Journal for Labour Market Research*, 55(12), 1-12. doi: 10.1186/s12651-021-00294-0

Each of the three studies has a different focus and provides a deeper insight into the background, the relevant theory and previous empirical findings on the topic of the study. The studies complement each other and gradually narrow down the topic of the thesis. The aim, method and results of the studies are briefly summarized in section 2 and all main results are depicted in table 3 (see section 2). The discussions of the results and the conclusions of the three studies are integrated in the general discussion in section 3.

The authors' contributions are listed in each manuscript (see appendix) and are described below. With respect to study I, Nina Garthe (NG) and Hans Martin Hasselhorn (HMH) designed the study. NG

performed the analyses and wrote the first draft and the revised versions of the manuscript. HMH and NG critically reviewed and revised the manuscript and approved the final article. With respect to study II, NG and HMH designed the study. NG performed the analyses and wrote the first draft of the article. HMH and NG critically reviewed and revised the manuscript and approved the final article. With respect to study III, NG conceptualized and wrote the manuscript as well as analyzed and interpreted the data. HMH contributed to the interpretation of the data and the writing of the manuscript. Both authors have read and approved the final manuscript.

The three different peer-reviewed journals reflect the interdisciplinary nature of the topic. The journal *Ageing & Society* is an interdisciplinary journal with contributors from disciplines such as gerontology, sociology, demography, psychology, economics, medicine, social policy, and the humanities and contributes to understand human ageing and the circumstances of older people in their social and cultural contexts (Cambridge University Press, 2021). The journal *International Archives of Occupational and Environmental Health* focusses on health outcomes and research on vulnerable or underserved populations from an occupational and environmental health perspective, as well as clinical medicine and public health (Springer Nature, 2021a). The *Journal for Labour Market Research* publishes papers dealing with the labor market, employment, training, or careers and has an interdisciplinary perspective on the field of labor market research (Springer Nature, 2021b).

2. Summary of the Studies

2.1 Study I

Garthe, N. & Hasselhorn, H.M. (2021a). Changes of profession, employer and work tasks in later working life - An empirical overview of staying and leaving. *Ageing & Society*, 1-21. doi: 10.1017/S0144686X21000088

2.1.1 Aim

This study gives an empirical overview on occupational change in later working life in Germany. Various disciplines such as psychology, sociology, economics, and occupational health deal with occupational change – all from their own perspective. Therefore, reviewing occupational change literature offers different understandings and operationalization of occupational changes (Bailey & Hansson, 1995; Canivet et al., 2017; Fernet et al., 2017; Hom et al., 2017; Liljegren & Ekberg, 2008; Mantler et al., 2015; Nouri & Parker, 2013; Rubenstein et al., 2018). Three forms of occupational change are differentiated in this study: The change of *profession*, *employer* and *work tasks*.

Conceptual basis of this study is the theory on *motivational states of staying and leaving* by Hom et al. (2012), who distinguish between *enthusiastic leavers* (EL), *reluctant leavers* (RL), *enthusiastic stayers* (ES), and *reluctant stayers* (RS) (see section 1.2). Although their categorization is based on employee turnover theory (i.e., the change of employer) it may be expanded to all three forms of occupational change.

In this study, the proportion of changes of profession, employer and work tasks among older workers in Germany is displayed while differentiating between the four change groups (EL, RL, ES, RS). Furthermore, each change group is characterized considering socio-demographic, health, and job factors and the self-reported main reasons for voluntary and desired occupational changes are presented.

2.1.2 Method

The analyses are based on data from the second and third wave of the German IidA Cohort Study, 2014 (n=4244) and 2018 (n=3586). Study participants were excluded if they were not employed full time, part time or marginally, or if they were self-employed in either wave. The final sample consists of 2835 participants aged 53 or 59 in 2018.

The *changes of profession, employer and work tasks* were assessed in 2018 by the questions: „In the last interview you said that your profession is <information from previous wave>. Is this still the case? (Yes/No)“, „Have you changed your employer since the last interview? (Yes/No)“, and „Have your work tasks changed significantly in the last three years? (Yes/No)“. Participants who reported a

change were asked whether they changed on their own initiative (EL), or on the initiative of their employer (RL) (not the case for changes of profession). Participants who reported no change were asked whether they would have liked to change since the last study interview in 2014 (RS) or not (ES). Additionally, participants, who would have liked to change (RS), were asked if they had *attempted* to change. Finally, EL and RS were asked to select a *main reason* for the change or for the desired change.

The *socio-demographic factors*, gender, year of birth, having a partner, and job task requirement level, the *health measures* mental and physical health (SF-12, Nübling, Andersen, & Mühlbacher, 2006; Ware, Kosinski, & Keller, 1995), and the *job factors*, weekly working time, seniority, income level, physical workload, leadership quality, influence at work, possibilities for development, and work-family conflict (COPSOQ II, middle version, Pejtersen, Kristensen, Borg, & Bjorner, 2010) were included in the analyses.

Empirical evidence is provided by depicting the frequencies of voluntary, involuntary and desired changes of profession, employer and work tasks considering possible overlaps of changes and presenting the self-reported main reasons. Furthermore, all change groups were characterized by conducting a multinomial logistic regression analysis for each form of change including the socio-demographic factors, health measures, and job factors. In each model, the group of enthusiastic stayers (ES) constitutes the reference group.

2.1.3 Results

The most common changes were changes of work tasks (45.1%), 13.4% reported a change of employer, and 10.5% a change of profession. In the full sample, there were more EL (7.1%) than RL (3.9%) among employer changers, but considerably more RL (24.8%) than EL (6.5%) among work task changers. However, for all forms of occupational change the majority of older workers were stayers. Still, in this group a considerable proportion of RS was found. Regarding changes of profession, employer, and work tasks, the proportions of RS (17.6%/ 13.2%/ 8.9%) are higher than the respective proportions for EL. About every third RS attempted to change profession, about every second the employer, and two out of three the work tasks.

With respect to the overlap of changes, most of the changes of profession went along with changes of employer or work tasks. Only few participants changed employer without changing work tasks and/or profession. 33.5% of the participants reported changes of work tasks without a change of profession or employer. Further, 49.0% reported no change whatsoever between 2014 und 2018.

Regarding the main reasons among the ES and RS, three aspects stand out. First, some main reasons were mentioned frequently, such as *better working conditions* (especially among RS), *better salary* and *occupational career*. Second, the most frequent main reasons for the three forms of occupational change differ. While the reasons, *better working conditions* and *better salary* are prominent among

employer changes, the reason *avoiding unemployment* is common among changes of profession and the reason *want to do something new* is common among changes of work tasks. Last, the most frequent main reasons for EL and RS differ in some respect. For example, while *avoiding unemployment* is common among EL of profession, only few RS aimed to change profession to avoid unemployment.

The multinomial logistic regression analyses revealed that EL, RL and RS differ from the ES in terms of socio-demographic factors, health measures, and job factors. Furthermore, the EL, RL and RS differ depending on the form of change. Employees who changed their employer voluntarily (ES) vary from employees who changed their profession voluntarily (ES). With respect to the change of employer, the EL were younger, more often had a partner, had better physical health, a shorter seniority, more often had a lower income level and a lower leadership quality. In contrast to changes of profession and work tasks, the EL of employer were the only group to more often have a partner and to report better physical health than the respective ES. Like the EL, the RL were less often part-time workers, had a shorter seniority and more often a lower income level, and they reported lower leadership quality. The RS showed a different pattern as they were younger, had poorer mental health, a shorter seniority, lower leadership quality, and a higher work-family conflict.

2.2 Study II

Garthe, N. & Hasselhorn, H.M. (2020). Leaving and staying with the employer - Changes in work, health and work ability among older workers. *International Archives of Occupational and Environmental Health*, 94(1), 85-93. doi: 10.1007/s00420-020-01563-0

2.2.1 Aim

A change of employer may exhibit the potential to improve the fit between the older workers and their work, with regard to work factors, qualifications, motivation, work ability, and health, and therefore to extend the personal working life (Behrens, 1999; Jahn & Ulbricht, 2011; Morschhäuser, 2002b). However, voluntary employer changes not only offer chances, but also bear risks, especially for older workers. Behrens (1999) pointed out that employer changes cannot be a general recommendation for all older workers who find themselves in inappropriate work situations. Beyond the risk of becoming unemployed, further obstacles keep older workers from changing.

The aim of this prospective study was to differentiate between four groups of employer change among older workers, namely employees who left or stayed with their employers voluntarily or involuntarily and to relate them to psychosocial work factors, health, and work ability over time.

To cover voluntary and involuntary staying and leaving, four groups of employees, as elaborated by Hom et al. (2012), were distinguished: Enthusiastic leavers (EL), reluctant leavers (RL), enthusiastic

stayers (ES), and reluctant stayers (RS) (see section 1.2). In all four groups, work factors, especially psychosocial work factors, as well as health and work ability play a central role. EL may want to leave their employer due to a lack of person-work fit and aspire improvements (Mobley, 1977; Trevor, 2001). The work situation is similarly perceived by RS, yet, they cannot leave due to diverse obstacles. Researchers found that RS may quit psychologically and develop work avoidance and counterproductive workplace behaviors (Hulin, Roznowski, & Hachiya, 1985; Mobley et al., 1979; Mowday, Porter, & Steers, 1982). In contrast, RL may have to leave their employer due to low performance for example and have to find a new job. The latter may constitute a big challenge, especially for older workers (Hulin et al., 1985; Jackofsky, 1984). Finally, ES may have a satisfying person-work fit and good work performance (Lee et al., 1999; Mobley, 1977).

2.2.2 Method

The analyses are based on data from the second and third wave of the German IidA Cohort Study, 2014 (t1; n=4244) and 2018 (t2; n=3586). In order to focus on employer changes, study participants were excluded if they were not employed full time, part time, or marginally in any of the waves. As a result, the sample consists of 2811 participants.

The *change of employer* was assessed in the third wave in 2018 (t2) by the question: “Have you changed your employer since the last interview? (Yes/No).” Participants who reported a change were asked whether they changed on their own initiative (EL) or on the initiative of their employer (RL). Participants who reported no change were asked whether they would have liked to change since the last study interview in 2014 (RS) or not (ES).

The outcomes, *mental and physical health* were assessed with the Short Form Health Survey (Nübling et al., 2006; Ware et al., 1995). Component scores ranging from 0 to 100 with a high score indicating better health were calculated. *Work ability* was assessed with the second dimension of the Work Ability Index (Ebener & Hasselhorn, 2019). The sum score ranges from 2 (no work ability) to 10 (high work ability). *Psychosocial work factors* were assessed with scales from the Copenhagen Psychosocial Questionnaire (COPSOQ II, middle version, Pejtersen et al., 2010). Six psychosocial work factors were generated with scores ranging from 0 to 100: Leadership quality, social support from colleagues, work-family conflict, possibilities for development, quantitative demands, and influence at work. Further, the *socio-demographic information*, gender, year of birth, vocational education, weekly working time, and seniority were used to describe the four groups.

Group means of mental and physical health, work ability, and the six psychosocial work factors were compared across the two waves. GLM Repeated Measures ANOVAs were performed in order to investigate within group and between group differences, occurring between t1 and t2. Three effects were tested: The main time effect, the main group effect, and the interaction effect group*time. In

addition to the main group effect, post hoc tests (Bonferroni corrected) were conducted to indicate which groups differ in which way from each other.

2.2.3 Results

Of the 2811 participants, 13.5% changed employer between t1 and t2, 7.1% were EL and 6.4% were RL. The ES constitutes the biggest group of participants (73.3%). More than one in ten stayed with their employer although they would have preferred to leave (13.2%; RS). Among EL there were more women and among ES more older participants than in the other groups. Participants with low vocational education were overrepresented in RS and marginal workers in EL. Seniority at t1 was in both leavers' groups (EL and RL), substantially lower than in RS and ES.

The groups differ significantly in terms of health, work ability, and all psychosocial work factors (t1). With respect to changes over time, the groups vary in terms of mental, but not physical health, in terms of work ability and the psychosocial work factors, leadership quality, work-family conflict, possibilities for development, and quantitative demands. The comparison of the four groups (post hoc tests) showed that in all cases the group of RS significantly differ from one or more other groups. This group exhibited the most adverse mean scores for work ability, the health indicators, and all psychosocial work factors already at t1. RS reported deteriorations in leadership quality, possibilities for development, influence at work, and work-family conflict. Among ES, the mean scores for the outcomes changed only slightly over time. In the group of EL, the ratings for the new job at t2 indicate substantial improvements for mental health, work ability, leadership quality, work-family conflict, possibilities for development, and quantitative demands in relation to the previous job (t1). RL reported, on the one hand, improvements in work ability, leadership quality, and support from colleagues, and on the other hand, deteriorations in influence at work.

The outcome leadership quality was particularly noticeable in the analysis. The main group effect of leadership quality shows a high effect size ($\eta^2 = 0.08$) in contrast to the other outcomes and the greatest effect size for the interaction effect was found for leadership quality ($\eta^2 = 0.03$).

2.3 Study III

Garthe, N. & Hasselhorn, H.M. (2021b). The relationship between voluntary employer change and work ability among older workers: Investigating the honeymoon-hangover effect. *Journal for Labour Market Research*, 55(12), 1-12. doi: 10.1186/s12651-021-00294-0

2.3.1 Aim

The aim of the study was to investigate the long-term relationship between voluntary employer changes and work ability among older workers in Germany. In the context of aging workforces and

extended working life policies, maintaining work ability among older workers has received increased public and policy attention (Nilsson, Hydbom, & Rylander, 2011). Work ability describes the fit between the worker's resources and his or her work demands (Tuomi et al., 1997). A voluntary change of employer may constitute one strategy to maintain the fit between older workers and their work, which could enable older workers to leave unsuitable workplaces and thereby adapt unfavorable working conditions on their own initiative.

With respect to job satisfaction, some studies showed that employer changes had only positive short-term, but no long-term consequences (Boswell et al., 2005; Boswell et al., 2009; Chadi & Hetschko, 2014). This progression is called a honeymoon-hangover effect (HHE) (Boswell et al., 2005) and consists of three typical periods: (1) A deterioration in the old job (*deterioration*), (2) an initial increase in the new job (*honeymoon*) and (3) a subsequent decline over time (*hangover*). What remains open is whether a HHE can also be found for work ability. Therefore, this study aimed to investigate the long-term effects of voluntary employer changes on work ability and, more specifically, whether a honeymoon-hangover effect (HHE) exists for work ability.

2.3.2 Method

The analyses are based on data from the first three waves of the German IliA Cohort Study, 2011 (n=6585), 2014 (n=4244) and 2018 (n=3586). In order to investigate voluntary employer changes, some participants were excluded in the analyses: Participants who were not employed full time, part time or marginally in any of the waves, participants who were self-employed and participants who had an involuntary change of employer between any of the waves. In all, 2502 workers, who participated in all three study waves, were included in the analyses.

In wave two (2014) and three (2018), the participants were asked, "Have you changed your employer since the last interview? (Yes/No)" and whether they changed on their own initiative. Four groups of employees were distinguished in the description: (1) Participants, who stayed in the same job for all three waves (Job A, Job A, Job A; AAA), (2) participants, who changed once between 2014 and 2018 (Job A, Job A, Job B; AAB), (3) participants, who changed once between 2011 and 2014 (Job A, Job B, Job B; ABB) and (4) participants, who had new jobs in wave 2 and also in wave 3 (Job A, Job B, Job C; ABC).

Work ability was assessed with the second dimension of the Work Ability Index (Ebener & Hasselhorn, 2019). The sum score ranges from 2 (no work ability) to 10 (high work ability). The *socio-demographic information*, gender, year of birth, vocational education, having a partner, working hours, mental and physical work, income level, and *mental and physical health* (SF-12, Nübling et al., 2006; Ware et al., 1995) were used to describe the change groups. Working hours, mental and physical work and income level were considered in the regression analyses.

As indicated, the analysis consists of two steps: (1) a description and (2) a regression analysis. (1) Firstly, the four groups (AAA, AAB, ABB, ABC) were compared in terms of socio-demographics, work factors, health, and work ability in each of the three study waves. For work ability, group means and confidence intervals are provided. (2) Secondly, a fixed effects regression analysis was conducted. In order to investigate the individual changes of work ability before and following a voluntary employer change (deterioration, honeymoon, hangover), the regression analysis included lag and lead variables for employer changes. The lag and lead variables were dummy variables indicating either if a participant was in a new job since one or two waves (lag: *new job since 1 wave*; *new job since 2 waves*), or if a participant is in a new job in one or two waves (lead: *new job in 2 waves*; *new job in 1 wave*). Only participants who reported at least one voluntary change of employer (AAB, ABB, ABC) were included in the fixed effects regression analyses. Overall, four models were conducted. Models 1 and 2 included the two lag variables and models 3 and 4 the two lead variables. Models 2 and 4 included the control variables.

2.3.3 Results

Most of the participants stayed with their employer over all three study waves (89.6%; AAA). Almost one in ten changed once (9.2%; AAB, ABB) and only few participants changed twice (1.2%; ABC).

The descriptive analysis indicates that the work ability of the stayers (AAA) deteriorated slightly over the seven years. In contrast, the work ability of the participants who had a new job in 2014 and 2018 (ABC) improved considerably after each change. The groups who changed once (AAB, ABB) showed different patterns. Participants who changed once between 2011 and 2014 (ABB) reported improved work ability following the change which, however, deteriorated considerably after 2014. The work ability of participants who changed once between 2014 and 2018 (AAB) deteriorated slightly while staying with the old employer between 2011 and 2014 and improved following the change.

The fixed effects regression analyses further support the existence of a honeymoon-hangover effect. Models 1 and 2, which allowed to investigate the honeymoon and hangover period, show that the work ability was significantly higher one wave (honeymoon), but not two waves after the change (hangover), compared to the work ability in the old job. This was indicated by the two lag variables. While the lag variable *new job since 1 wave* showed a positive significant effect, the lag variable *new job since 2 waves* showed no significant effect. Models 3 and 4, which allowed to investigate the deterioration period, show that the work ability was significantly lower one wave, but not two waves, before the change compared to the work ability after the change (deterioration). This was indicated by the two lead variables. While the lead variable *new job in 1 wave* showed a negative significant regression coefficient, the lead variable *new job in 2 waves* showed no significant effect. In conclusion,

the four models support the assumption that the initial high work ability at the new job declines over time and that a honeymoon-hangover effect (HHE) exists for work ability.

A brief summary of the results of all three studies is given in table 3.

Table 3. Summary of the results

	Enthusiastic leavers (7.1%)	Reluctant leavers (6.4%)	Reluctant stayers (13.2%)	Source
Socio-demographic factors	<ul style="list-style-type: none"> • more younger workers • more workers having a partner 	<ul style="list-style-type: none"> • more full-time workers 	<ul style="list-style-type: none"> • more younger workers 	<ul style="list-style-type: none"> • study I (multinomial regression analysis)
Job factors	<ul style="list-style-type: none"> • shorter seniority • more often having a low income level 	<ul style="list-style-type: none"> • shorter seniority • more often having a low income level 	<ul style="list-style-type: none"> • shorter seniority 	<ul style="list-style-type: none"> • study I (multinomial regression analysis)
Psychosocial working conditions	<ul style="list-style-type: none"> • lower leadership quality before the change and improvement after changing • more support from colleagues after changing • higher work-family conflict before the change and lower after changing • less possibilities for development before the change and more after changing • less quantitative demands after changing 	<ul style="list-style-type: none"> • lower leadership quality before the change and improvement after changing • less possibilities for development before the change • less quantitative demands before the change 	<ul style="list-style-type: none"> • lower leadership quality and further deterioration while staying • less support from colleagues • higher work-family conflict and further deterioration while staying • less possibilities for development and further deterioration while staying • more quantitative demands • less influence at work and further deterioration while staying 	<ul style="list-style-type: none"> • study I (multinomial regression analysis) • study II (repeated measures ANOVA)
Health	<ul style="list-style-type: none"> • better physical health before the change • improvement in mental health after the change 	<ul style="list-style-type: none"> • poorer physical health before the change 	<ul style="list-style-type: none"> • poorer physical health and further deterioration while staying • poorer mental health 	<ul style="list-style-type: none"> • study I (multinomial regression analysis) • study II (repeated measures ANOVA)
Work ability	<ul style="list-style-type: none"> • lower work ability before the change • improvement after changing, but deterioration while staying with the new employer 	<ul style="list-style-type: none"> • lower work ability before the change 	<ul style="list-style-type: none"> • lower work ability and further deterioration while staying 	<ul style="list-style-type: none"> • study II (repeated measures ANOVA) • study III (fixed effects regression)

Note. Enthusiastic stayers serve as a reference group (n=2063, 73.4% of all participants, study II). Significant group differences are displayed only.

3. General Discussion

This section provides a general discussion of the results of the three studies and consists of the discussion of the proportion of (desired) employer changes (3.1), the antecedents of employer changes and the characterization of change groups (3.2), the consequences of voluntary and involuntary staying and leaving on work, health, work ability, motivation and employment perspective (3.3), and the role of policy and employers in the context of employer changes at higher working age (3.4). Additionally, the strengths and limitations of the studies are presented (3.5). The general discussion closes with a conclusion and outlook (3.6).

3.1 The Proportion

When it comes to the proportion of occupational changes among older workers, study I gives an overview for changes of employer, as well as changes of profession and work tasks between 2014 and 2018 (Garthe & Hasselhorn, 2021a). As presented in the introduction, the four groups of enthusiastic leavers (EL), reluctant leavers (RL), enthusiastic stayers (ES), and reluctant stayers (RS) were distinguished (Hom et al., 2012). When comparing the proportion of changes of employer (EL/RL, 13.4%) with the proportion of changes of profession (EL/RL, 10.5%) and work tasks (EL/RL, 45.1%), it is noticeable that there have been almost as many changes of profession as there were employer changes. In general, less changes of profession could be expected among older workers because of several obstacles such as the need for retraining (Hecker, 2000). Yet, the measurement of changes of profession in the lidA-study includes a range of possible changes. The self-reported professions of each participant were compared between the two study waves. Different self-reported professions cover changes of profession, as well as changes of position, or just the change of the description of a profession (see study I, Garthe & Hasselhorn, 2021a). What is striking, however, is the high number of work task changes. About half of all employed participants had work task changes and these were mostly initiated by the employer (RL, 24.8%). This demonstrates that work is constantly changing and that older workers are required to constantly adapt to changes.

Analyses on the overlap of the three forms of change showed that about half the participants who changed employer, changed their self-reported profession as well. Furthermore, over half of the employer changers reported a change in work tasks. Here, however, only the changes of employer were discussed, as these changes were in the focus of this thesis.

Enthusiastic leavers. Although employees are less likely to change their employer with increasing age (Kattenbach et al., 2014; Schneider, 2010), a considerable number of older workers in Germany changed voluntarily between 2014 and 2018: 7.1% of all employees in the lidA-study (study I, Garthe & Hasselhorn, 2021a). In comparison, researchers in Great Britain found that one third of workers in

their 60s had a change of employer over a five-year period and that a change of employer was the most frequent form of change, in contrast to changing roles, working hours, or to self-employment (McNair, Flynn, Owen, Humphreys, & Woodfield, 2004). About 42% of all workers changed employer in Finland between 1997 and 2002 (Böckerman, Ilmakunnas, Jokisaari, & Vuori, 2011).

Reluctant leavers. There were less involuntary changes (3.9%) than voluntary ones among older workers. This is not surprising as older employees usually occupy a secure job and have more job protection compared to younger employees (Tullius, Freidank, Grabbe, Kädtler, & Schroeder, 2012). It needs to be taken into consideration that these workers form a selective group, as they have found a new job after losing their jobs. Workers who left employment were not included in the analyses. Additional analyses with the lidA-study showed that in 2018 one third of the unemployed participants had become unemployed due to dismissal and a second third had become sick or incapable of work. The employment of the last third ended as a result of voluntary leaving, mutual agreement, or the ending of a fixed-term employment contract (Garthe, 2019).

Enthusiastic stayers. Those who want to stay with their current employer represent the biggest group of older workers (73.4%). This was also the case when investigating employer changes over a time span of seven years with data from the first three study waves from the lidA-study (group AAA, study III, Garthe & Hasselhorn, 2021b), or when examining the overlap of different forms of occupational changes (study I, Garthe & Hasselhorn, 2021a). However, since older workers were examined, a certain selection bias can be expected, as many who did not want to stay in their job, already changed to a job with a better person-job fit over time. This is one important difference between older and younger workers that research should consider.

Reluctant stayers. The group of employees, who would have liked to change employer, is surprisingly large among older workers (13.2%) and larger than the group of EL (Garthe & Hasselhorn, 2021a). The lidA-study was the first to identify reluctant stayers in a representative sample for older workers in Germany. This data is highly up-to-date compared to data from other countries. Researchers using the British Household Panel Survey (BHPS) found that about 45% of British employees (all age groups) reported job dissatisfaction and were immobile during two subsequent years, which was defined as being in a job lock situation (Huysse-Gaytandjieva et al., 2013b). However, these analyses were based on data from 1997. A Finnish study, using data from the Quality of Work Life Survey, again from 1997, found that about 24% of Finnish employees between the age of 15-64 years would have changed employer at the same level of pay (Böckerman et al., 2011). It can be assumed that the frequencies are different today, not least because of changes in the labor market situation. Moreover, researchers from Sweden examined the intention to leave a non-preferred occupation using longitudinal data from 1999 until 2010 and found that this intention declined steadily with advancing age (Canivet et al., 2017). These studies are only partially comparable with the results

of the lidA-study as measurements were made differently. The importance of the measurement is also shown by the analyses of the attempt to change, because less than half of the participants who wanted to change actually tried to do so (study I, Garthe & Hasselhorn, 2021a). Although it can also be assumed for Germany that this group of reluctant stayers is smaller among older workers than among younger workers, it nonetheless remains a large group that should be considered as it represents a potential risk group for health, work ability, and employment participation (Canivet et al., 2017).

In summary, the analyses have shown that employer changes and the desire to change are not a rare phenomenon among older workers in Germany. It is worthwhile examining and differentiating between these groups, as they may differ in terms of their employment perspective. Those who (can) change voluntarily can take advantage of opportunities, but those who cannot change or did so involuntarily belong to potential risk groups.

3.2 The Antecedents

Before discussing the consequences of voluntary (EL), involuntary (RL), and desired (RS) employer changes of older workers, these change groups should be characterized. Knowledge on their former work situation, individual characteristics, and the self-reported reasons why they changed or would have liked to have changed allow a better understanding and discussion of the consequences for their health, work ability and employment perspective.

Recent research has mainly focused on the determinants and reasons, not on the consequences of voluntary employer changes, due to limited access to longitudinal data. This leads to the fact that often the reasons for the intention to leave, rather than the reasons for the actual change were investigated (e. g., Fernet et al., 2017; Ofei-Dodoo et al., 2020). Thus, EL and RS were mixed up. Yet, analyses presented in study I showed that the change groups differ substantially when it comes to characteristics and reasons (Garthe & Hasselhorn, 2021a). Over and above that, RS and EL differ in their abilities and possibilities to change. Among RS, obstacles often play a more important role than wishes. In the context of occupational safety and occupational science, being aware of the wishes of those who are locked in their jobs, however, may facilitate the establishment of suitable measures at the workplace.

Therefore, in this section, the four groups according to Hom et al. (2012) among older workers are briefly characterized and the most common reasons for the changes and the desired changes are presented and discussed. Basis for this discussion are the reasons and the multinomial logistic regression analyses presented in study I (Garthe & Hasselhorn, 2021a) and the description of the psychosocial working conditions in the old job given in study II (Garthe & Hasselhorn, 2020).

Enthusiastic leavers. The EL differ in several points from the largest group of ES. As is it described in study I, “the EL were younger, more often had a partner, had better physical health, a shorter seniority, more often had a lower income level and a lower leadership quality. The EL were the only group having more often a partner and reporting better physical health than the respective ES.” (Garthe & Hasselhorn, 2021a, 10) In other words, EL are less often male, older employees with high complex tasks, working full-time and with a long seniority, which pose a classical stereotype of an employee with high income and high job security (Müller, 2008). A meta-analysis by Rubenstein et al. (2018) investigating the predictors of employer changes further broadens the knowledge on voluntary changers. They found that employees with higher seniority, more internal locus of control and motivation, higher task complexity, higher workload, and who have a good work climate, organizational support, and rewards are less likely to change employers. The characterization of the EL leads to the question of which resources employees need in order to change voluntarily. Since a voluntary change can be a risk as well as a challenge, workers need certain resources such as sufficient good health, sufficient qualifications, self-confidence, and financial security (Huyse-Gaytandjieva et al., 2013a; Moen et al., 2016). This fits to the finding that the EL had better physical health and more often a partner who could give support and financial security. Moreover, it could be assumed that these employees took a low risk when they left their old job because they may already have had a new job in prospect.

The self-reported main reasons for the voluntary change were presented in study I (Garthe & Hasselhorn, 2021a). Almost one third changed in order to attain better working conditions (29.1%), 15.1% changed for a better salary, and 14.1% changed for career reasons. Somewhat similar findings were presented in a study by McNair et al. (2004) who surveyed older workers in England. They found that career, redundancy, and reduced pressure were the most frequent reasons for an employer change. With respect to theory, the main reasons for leaving are also depicted in *Mobley’s expanded turnover model* from 1979 (see section 1.2, figure 1). The working conditions and salary in the old job and the expectation that in other jobs more opportunities for career development are given, are important factors in the decision making process. Here both were included, those who leave a poor job and those who change towards a better and more suitable job (Feldman & Ng, 2007). Further, non-work reasons were reported by less than 10% of the EL, such as work-family conflict or health reasons (study I, Garthe & Hasselhorn, 2021a). These reasons were included in Mobley’s model as well. In accordance with the model, the results from the lidA-study confirm that the reasons for a change are diverse and individual. They are partly related to the old job, partly to the new but can also be connected to private life. Most often, however, the reasons refer to the old job, specifically the working conditions.

This main reason is reflected by the findings on the working conditions of the EL in the old job presented in study II (Garthe & Hasselhorn, 2020). Before the change, their psychosocial working conditions such as leadership quality, work-family conflict, or quantitative demands were significantly worse than after the change. Additionally, their psychosocial working conditions were worse compared to those of the participants who wanted to stay (ES). Hammer et al. (2019) emphasized the importance of psychosocial working conditions for job satisfaction, well-being, and health. In the long run this may lead to occupational change. Findings from Sweden, the Netherlands, and Japan confirmed that psychosocial working conditions such as high demands-low control, co-worker conflicts, or occupational stress are predictors for voluntary employer changes (de Raeve, Jansen, van den Brandt, Piet A., Vasse, & Kant, 2008; Kachi et al., 2020; Söderberg et al., 2014). Furthermore, psychosocial working conditions were found to be push and pull factors for early exit from work (d'Errico, Burr, Pattloch, Kersten, & Rose, 2020). In some cases, though, aspects of the new job are the decisive factors such as the prospect of career development (Söderberg et al., 2014). Also, the importance of job offers on employer change, especially among high-wage employees, should not be underestimated (Böckerman et al., 2011). For some jobs such as management positions or coordination older employees with high qualifications and certain experience are specifically sought.

Reluctant leavers. As described in study I, „the RL were less often part-time workers, had a shorter seniority and more often a lower income level and they reported lower leadership quality.“ (Garthe & Hasselhorn, 2021a, 10) In general, older workers with a long seniority hold higher job protection than younger workers (Benz, 2010). Here, the RL seem to be those among the older workers who tend to have a lower job protection due to a shorter seniority and could be more easily dismissed, dispensed, and replaced. Many older workers need interventions, further qualifications, or retraining in order to find a new job after job loss (Callan, Bowman, Fitzsimmons, & Poulsen, 2020). The RL investigated in the lidA-study had found a new job.

The reasons for the job loss were not surveyed in the lidA-study. They can be directly related to the employee, but they can also be independent of the employee when it comes to the organizations' restructuring or closure. The *push model of turnover*, however, describes involuntary leaving based on low job performance (Becker & Cropanzano, 2011; Jackofsky, 1984). The results from the lidA-study do not allow to confirm if the RL were low performers. Rubenstein et al. (2018) found in a meta-analysis that low performing, lateness, and absenteeism are main reasons why employees are dismissed. Canivet et al. (2017) emphasized conflicts with supervisors as one central reason. Such conflicts and work avoidance behaviors may be indicated by the reported low leadership quality among the RL.

Enthusiastic stayers. Studies I and II showed that the ES were slightly more often male and older employees, with higher vocational education, working full time, and with a longer seniority compared

to the study sample and the other change groups (Garthe & Hasselhorn, 2020, 2021a). Accordingly, this group represents the opposite of the EL and typical workers with high job protection, a high and stable income level, and a permanent contract (cf. *German: Normalarbeitsverhältnis*, Müller, 2008). A review by Spurk, Hofer, Burmeister, Muehlhausen, and Volmer (2019) confirmed that age and tenure are positively related to occupational commitment, described as the emotional attachment and desire to remain in the occupation as well as perceived cost associated with leaving. Bentein, Vandenberghe, Vandenberg, and Stinglhamber (2005) confirmed that decreased occupational commitment is associated with a higher intention to leave.

These findings fit to the *job embeddedness* theory describing the links and fit to the current job and the ease with which these links can be broken (see section 1.2.2, Lee et al., 2014). The ES among the older workers are highly embedded to their jobs as they pose a selective group: workers who have found a suitable job over time (Heywood & Jirjahn, 2016; Kim, Schuh, & Cai, 2020; Maurer, Weiss, & Barbeite, 2003). Study II confirmed that the ES reported very good psychosocial working conditions such as high leadership quality, influence at work, and possibilities for development as well as low work-family conflicts compared to the study sample and the change groups at both measurement time points. Next to the person-job fit and possible emotional links to the employer, it could also be assumed that the sacrifices of leaving would be too high for the ES with high tenure, because they may risk pension, insurance, and financial benefits (see section 3.4.2).

Reluctant stayers. The RS differ significantly from the ES and the change groups. They “were younger, had poorer mental health, a shorter seniority, lower leadership quality and a higher work-family conflict.” (Garthe & Hasselhorn, 2021a, 10) This matches with earlier findings from Huisse-Gaytandjieva et al. (2013b) who found job lock situations more often among older men, with poor health, working full-time, and having an employer-provided pension scheme. External obstacles such as an employer-provided pension scheme could not be investigated with the data from the lidA-study, but may keep many RS in their jobs (see section 3.4.2). Next to voluntary leaving, reluctant staying due to contract bounds was also depicted in *Mobley’s ‘expanded’ turnover model* (1979).

In the lidA-study, over 40% of the RS wanted to change to improve their working conditions, about 16% wanted better salary, and about 7% better working hours (study I, Garthe & Hasselhorn, 2021a). The high percentage of those wanting better working conditions seems justified as their psychosocial working conditions were significantly worse than those of the other groups and the study sample. They had a poorer leadership quality, a higher work-family conflict, more quantitative demands, and less support from colleagues, possibilities for development, and influence at work (study II, Garthe & Hasselhorn, 2020). This work situation reflects a typical *job lock* situation as it is described in theory: a low person-job fit, poorer working conditions and, thus, enough reasons to desire a change, but with

low resources and possibilities to actually change (see section 1.2.2, Huysse-Gaytandjieva et al., 2013a, 2013b). A work situation with such an overlap of unfavorable working conditions was found to increase the risk for early exit from work (d'Errico et al., 2020) and this risk may be higher if the older workers were unable to change employers on their own initiative.

In contrast to the working conditions, only few RS wanted to change for health reasons although they reported significantly poorer mental and physical health than the ES (study II, Garthe & Hasselhorn, 2020). Reineholm et al. (2012) showed that poor working conditions, but not poor health could predict employer changes. Böckerman et al. (2011) found that mental health problems could predict the intention to leave the employer, but not an actual change. Furthermore, higher burnout levels were found to determine the intention to leave among Dutch nurses (van der Heijden, Brown Mahoney, & Xu, 2019). Canivet et al. (2017) supposed that the advantages of jobs, such as a secure employment situation and income are more important to the RS than their health and that they try to manage the last few years without changing. Yet, good mental health is an important precondition to be able to change and stay productive (Böckerman et al., 2011). It might be one important factor which determines whether an employee belongs to the RS or the EL. Böckerman et al. (2011) summarized that these factors, poor working conditions and mental health as well as poor promotion prospects, are those factors that push the employees to job search and simultaneously make them less employable. This low self-perceived employability keeps the older employees at their secure workplaces although they are dissatisfied (Canivet et al., 2017; Gielen & Tatsiramos, 2012). From this point of view, a change might represent a high risk for this group because they would lose their security, assured income, and might not find a new and better job at the same or higher level of pay. Furthermore, internal job mobility such as a change in work tasks or position is probably difficult to achieve.

In summary, many different factors and their interaction keep older workers in their jobs or push them out, such as individual reasons, obstacles, resources, possibilities, risks, or sacrifices. Feldman and Ng (2007) have given a good overview to these factors and assigned the reasons for staying and leaving to six different perspectives: (a) *structural labor market factors* such as macroeconomic conditions, (b) *occupational labor market factors* such as gender composition and wage levels, (c) *organizational policies and procedures* such as the structure of pension and insurance benefits, (d) *work group-level factors* such as social support and relational demography, (e) *personal life factors* such as family and friendship networks, and (f) *personality and personal style differences* such as the locus of control and career interests. These perspectives show where the lidA-study reaches the limit when it comes to recording reasons and determinants. Only aspects of the perspectives (d), (e) and (f) could be investigated directly: The four groups EL, RL, ES and RS showed different patterns of socio-

demographic characteristics, main reasons, and work situations which help to understand why they left or stayed. The self-reported main reasons (study I) often matched the work situation (study II), for example, when it comes to poor working conditions. Yet, poor working conditions were the most common reason given for EL and RS but the RS lacked the opportunities or the resources to change. Therefore, these results already indicate that the RS are a risk group for the employment perspective and should be given special attention by occupational safety and science. The antecedents and obstacles regarding policy and employers (a, b, c) are discussed in section 3.4.

3.3 The Consequences

So far, there is little research on the consequences of employer changes in general, especially for older workers. This was mainly due to the data situation as data which allowed longitudinal analyses independently of the employer were rarely available. The lidA-study has the potential to examine the consequences of staying and leaving for older workers on various outcomes. The findings on the consequences for work, health, and work ability are discussed in this section. Following the discussion of the findings, their significance for the motivation to work and the employment perspective is outlined.

3.3.1 Work

Enthusiastic leavers. The findings from study II showed that among EL most of the psychosocial working conditions were rated worse compared to the ES before the change (Garthe & Hasselhorn, 2020). As described above, every third EL changed with the aim to improve the working conditions (study I, Garthe & Hasselhorn, 2021a). This fits to findings from Söderberg et al. (2014) who found that voluntary changers had higher job demands and lower control and rewards than stayers. Noonan (2005) and Andersen, Jensen, and Sundstrup (2020) confirmed that older workers prefer working conditions that meet their changed needs, for example, for flexible working time.

The assumption that working conditions can be improved through a voluntary change were confirmed by the results from study II. After a voluntary change, the psychosocial working conditions were rated better than before the change and in all other groups examined. The EL reported significantly better leadership quality, more support from colleagues, more possibilities for development, less work-family conflicts, and less quantitative demands (Garthe & Hasselhorn, 2020). The few previous studies on the consequences of employer changes also confirm that voluntary employer changes have a positive effect on several psychosocial and physical working conditions. The changers reported increased job security (Carless & Arnup, 2011), better possibilities for development, and more appropriate work tasks (Grund, 2009). In addition to psychosocial working conditions, a study using a representative sample of the Swedish working population showed over a period of six

years that voluntary changers left workplaces with a high workload, time pressure, and work intensity and changed to workplaces with lower demands (Bujacz, Bernhard-Oettel, Rigotti, Magnusson Hanson, & Lindfors, 2018). Grund (2009) found for Germany that one third of the employer changers reported less physical workload after the change. About 44% reported a constant physical workload and about 23% of an increase of physical workload. Further working conditions regarding the type of work, the earnings, and the working time changed following a voluntary change of employer. Most of the voluntary changers, examined over seven years in study III, left initially marginal employment in 2011 over time and were working full-time in 2018 (Garthe & Hasselhorn, 2021b). Carless and Arnup (2011), using the Australian HILDA-study, found reduced working hours after voluntary leaving and McNair et al. (2004) found for England that after the change about 22% of the older workers aged 55 to 59, about 35% of the older workers aged 60 to 64 and about 50% of the older workers aged 65 to 69 reported fewer working hours. Furthermore, Chadi and Hetschko (2014), as well as Grund (2009) found among others, improvements in working time, earnings, and the type of work. These numerous improvements are plausible to such a degree as these employees changed voluntarily and with the aim to achieve these improvements. As described above, the EL are a selective group who had the opportunity and ability to improve their work situation by changing employers. However, the significantly higher rating of the psychosocial working conditions after the change in relation to all other groups (study II, Garthe & Hasselhorn, 2020) could also be attributed to an overestimation of their new work situation, as they may have deliberately left a worse job and the new job, in contrast, appears particularly better. Here, further longitudinal investigations are necessary to distinguish between short- und long-term consequences of voluntary changes on psychosocial working conditions. Nevertheless, the real positive effect should not be underestimated as many working conditions strongly improved.

Reluctant leavers. Before the involuntary change, the RL reported poorer leadership quality, less possibilities for development, less quantitative demands, and less influence at work than the ES. Study II showed that an involuntary change does not necessarily go along with deteriorations in psychosocial working conditions (Garthe & Hasselhorn, 2020). The RL reported better leadership quality, more support from colleagues, and more possibilities for development than in the old job. Deteriorations among the ES such as in work-family conflict or the possibilities for development were not found among the RL. Chadi and Hetschko (2014) presented similar findings as they compared the old and new job of involuntary changers. They found more improvements than deteriorations with respect to the type of work, earnings, working time, and job security as well as deteriorations and improvements concerning benefits, promotion, workload, and the commute among RL. However, positive effects of changing on job satisfaction were only found for voluntary and not for involuntary changes. The improvements following involuntary change may be due to the fact that an involuntary change as well

as a voluntary one means a nonbiased start at a new job. The RL had other work circumstances, colleagues, supervisors and an unbiased view on the new job situation. Boswell et al. (2009) also discussed that RL may experience an initial high in job satisfaction and that they need to psychologically make sense of the new job. Moreover, the old job of the RL may be associated with poor working conditions or memories. In consequence, a new job can probably only be better at first. It should also be noted that the RL investigated in the lidA-study had found a new job which can be a challenge for older workers.

Enthusiastic stayers. In contrast to the other change groups, the ES reported better leadership quality, more support from colleagues, less work-family conflicts, more possibilities for development, and more influence at work (study II, Garthe & Hasselhorn, 2020). Over four years the quality of these working conditions remains relatively constant. Thus, regarding the working conditions, there are no clear reasons why they would want to change employers. However, there are slight deteriorations over time such as in leadership quality, work-family conflict, and influence at work but an increase of support from colleagues. One assumption for these deteriorations is that the demands, for example on flexibility, working hours or work organization and the preconditions for job satisfaction change in the case of older workers (Converso et al., 2017; Raab, 2020). The importance and priorities regarding work such as on the arrangement of the retirement transition are changing but often supervisors may not afford to respond to this (Wainwright et al., 2018).

Reluctant stayers. In 2014, the first measurement time point in study II, the RS already reported significantly poorer psychosocial working conditions than all other groups examined: poorer leadership quality, less support from colleagues, higher work-family conflicts, higher quantitative demands, and less influence at work (Garthe & Hasselhorn, 2020). As described above, many of the RS wanted to change in order to improve their working conditions; a higher share than among the ES. A meta-analysis on the antecedents of turnover by Rubenstein et al. (2018) confirmed that diverse working conditions were the drivers for actual employer changes.

Hence, the lidA-study allowed to differentiate between actual changers and those who did not change but wanted to, and to track these groups over time. The analyses showed significant deteriorations among the RS in terms of leadership quality, work-family conflict, possibilities for development, and influence at work over four years. Their perceived psychosocial working conditions further deteriorated while the EL experienced various improvements after changing. These results point at the importance of distinguishing between these two groups. The RSs' negative attitude towards the job with poorer working conditions has probably over time led to the fact that the job is rated even worse and, moreover, more poorly performed. The group of RS which is characterized by the lack of control and a locked-in situation (Liljegren & Ekberg, 2009) was found to show withdrawal

and job avoidance behavior, such as lateness, absence, and disengagement from their job (Böckerman et al., 2011; Stengård et al., 2016). Researchers from China also showed that a change in person-job fit was related to a change in satisfaction and organizational commitment (Kim et al., 2020). Remaining in a non-preferred job over a longer period of time may lead to a resource loss spiral, because employees who show no interest in their jobs may receive less support from supervisors and colleagues and less possibilities for development or opportunities to change their work tasks (Stengård et al., 2016). That means that their employability further deteriorates. As described above, these poor working conditions and the following behavior at work are factors that push the employees to job search and simultaneously make them less employable (Böckerman et al., 2011). Thus, their chances to change on their own initiative decline over time, which makes them in the long run a risk group for early exit from work.

In summary, the four change groups showed different patterns in terms of psychosocial working conditions. Their evaluation on these working conditions already differed before the change or at the first measurement time point in 2014, respectively. Over time these group differences increased. While EL and even RL can benefit from the change by leaving a job with poor working conditions and using the change to get to a job with better working conditions, the group of RS represents a risk group. They are locked in jobs with poor working conditions and low opportunities to change on their own initiative, often experience low employability, and are therefore at a high risk to leave the labor market earlier.

3.3.2 Health and Work Ability

Enthusiastic leavers. As discussed above, many working conditions improved following a voluntary change of employer. These working conditions have been found to be associated with health and work ability. For example, Niedhammer, Bertrais, and Witt (2021) showed in a meta-review that psychosocial work factors, cardiovascular diseases, and mental disorders are significantly associated. Lohela, Björklund, Vingård, Hagberg, and Jensen (2009) observed that improvements in leadership quality and social climate go along with improvements in health. The work of Havermans et al. (2017) demonstrates that improvements in unfavorable psychosocial work factors were associated with improved mental health and Strazdins et al. (2011) confirmed that improvements and deteriorations in various working conditions were associated with corresponding improvements or deteriorations in mental health. For work ability, Malińska and Bugajska (2020) found that among others, high levels of job control and low job insecurity are strong predictors of work ability. These and further researchers showed the connection between changes in working conditions and changes of health and work ability.

The results of the lidA-study presented in study II and III confirmed that voluntary employer changes are actually associated with improvements in health and work ability (Garthe & Hasselhorn, 2020, 2021b). Before the change, the EL reported poorer mental health as well as lower work ability than the ES. In contrast, they reported better physical health. As discussed in section 3.2.1, EL may have to be healthy enough to be able to change on their own initiative (Reineholm et al., 2012). Only about 6% of the EL changed predominantly for health reasons (Garthe & Hasselhorn, 2021a). Qualitative research found that some older workers changed jobs because their health did not allow them to continue working in their current job (Jahn & Ulbricht, 2011). However, the mental health and work ability of the EL improved significantly following the change. Although many working conditions improved after changing, no improvements were found for physical health after four years. Yet, it could be assumed that physical health can be maintained due to the better working conditions, but that these effects may only emerge after a longer period of time. With regard to mental health, similar findings were found by Liljegren and Ekberg (2008) who showed among Swedish civil servants that job mobility was a predictor of mental, but not physical health and burnout. Furthermore, mental health and burnout were not predictors for job mobility. Here, too, it can be assumed that the new job situation and new start improved the job satisfaction and self-reported mental health of the EL. Liljegren and Ekberg (2008) compared the voluntary change of employer with the experience of professional development or upward hierarchical mobility which positively affects the individual mental health. Liljegren and Ekberg (2009) summarized that the positive effects of voluntary changes on mental health may be due to the employer change per se, as a change goes along with a whole new work situation including an unbiased view on the new supervisor, colleagues, working conditions, and work circumstances. Similar to Söderberg et al. (2014), who investigated the association of psychosocial working conditions and job mobility, the results of the lidA-study confirmed that voluntary employer changes may be important in the context of health protecting strategies, especially among older workers.

When it comes to work ability, the results also showed significant improvements. In the lidA-study, the work ability of the EL improved after changing while physical health did not. As described in study III, work ability can be defined as the result of the fit between the individual's resources, such as health and his or her work demands (Tuomi et al., 1997), in other words, the fit between the worker and his or her work. Therefore, a worker's work ability can be improved by improving the work situation. The new job situation with other work demands may increase the fit between the older worker and the work and thereby improve their work ability (Varianou-Mikellidou et al., 2019). A study among nurses showed that the risk of changing employer increased significantly with unfavorable working conditions, but only among nurses with low work ability. Overall, Varianou-Mikellidou et al. (2019)

stressed that strategies that promote work ability could be seen as an investment for the future, as high work ability is associated with a decrease of work disability and premature retirement.

However, study III shows another aspect of the consequences of voluntary change on work ability: the role of time. The increase in work ability after a voluntary employer change decreases sharply with time while staying with the new employer. In turnover research this is called a honeymoon-hangover effect (Boswell et al., 2005). Boswell et al. (2005) investigated the honeymoon-hangover effect for job satisfaction and found a honeymoon period (improvement) in the assessment one year after the change and a hangover period (deterioration) one year later. In study III, a honeymoon-hangover effect was found for work ability, although work ability was measured in three- to four-year periods. This is in line with Roe (2008) who assumed that the duration of the consequences on different outcomes can widely differ. Some changes have an immediate impact and some may take time. In the new job, the work ability is estimated, possibly overestimated, to be significantly higher due to the new work situation as it is rated in contrast to the old (worse) work situation and the negative aspects of the new job may not be present at the beginning. After a while, *normalization* occurs (Boswell et al., 2009). The short-term effects of voluntary employer changes should therefore not be overestimated as they may not last long to a high extent. However, this does not mean that the change had no long-term effect on work ability. Without the voluntary change, the work ability of these workers might have become significantly worse, similar to the work ability of the reluctant stayers investigated in study II (Garthe & Hasselhorn, 2020). Therefore, voluntary changes of employer might maintain the older workers' work ability rather than improve it substantially in the long term. The positive effect despite the honeymoon-hangover effect should not be underestimated as actual positive changes have taken place in the work situation.

Reluctant leavers. The health and work ability trajectories differ between EL and RL. Before the change, the RL reported poorer mental health than the ES but better mental health than the EL. Furthermore, they had significantly poorer physical health than all other groups investigated. Also, the work ability was lower. Contrary to expectations, the mental health of the RL had not deteriorated following the involuntary change (study II, Garthe & Hasselhorn, 2020). Schaller and Stevens (2015) showed that job loss results in poor self-reported health, activity limitations, and poor mental health. Furthermore, the work ability slightly improved while the work ability of the ES slightly deteriorated. Possibly no decrease in health and work ability was found because only those who found a new job after reluctant leaving were investigated. Similar to the EL, this selective group experienced a new start in a job with other supervisors, colleagues, and working conditions. Chadi and Hetschko (2014) found an increase of job satisfaction in the first year in the new job among involuntary changers but this effect faded away within the subsequent year. The long-term consequences of involuntary employer

changes on health and work ability remain unclear and may exhibit strong individual variation, as some RL may have found a new job with a better person-job fit, but others lost appropriate and long lasting jobs in which they enjoyed working.

Enthusiastic stayers. As in all other change groups investigated, the physical health and work ability slightly deteriorated over time among the ES. The ES reported better mental health after four years in the same job (Garthe & Hasselhorn, 2020). The slight deteriorations can be attributed to aging (Crawford, Graveling, Cowie, & Dixon, 2010) and were found for the full sample of the lidA-study. There was also a general slight increase in mental health in the entire sample of the lidA-study. This increase could be due to the times of the assessment. The interviews of the lidA-study were conducted in winter 2014 and in the summer of 2018. Seasonal influences may have affected the rating on mental health and the perception of the current work and life situation (Harmatz et al., 2000).

Reluctant stayers. The results of the lidA-study show that the RS reported not only poor working conditions, but also the worst mental health at both measurement time points compared to the other change groups. It is also noticeable that, unlike the other groups and the overall sample in lidA, mental health does not improve over time, it remains constant. Furthermore, they reported poorer physical health than ES and EL and the worst work ability among the groups which further deteriorated over time in the undesired job (study II, Garthe & Hasselhorn, 2020). Only about 6% of the RS wanted to change due to health reasons, yet, over 40% wanted to change to improve their working conditions (study I, Garthe & Hasselhorn, 2021a). Canivet et al. (2017) also found that poor mental health was related to involuntary staying among older workers, which further contributes to perceived low employability and the sense of being locked-in. These results support the assumption of the *stuck at work* theory, that one consequence of reluctant staying, is decreased health (Huysse-Gaytandjieva et al., 2013a). Qualitative research on RS by Wainwright et al. (2018) showed that some respondents have the feeling that they have to be practically dead before the organization agrees to let them leave employment for health reasons. Due to the deterioration in health and working conditions, in other words, a decreasing person-job fit, the work ability also decreases over time. The findings confirm that the RLs' employability continues to decrease over time and that they are less capable of changing. The result is that they stay at their undesired workplace and leave employment earlier rather than change the employer (Böckerman et al., 2011; Liljegren & Ekberg, 2009; Strazdins et al., 2011).

In summary, the findings emphasize the differences between the four change groups investigated with respect to their trajectories in health and work ability over time. All findings on EL stress that employer changes actually bear the chance to improve work, health, and work ability. Even reluctant leaving may bear such chances. In contrast, reluctant staying represents a risk as deteriorations in

working conditions, health, and work ability were found while staying at the undesired workplace. For this group of older workers, the long-term consequences for health and work ability are unclear. At any rate, these employees need special attention in organizations if the employers want to keep them in employment. This is the responsibility of supervisors and actors in occupational health and safety (Varianou-Mikellidou et al., 2019).

3.3.3 Motivation and Employment Perspective

The reasons and determinants for the timing of exit from work are characterized by complexity, processuality, individuality and structure dependence. Several factors such as working conditions, health, and work ability, but also private life, social position, legislation, finances, or motivation and their interaction individually determine when and how a worker leaves employment (see the lidA conceptual framework on work, age and work participation; Hasselhorn, Ebener, & Müller, 2015). The findings from study I, II and III showed that the four change groups EL, RL, ES and RS differ in terms of work, health, and work ability and experience different trajectories following voluntary and involuntary staying or leaving. While actual changes have the potential to improve or maintain working conditions, health, and work ability, involuntary staying goes along with deteriorations. In this section, the consequences of voluntary and involuntary staying and leaving at higher working age for the motivation to continue working and the employment perspective, meaning the timing of the exit from work, are discussed.

Moen et al. (2016, 322) summarized: “Retirement plans are often uncertain, contingent and ambiguous as workers’ plans and desires evolve and react to their changing circumstances.” This quote emphasizes the influence of the current work situation for retirement planning. Accordingly, the employer may have a strong influence on when and how one retires. This is supported by van Solinge and Henkens (2014) who noted that retirement intentions are shaped by workplace norms and supervisors’ attitudes as well as by Brussig (2021) and Wainwright et al. (2018) who stressed that the membership to an organization with its individual work design, career paths, early retirement options, and additional pensions largely determine retirement timing. Thus, a change of employer additionally implies a change of opportunities to exit from work.

The discussion of the consequences of employer changes on work, health, and work ability reveal various aspects that are known to have an impact on the employment perspective, such as work demands, health, work ability and employability, the meaning of work, and job satisfaction. The occurrence of physical and psychological demands strongly depends on the sector (Brussig, 2021). Especially, physical work and work environment factors such as awkward body postures, lifting heavy loads, repetitive movements, and strenuous work tasks were found to increase the risk of early exit

from work (Andersen et al., 2020; Brussig, 2016; d'Errico et al., 2020; Schram et al., 2020). Additionally, psychological demands were found to shorten the employment participation (Varianou-Mikellidou et al., 2019). When it comes to adverse work conditions, employer changes bear the potential to improve several working conditions at once. In contrast, involuntary staying in jobs with adverse work conditions increases the risk of leaving working life earlier.

In terms of health, Büsch, Dittrich, and Lieberum (2010) noted that sufficient health is an obligatory precondition for continued employment participation. Among others, de Wind, Geuskens, Ybema, Bongers, and van der Beek (2015) found that poor physical health is a predictor of early retirement. Nilsson et al. (2011) who differentiated whether workers *can* or *want to* work until the age of 65 years or beyond showed that the workers' health was only associated with the *can* but not with the *want to* outcome. Therefore, health is an important requirement in order to continue working, but neither good nor poor health solely determines if a worker will sooner or later leave the working life. For example, Rice, Lang, Henley, and Melzer (2011) and Wilson et al. (2020) found that fair and poor self-rated health were both associated with exit from work. This is explained by different pathways depicted by Pond, Stephens, and Alpass (2010) and de Wind et al. (2013). Pathways for early retirement were identified for poor health, such as leaving because of the inability to continue working due to health problems, because the older workers were afraid of a further decline in health and chose to retire early, or because they felt pushed out by their employer (de Wind et al., 2013). Yet, two additional pathways were identified for good health: To retire early with good health, to be able to fulfil other life goals outside of work (maximization of life), or to protect and promote good health (health protection) (Pond et al., 2010). Nevertheless, the findings from the lidA-study showed that employer changes help to maintain the workers' health and, therefore, give the opportunity and ability to continue working. The strong decline in physical health among RS, however, increases the risk of staying in a job lock situation and early exit from work, be it due to the inability to continue working or to protect their own health.

Apart from health, work ability was confirmed to contribute to the intention to retire (Prakash et al., 2019). Low work ability often goes along with poor work participation outcomes and health-related exits from work (Bethge, Spanier, Köhn, & Schlumbohm, 2021). As work ability encompasses the interaction of the workers' abilities, which are not independent from health, and the work situation, employees can have a high work ability when working in suitable jobs in spite of poor health. Voluntary employer changes were shown to have the potential to increase all three, working conditions, health, and work ability. However, involuntary stayers experienced a decline in work ability, be it due to the self-rated poor working conditions, or the worsening health, and are therefore a risk group for early exit from work.

Employability has similar relevance for leaving the labor market earlier, which can be defined as the perceived ability to find a comparable new job (Moen et al., 2016). As Moen et al. (2016) summarized, employability is about the perceived control over the own career. The EL who managed to change on their own initiative may perceive high employability and even the RL may benefit from finding a new job after job loss. Among RS, on the other hand, employability steadily decreases due to the sense of a job lock situation, low possibilities for development, and low control. The same applies to the meaning of work and job satisfaction. Working in a job which is perceived as meaningful was found to extend the employment participation (Moen et al., 2016) and high job satisfaction was shown to be associated with productivity, high quality of work, and high and longer employment participation (Sousa, Ramos, & Carvalho, 2021; Varianou-Mikellidou et al., 2019). Both may increase after voluntary changing (Chadi & Hetschko, 2014) and may decrease while staying at an undesired workplace.

Next to findings on the consequences which go along with employer changes, researchers also investigated the consequences of occupational change itself for the employment participation. In 1999, Behrens already discussed the extension of working life as a result of changing profession, employer, or work tasks in a suitable way because some jobs, for example with high physical demands, may not be appropriate for older workers. Henkens and Kalmijn (2006) showed that older workers who changed employers at the end of their career, retire substantially later than immobile workers. Additional analyses from the lidA-study confirmed that EL more frequently stated that they wanted to work up to their individual retirement age and that they plan to do so. Those who changed several times also stated that they could work longer than those who stayed with their employer (Garthe, 2020). RS, on the other hand, stated less often that they wanted to work up to their individual retirement age (Hasselhorn et al., 2019). In addition to employer changes, other forms of occupational change, such as change of profession or work tasks bears the potential to extend the working life (Aleksandrowicz, Zieschang, Bräunig, & Jahn, 2014; Wong & Tetrick, 2017). This includes measures at the workplace, such as the reduction of physical demands or flexible working time arrangements, which help to maintain the work ability and employability of older workers (Turek, Oude Mulders, & Henkens, 2020). A change of profession is a far-reaching change in the work situation, but an even greater challenge with a higher risk and for which more resources are required (study I, Garthe & Hasselhorn, 2021a).

Moreover, occupational change was found to be part of the retirement process including phased retirement (Wainwright et al., 2018) and bridge jobs (Cahill, Quinn, & Kaskie, 2020). Cahill et al. (2020) showed for the American working population that about one-half of the older full-time workers moved to a bridge job filling the gap between a career job and full retirement, usually with another employer

and often part-time, before exiting the labor market. They emphasized the importance and potential of various forms of gradual retirement for the older workers' employment participation.

In summary, employer changes, but also unfulfilled desires to change impact the motivation to continue working at higher working age and the time when and how older workers leave employment. Employer changes offer opportunities for better or more suitable working conditions, a new start with increased job satisfaction and motivation. However, the larger group of RS trapped in an unfavorable work situation, once again represents a risk group that is more likely to leave working life earlier for a variety of reasons, be it due to the decrease in the person-work fit, the working conditions, health, work ability, perceived employability, job satisfaction, or motivation.

3.4 The Role of Policy, Society, and Employers

Regarding employer changes, the previous sections discussed the findings from the perspective of the individual. As summarized at the end of section 3.2, Feldman and Ng (2007) have given an overview to factors affecting leaving and staying with the employer by assigning them to six perspectives (a-f). The perspectives d, e, and f cover factors regarding the individual, specifically work group-level factors, personal life factors, and personality and personal style differences.

Yet, chances, risks, and obstacles to employer change are next to the individual resources, largely determined by the current labor market situation, social norms, and individual organization regulations. Thus, the following section deals with the perspectives a, b, and c covering structural labor market factors, occupational labor market factors, and organizational policies and procedures (Feldman & Ng, 2007). Employer changes at a higher working age are discussed in the context of policy, society, and employers aiming to identify the structural obstacles to employer change as well as the opportunities that may give older workers more flexibility and thereby give them the chance to stay in working life longer.

3.4.1 Policy

Feldman and Ng (2007) summarized that public policies affect the initiative and opportunities for employer change. One example are policies that strengthen employer provided pension systems, which may reduce voluntary employer change at a higher working age, as the older workers benefit financially if they stay with the employer. A second example are policies that extend unemployment subsidies, as this reduces financial risks when leaving an employer or staying in unemployment (Feldman & Ng, 2007). Another aspect directly influencing employer changes at a higher working age is the pension insurance system. In Germany, it is centrally regulated by the state and the pension amount depends largely on the contribution periods and the amount of the contributions (Stöger,

2011). This poses an obstacle to occupational change at a higher working age, as leaving a secure employment situation voluntarily may lead to a job with a lower level of pay or even unemployment. Both would reduce the amount of the pension. Secure income at the usual level and financial security for retirement are aspects to which older workers attach particular importance and which tie them to an employer even if the working conditions, health, work ability as well as motivation for these jobs are low (Böckerman et al., 2011; James & Pitt-Catsouphes, 2016).

A political concept covering a range of public policies affecting occupational change is the concept of flexicurity. The concept first emerged in Dutch and the Netherlands labor market reforms (Bekker et al., 2008). Aims of the flexicurity concept are to enhance the flexibility of labor markets as well as the social security for vulnerable groups within and outside the labor market and thereby reduce unemployment (Wilthagen & Rogowski, 2002; Wilthagen & Tros, 2004). In this context, security does not represent protection from job loss, but the promotion of employability and adaptability of workers (Bekker et al., 2008; Wilthagen & Tros, 2004). This provides more opportunities to find new jobs after job loss. Examples for such policies are contractual and working arrangements, such as flexible working time arrangements reducing work-family conflicts (Wilthagen & Tros, 2004). However, Bekker et al. (2008) noted that each country has to find its own concept of flexicurity. The findings presented in this thesis indicate that, in Germany, a combination of public policies promoting flexicurity may facilitate employer changes at a higher working age and increase the employment participation of older workers and other vulnerable groups.

3.4.2 Society

Next to public policies, societal norms and stereotypes affect the proportion and voluntariness of employer changes at a higher working age. Although the demographic change increased the need to keep older workers in employment, an early exit culture still prevails in Germany. Findings from the German lidA-study showed that more than every second older worker born in 1959 or 1965 would like to stop working as soon as possible (Hasselhorn et al., 2019). Furthermore, the findings indicate that the attitude of the older workers' social environment on retirement timing, co-determines when the older workers want to leave employment (Borchart, Ebener, Tiede, Garthe, & Hasselhorn, 2021). In this context, older workers are more likely to stay with their employer and plan their retirement than to change employers, particularly when they have high job security. This is also the case when the job quality is low (Canivet et al., 2017; Gielen & Tatsiramos, 2012).

What additionally contributes to the early exit culture in Germany and the reluctance to change at a higher working age are ageism and age stereotypes (Clemens, 2010). There are both favorable and unfavorable stereotypes of older workers. On the one hand older workers are regarded as educated,

skilled, reliable, and accurate, but on the other hand they are perceived as being sick more often, slower, inflexible, and with a poorer adaptability to technological systems (Henkens, 2005). A review by Weber, Angerer, and Müller (2019) showed significant associations between negative age stereotypes and reduced self-efficacy, job satisfaction, performance, work commitment, willingness to development as well as increased retirement intentions among older workers. One explanation for these associations offered by Weber et al. (2019) is that repeated exposure to prevalent age stereotypes leads to an internalization of these stereotypes throughout life. Hence, age stereotypes do not only affect behavior of supervisors and colleagues, but also that of older workers. Thus, they pose additional obstacles to employer change at a higher working age and are more likely to contribute to an earlier exit from work. Regarding societal norms and stereotypes, a reduction of ageism and age stereotypes in society, as well as in organizations may help to retain older workers in the labor market.

3.4.3 Employers

As indicated above, employment policies of organizations can contribute to leaving or staying at a higher working age. Often a longer seniority in an organization goes along with a higher level of income and higher job protection, which older workers do not want to lose through changing employer. Further, employer provided pension schemes, insurance benefits, incentives, and organizational socialization practices are factors why older workers tend to stay in the organization rather than change (Feldman & Ng, 2007). Thus, organization policies may promote a form of job lock situation in the case of adverse work. Moreover, frequent employer changes are rarely in the organizations' interest. Employer changes, as well as a large number of retirements, entail high costs for organizations, such as recruitment and training costs of new employees, disruptions in productivity and financial performance, and the loss of knowledge and expertise of the employees who leave (Böckerman et al., 2011; Clark & Ritter, 2020; Hom et al., 2017). Martin, Nguyen-Thi, and Mothe (2021) investigated the relationship between organizational Human Resource Management and turnover intentions. They found that practices that offer flexibility and high work-life balance such as flexible working time or teleworking help to retain highly employable older employees. Further, Human Resource practices facilitating work ability and motivation positively affect the opportunity to continue working (Pak, Kooij, Lange, & van Veldhoven, 2019). In this context, employers support internal changes and measures at the workplace rather than employer changes in order to keep their experienced older employees.

However, many older workers are not aware of their organization's Human Resource Management practices that support working at a higher working age and the transition from work to retirement (Wainwright et al., 2018). Often there is a lack of communication between older workers and supervisors about change intentions and retirement plans (Henkens, 2005). Yet, as Böckerman et al.

(2011, 27) summarized, “the supervisor is a central representative of the organization who affects the ways in which employees perceive the organization as a whole.” The direct supervisor may govern the form of communication, work processes, the distribution of tasks, team composition, and represents a connection between the employees and the management. Especially, a lack of talks about potential improvements at the workplace is perceived as a low leadership quality and increases the intention to quit (Böckerman et al., 2011). This matches the results from study II as EL and RS reported significantly lower leadership quality than the ES (Garthe & Hasselhorn, 2020). In order to retain older workers in employment, employers could promote the transparency of their Human Resource Management practices that support working at a higher working age and initiate communication between supervisors and employees on suitable working conditions and retirement plans. However, this would support internal changes and solutions rather than employer changes.

In summary, leaving and staying with the employer at a higher working age is next to individual resources determined by public policies, societal norms and employment policies of organizations. While policies like the pension insurance system in Germany may reduce efforts of changing employer at a higher working age, policies that offer more flexibility and promote employability increase those attempts. When it comes to societal norms, a culture of early exit still prevails in Germany. Additionally, stereotypes on older workers reduce voluntary employer change and contribute somewhat to the early exit culture. Furthermore, organizational employment policies influence the intensity and tendency to change, as well as retirement planning. Particularly in the last few years of employment, employer provided pension systems tie older workers to the organization and reduce efforts to change. Organizational strategies to keep older employees in working life, offer internal solutions such as flexibility and may prevent external job mobility. Finally, the direct supervisor and internal communication about working conditions, demands, change intentions and retirement plans also play a decisive role with respect to employer changes. The findings from study I, II and III showed that there is a large group of older workers who want to change employer, mostly because of poor working conditions (Garthe & Hasselhorn, 2020, 2021a, 2021b). As these workers represent a risk group for poor health, low work ability and an earlier exit from work, measures that promote flexibility and reduce structural obstacles gained in importance.

3.5 Strengths and Limitations

This thesis has strengths and limitations. All analyses were based on data from the German lidA-study. The lidA-study is particularly suitable for investigating employer changes at a higher working age, because it focuses on employees of the baby boomer generation in Germany. Strengths of lidA are the large sample size allowing for in-depth subgroup analyses, the age-homogenous sample, the

longitudinal study design, and the representativeness for the German socially insured working population of similar age. Another strength of the study is that actual changes were measured rather than proxy measures, such as change intentions or job search. The lidA-study made it possible to investigate determinants as well as several consequences of employer changes. Relevant outcomes for the thesis such as health and work ability were assessed in each of the three waves of the lidA-study. For example, the data enables tracking the participants' work ability over seven years, distinguishing between voluntary and involuntary changers as well as stayers. These strengths make the lidA-study globally unique with respect to occupational change research. Since all three studies are based on data from the lidA-study, they could be compared directly and complement each other.

However, there are also limitations associated with these data. No comparison between younger and older workers was possible. Further, participants were only interviewed every three to four years. Thus, there is a lack of information on the time between these years. In addition, multiple changes were not measured, only the last change was registered. The important risk group of reluctant stayers could not be identified in 2014 and could therefore not be tracked over seven years. Another limitation is that all outcomes were self-reported such as health, work ability, and working conditions. However, self-reported measures may determine intentions, wishes, and motivations in a unique way. Further limitations are that the analyses focused on psychosocial work factors only and did not include employees who became unemployed. Last, selection effects could not be excluded in study III, because only employees who participated in all three waves were included.

More in-depth strengths and limitations are reported in the publications of the three studies (see appendix).

3.6 Conclusion and Outlook

The results of the three studies (Garthe & Hasselhorn, 2020, 2021a, 2021b) have brought new insights into leaving and staying with the employer at a higher working age. Analyses with data from the lidA-study made it possible to identify actual employer changes among older workers and to distinguish between workers who changed voluntarily and involuntarily and workers who wanted to change but stayed with the employer. With longitudinal analyses over a period of up to seven years, the determinants and consequences of these changes and wishes on work, health, and work ability could be examined. Thereby the potential of employer changes at a higher working age became clear. They help to maintain health and work ability and can significantly improve psychosocial working conditions. Although a honeymoon-hangover effect for work ability was found, positive long-term consequences for a higher employment participation are to be expected.

However, the discussion of leaving and staying among older workers also illustrates that employer change is not an opportunity for every older worker experiencing job dissatisfaction. There may be

strong and intelligible obstacles, such as salary, job security, employer provided pension systems, colleagues, a familiar work environment, or the location. The result is that some of these older workers do not even try to change. Furthermore, an employer change requires self-initiative as well as resources such as good health. Therefore, besides employer changers, the group of older workers who did not want to stay with their employer was identified and investigated. The analyses showed that these older workers form a large group, even bigger than the voluntary changers that differ from the changers in terms of working conditions, health and work ability. While staying at the undesired workplace, they are a risk group for adverse working conditions, poor health, low work ability and early exit from work.

These findings are relevant as developments in the labor market, as a result of demographic change, make it necessary to keep older workers in working life. Here, policy makers and organizations need to actively act, especially for those older workers who would like to work longer if they were able to. In contrast, an early exit culture still prevails in Germany, which was supported by politics and organizations for a long time. Many older workers are more likely to plan their retirement than to change employer and start a new stage of employment. Overall, more and more organizations currently aim to keep older workers, yet, often only if they fail to recruit younger ones. Naturally, internal solutions and changes such as in work tasks are promoted more by employers than external changes. Hiring older workers is also an obstacle for employers, as prejudices and experiences with older workers hold them back. Yet, this is different depending on the sector and the specific organization.

Policy makers who aim to increase the work participation of older workers and extend working lives should identify those who need support in changing employer, as well as which obstacles keep these workers at an undesired workplace and how they can be supported, for example with job search, retraining, or further qualification. Other aims should be to reduce negative age stereotypes and to inform organizations and supervisors about the consequences of voluntary employer change and reluctant staying. Overall, an inclusive labor market policy for older workers, allowing for high job mobility and further possibilities to adapt work may have the potential to contribute to considerable improvements of workers' individual working conditions, health, and work ability and to increase the employment participation of older workers. In some cases, employer changes could be implemented as part of the retirement process.

Stakeholders in organizations, such as supervisors, could also actively support their older employees. There is a lack of transparency and communication about retirement planning and desires to adapt work or to change employer. Supervisors should seek communication and not wait until their older employees are no longer able to work. In organizations, supervisors play a central role when it comes to team structure, attitude to the organization, work adjustments, and retirement planning

(Varianou-Mikellidou et al., 2019). They can relieve inhibitions about internal and external changes, rearrange the team, hire older workers, integrate new older workers, reduce age stereotypes, and promote participation in further training. On an organizational level, active strategies could be retirement counselling, flexible working hour arrangements and ergonomic adaptations for older workers (Clark & Ritter, 2020). Such age management strategies should not only be integrated in the Human Resource Management, but also in the occupational health and safety management system of the organization and, at best, take into account the varying needs of heterogeneous workforces in different age groups.

Moreover, the findings are relevant for the international scientific community, which investigates employer changes in all age groups and whose limited data often do not allow to investigate both the determinates and the consequences of employer changes. Overall, more longitudinal data is needed to allow researchers to investigate the situation of voluntary and involuntary leavers, as well as reluctant stayers in countries other than Germany. The introduction and discussion of this thesis shows the interdisciplinary nature of the topic and that a collaboration of different disciplines is needed. Furthermore, researchers should differ between types of change and conduct more research on changes of profession and possibilities for changes within an organization. When it comes to employer changes, further longitudinal analyses are necessary to investigate the consequences of staying and leaving on working conditions other than psychosocial working conditions, as well as the long-term consequences on health, work ability, and employment participation of older workers. Here, the phenomenon of the honeymoon-hangover effect should be investigated over a longer period of time, with shorter time intervals, and with regard to other outcomes than work ability. In addition, research on the obstacles that keep older workers at undesired workplaces is lacking. Structural obstacles that could be addressed to enable beneficial employer changes should be identified. Here, qualitative research could shed more light on individual change processes and obstacles than quantitative research.

In conclusion, this thesis shows that the topic leaving and staying with the employer at higher working age is important in the context of aging workforces and maintaining older workers in the labor market. The findings presented in the three studies (Garthe & Hasselhorn, 2020, 2021a, 2021b) shed new light on the determinants and especially the consequences of leaving and reluctant staying with the employer. They not only confirmed the potential of voluntary employer changes for the employment participation, but also identified a large risk group for early exit from work. Consequences at policy, national, and organizational level, as well as for research could be derived from the findings. Regarding Occupational Science and Occupational Health and Safety, the findings contribute to

improving the work environment and working conditions, as well as the health protection of older workers.

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Appendix

Manuscripts

Study I

Garthe, N. & Hasselhorn, H.M. (2021a). Changes of profession, employer and work tasks in later working life - An empirical overview of staying and leaving, *Ageing & Society*, 1-21. doi: 10.1017/S0144686X21000088

ARTICLE

Changes of profession, employer and work tasks in later working life: an empirical overview of staying and leaving

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Abstract

Occupational change encompasses change of profession, employer and work tasks. This study gives an overview on occupational change in later working life and provides empirical evidence on voluntary, involuntary and desired occupational changes in the older workforce in Germany. The analyses were based on longitudinal data from 2,835 participants of the German lidA Cohort Study, a representative study of employees born in 1959 or 1965. Multinomial logistic regression analyses were performed in order to characterise the change groups in their previous job situation. The findings indicate that occupational change among older workers is frequent. In four years, 13.4 per cent changed employer, 10.5 per cent profession and 45.1 per cent work tasks. In addition, the desire for change often remains unfulfilled: the share of older workers who wanted to but did not change was 17.6 per cent for profession, 13.2 per cent for employer and 8.9 per cent for work tasks. The change groups investigated differ in terms of their socio-demographic background, health and job factors such as seniority and leadership quality. In times of ageing populations, the potential of occupational change among older workers requires more consideration in society, policy and research. Special attention should also be paid to the group of workers who would have liked to change but feel that they cannot leave.

Keywords: employee turnover; career mobility; job lock; older workers

Introduction

In times of ageing workforces, strategies to extend the working life gain in importance. Currently, early exit routes from employment are reduced in many countries as a reaction to the demographic change. Moreover, older workers are encouraged to work longer (Conen *et al.*, 2014). While today more employers are promoting sustainable employability (Pak *et al.*, 2019), the responsibility for maintaining the employability still largely rests with the workers themselves. The rapid changes in

today's labour market and working life bring about new needs for adjustment among older workers, to guard against risks for an increasing person–job misfit and earlier exit from working life (Wong and Tetrick, 2017). Active strategies to maintain or promote person–job fit, health, work ability, motivation and –subsequently– employment participation of older workers may be occupational changes (Moen *et al.*, 2016; Canivet *et al.*, 2017).

Various disciplines, such as psychology, sociology, economics and occupational health, deal with occupational change – all from their own perspective. Therefore, reviewing occupational change literature offers different understandings and operationalisation of occupational changes (Bailey and Hansson, 1995; Liljegren and Ekberg, 2008; Nouri and Parker, 2013; Mantler *et al.*, 2015; Canivet *et al.*, 2017; Fernet *et al.*, 2017; Hom *et al.*, 2017; Rubenstein *et al.*, 2018). Three forms of occupational change may be differentiated:

- (1) *A change of profession*, meaning a change from one profession to another, which is often accompanied by retraining or further education and may end in a changed professional identity. An example is a change from salesperson to bus driver.
- (2) *A change of employer*, meaning a change from one employer to another, typically while continuing to practise the same profession. Depending on the discipline, researchers use alternative terms such as turnover, transition, (external) job mobility or career change (Trevor, 2001; Morris, 2009; Hom *et al.*, 2012; Alcover and Topa, 2018).
- (3) *A change of work tasks*, meaning a change of work tasks within the workplace without changing profession or employer, *e.g.* by adding, omitting or modifying tasks.

The comparative investigation of these three forms of occupational change is rare. The only scientific publication differentiating between these forms known to the authors is provided by Feldman and Ng (2007), who review factors that enable or discourage employees to change profession, employer or jobs. With this broad conception of occupational change in mind, occupational changes may today be the rule rather than the exception among workers, not least in times of ageing work forces.

However, occupational changes pose a greater challenge for older workers than for younger workers. With increasing age, employees face age-related individual alterations in, for example, health, work ability or motivation, with work constituting one of the many underlying causes (Crawford *et al.*, 2010; Kenny *et al.*, 2016). Furthermore, there is a range of obstacles to occupational changes in later working life such as reduced envisaged pension entitlements, risk of wage loss, fear of insufficient qualifications, work identity, age stereotypes, being in a safe employment position or high security needs. Not least, the devaluation of experience, specific knowledge and skills acquired over years makes a change of profession or employer difficult (Bailey and Hansson, 1995). Even if wanted, many older workers may not initiate a change or retraining anymore, considering it to be ‘too late’. They then tend to stay in the (potentially inappropriate) work situation or consider retiring earlier (Canivet *et al.*, 2017). Thus, older workers may be reluctant to such changes,

although research findings indicate that occupational change may sustain health and motivation (Canivet *et al.*, 2017; Wong and Tetrick, 2017).

The three types of occupational change differ in their ways as to how they contribute to the sustainable employability of older workers. Changes of profession have the potential to leave professions with characteristic high mental or physical work demands, such as roofing, construction work or nursing, and workers may change to professions with a less-demanding work content (Aleksandrowicz *et al.*, 2014). In contrast, job factors more related to work organisation, such as the quality of leadership and of social relations at work, are approved drivers for employer changes (De Raeve *et al.*, 2008); this includes work–family incompatibilities (van Hooft *et al.*, 2005). Here, a change of employer may bring along the improvement of such job factors without the need for a change of profession. While the first two forms of change require substantial efforts and individual risk taking, the third form, change of work tasks at the current workplace, may constitute low-risk – often stepwise and even reversible – solutions when the workers’ resources and/or interests do not fit to the work demands. Such adaptation of the work tasks on their own initiative may, for example, be part of a job crafting behaviour (Wong and Tetrick, 2017).

In the context of extending working lives, there is a need to understand better occupational changes of older workers. In today’s research we find both – much scientific evidence on occupational change, but also evident research gaps. Most research and most theory is about *changing employers*. Here, cross-sectional studies are particularly common (Allen *et al.*, 2014), the use of samples of specific occupational groups or employees of a particular organisation (Liljegren and Ekberg, 2008; Morris, 2009; Simon *et al.*, 2010; Jahn and Ulbricht, 2011; Reineholm *et al.*, 2012; Nouri and Parker, 2013; Mantler *et al.*, 2015; Fernet *et al.*, 2017), the investigation of determinants of employer changes (Rubenstein *et al.*, 2018) and investigations focusing on younger employees (Nouri and Parker, 2013) or explicitly excluding older workers from the sample, because diverging causes and mechanisms are assumed (Adams, 2004). Voluntary employer changes were found to have the potential to improve adverse psycho-social working conditions as well as health and work ability for the workers (Liljegren and Ekberg, 2009; Garthe and Hasselhorn, 2020). Other researchers found a positive effect of voluntary employer changes on the workers’ job satisfaction (Boswell *et al.*, 2009; Chadi and Hetschko, 2014). For Germany, Grund (2009) confirmed that an employer change often resulted in a higher income level, more appropriate working hours, more job security, better possibilities for promotion, and a better match between person and work tasks. Significantly less research is found on *changing the profession* at higher working age; a focus lies on the nursing profession (Simon *et al.*, 2010; Fernet *et al.*, 2017), qualitative investigations (Jahn and Ulbricht, 2011) and only a few studies address older workers (e.g. Carless and Arnup, 2011). Australian researchers found that older workers and workers with a high tenure are less likely to change professions and that changes resulted in higher job satisfaction and reduced working hours (Carless and Arnup, 2011). Research from Germany showed that a change of profession resulted in a higher income level (Nisic and Trübswetter, 2012). Canivet *et al.* (2017) investigated another aspect of changes of profession. They confirmed that continued work in a non-desired profession has negative

effects on mental health. Research on *changes of work tasks* usually takes place as part of research on job crafting (Tims *et al.*, 2013; Wong and Tetrick, 2017). Job crafting encompasses changes of tasks as well as social and cognitive aspects of the job which are initiated by the employee in order to improve the person–work fit and work motivation (Wong and Tetrick, 2017). Studies on job crafting interventions found that job crafting even has the potential to increase the work engagement of older workers, especially among workers with a high workload (Kooij *et al.*, 2020; Kuijpers *et al.*, 2020).

Considering the risks and obstacles for change among older workers, two aspects may be particularly important to investigate: whether a change occurs voluntarily or involuntarily (Hom *et al.*, 2017) and whether a change is desired or not (Huyse-Gaytandjieva *et al.*, 2013). The voluntariness is considered in a few studies on employer changes only (Allen *et al.*, 2014). Desired changes are studied by research on *job lock or stuck at work* (Stengård *et al.*, 2016) and by using indicators such as *willingness or intention to change and job search* (Otto *et al.*, 2009; Simon *et al.*, 2010; Weng and McElroy, 2012; Nouri and Parker, 2013; Mantler *et al.*, 2015; Alcover and Topa, 2018). Whether the gap between desired and actual change is especially prominent among older workers remains open and deserves increased scientific attention.

In summary, occupational change research usually uses small and selected, often cross-sectional samples and it is mostly focused on a specific concept of change. So far, a broad empirical overview and comparison of the three different forms of occupational change, their underlying causes, and the differentiation between merely desired and actual changes among older workers is lacking.

Aim of the study

Taking advantage of data from a large and representative cohort study of older workers, we want to contribute to a better understanding of occupational change among older workers in Germany by (a) depicting the frequencies of changes of profession, employer and work tasks among older workers considering possible overlaps of changes; (b) characterising change groups considering both socio-demographic, health and job factors, and also the degree of voluntariness/desire of the changes; (c) presenting self-reported main reasons for voluntary and desired occupational changes; and (d) discussing the obstacles and risks for change and the heterogeneity of the change groups among older workers. The conceptual basis of this paper is the theory on *motivational states of staying and leaving* by Hom *et al.* (2012).

Theoretical background

In their theory on motivational states of staying and leaving, Hom *et al.* (2012) define four employee groups, which in theory cover the complete range of actual and desired occupational changes. The authors combine the two dimensions (a) desired staying or leaving and (b) high or low perceived control of this preference. This results in four motivational states: enthusiastic leavers (EL), reluctant leavers

(RL), enthusiastic stayers (ES) and reluctant stayers (RS), which are characterised by Hom *et al.* (2012) as follows:

- (1) EL are characterised by having the desire and opportunity to change, leading to voluntary changing. Common reasons for the voluntary change are related to the job, such as adverse working conditions, conflicts with supervisors or colleagues, and outside job offers, as well as to the private life, such as relocating spouses or other family obligations. The typical EL is described as a low performer who often shows negative job attitudes resulting in a change of employer. Another type of EL is pulled away by attractive alternatives rather than pushed away from the previous job.
- (2) RL have to leave against their will because they are forced to. They are also described as poor performers or having conflicts with supervisors while lacking job protections such as high tenure or contract obligations. Also, the combination of obsolete skills and high salaries are prominent among RL.
- (3) ES are employees with high job satisfaction and commitment to their job, who neither want to change nor feel pushed to do so. ES remain with their employer as long as they can or until they retire, mostly because they are highly embedded in the job, for example, due to strong workplace links or sharing the employer's values and goals. However, some ES only stay because they are satisfied with their pay and job security or having a stress-free work situation.
- (4) RS are those who stay because they feel they cannot leave although they would prefer to. They are characterised by the personal inability and/or the lack of alternatives to change although desired. Furthermore, some RS stay because otherwise they would face sacrifices such as giving up pension entitlements. Sometimes the desire to change does not even lead to an attempt to change. RS often have a person–job misfit as their skills do not match the job or the employer's values clash with their own. They do not just meet the minimum performance requirements; they also show work avoidance or counterproductive workplace behaviours.

Although the categorisation by Hom *et al.* (2012) is based on reviewing employee turnover, *i.e.* the *change of employer*, it may be expanded to all three forms of occupational change and provides a theory-based structure to our analyses.

Method

Data and sample

The analyses are based on data from the German lidA Cohort Study on Work, Age, Health and Work participation, a representative cohort study of socially insured older employees in Germany (www.lida-studie.de). The aim of lidA is to investigate work and employment in the ageing workforce. The study population consists of employees born in either 1959 or 1965 who were employed subject to social security contributions as of 31 December 2009. Thus, sworn civil servants (German:

Beamte) and self-employed workers are not included. The social insured employees make up the largest part of the German labour force (about 86%) (Hasselhorn, 2020). At 222 randomly chosen sample points across Germany, 26,697 randomly selected people were approached to participate in the study. In the first wave in 2011, 6,585 interviews were realised, resulting in a response rate of 27.3 per cent (Schröder *et al.*, 2013; The American Association for Public Opinion Research, 2016), which is similar to that of other German surveys of comparable study design (e.g. Klaus *et al.*, 2017). Participants are interviewed in their homes by computer-assisted personal interviewing (CAPI). The data used in this article derive from the second wave in 2014 and the third wave in 2018 with 4,244 and 3,586 participants, respectively. A more detailed description of the lidA Cohort Study and its design has been given elsewhere (Hasselhorn *et al.*, 2014). The lidA Study received ethical approval from the Ethics Commission of the University of Wuppertal dated from 5 December 2008 and 20 November 2017.

In order to focus on occupational changes between the two waves, study participants were excluded if they – in either wave – were not employed full time, part time or marginally, or if they were self-employed. The final sample consists of 2,835 participants aged 53 or 59 in 2018.

Measures

In the lidA Study (Wave 3, 2018), questions to assess and examine the three different forms of changes (profession, employer, work tasks) were used in a specific succession (see Figure 1).

Change

To assess *change of profession*, participants were asked: ‘In the last interview you said that your profession is [information from previous wave]. Is this still the case? (yes/no)’. *Change of employer* was assessed by the question: ‘Have you changed your employer since the last interview? (yes/no)’. *Change of work tasks* was assessed by: ‘Have your work tasks changed significantly in the last three years? (yes/no)’.

Voluntariness of change (EL and RL)

For change of employer and work tasks, the participants were asked whether they changed on their own initiative, on the initiative of the employer or under other circumstances. This question allows distinguishing between EL and RL. The question was not asked in the case of change of profession.

Desired change (ES and RS)

Where there was no change, the participants were asked whether they would have liked to have changed since the last study interview. The responses enable us to identify ES and RS.

Attempt to change

Finally, if participants would have liked to have changed, they were asked if they had attempted to change. This gives further insight to the group of RS.

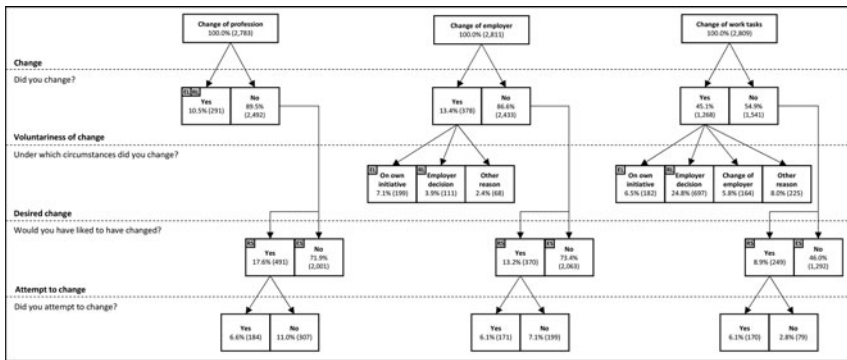


Figure 1. Empirical overview of occupational changes in later working life.

Notes: EL: enthusiastic leavers. RL: reluctant leavers. ES: enthusiastic stayers. RS: reluctant stayers.

Main reason for change or desired change

If the participants had changed on their own initiative (EL) or if participants had not changed, but would have liked to have changed (RS), they were asked to select a main reason for the change, or for the desire to change, from a list. The lists of potential main reasons differed slightly between the three forms of change, but were identical for actual and desired changes. Response options were: better working conditions, better salary, better working hours, occupational career, accident at work, health reasons, work-family conflict, avoiding unemployment (not for change of work tasks), another profession after retirement (only for change of profession), want to do something new (only for change of work tasks), other reason.

Socio-demographic factors, health and job factors

Socio-demographic background information, health measures and job factors assessed in Wave 2 (2014) were used to characterise the change groups in their previous job situation. The socio-demographic factors include gender (male, female), year of birth (1959, 1965), partner status (yes, no) and the job task requirement level of task complexity and occupational area (un-/semi-skilled task, skilled task, complex task, highly complex task).

Mental and physical health was assessed with the established Short Form Health Survey, SF-12 (Ware *et al.*, 1995, 1996; Nübling *et al.*, 2006). Component scores ranging from 0 to 100 were calculated for each health indicator; high values indicate better health.

The job factors include weekly working time (full time, part time, marginal employment), seniority (length of affiliation to the employer in years), individual income level (up to €450, €450–1,499, €1,500–2,999, €3,000 and more), and physical workload which includes three factors: (a) crouching, kneeling, lying or working overhead, (b) lifting or carrying heavy loads and (c) one-sided physical activity (never, up to one-quarter of the time, more than one-quarter of the time). Furthermore, four psycho-social work factors were assessed with scales from the Copenhagen Psychosocial Questionnaire (COPSOQ-II, middle version; Pejtersen *et al.*, 2010): leadership quality, influence at work, possibilities for development

and work–family conflict. Scores range from 0 to 100 with high scores indicating a high expression of the concept. Distributions and means of socio-demographic factors, health measures and job factors for the full sample are shown in [Table 1](#).

Analysis

In line with our research aims, we provide descriptive information on the prevalence of the three forms of occupational change, the overlap of changes, their voluntariness, desired changes, possible attempts and the most frequent main reasons (for actual changes on own initiative (EL) and desired changes (RS)). Multinomial logistic regression analyses were performed for each of the three forms of occupational change in order to characterise the change groups in their previous job situation, considering socio-demographic background information, health measures and job factors assessed in Wave 2 (2014). The highest significant correlations between the independent variables were found for weekly working time and individual income level ($r = 0.615$), weekly working time and gender ($r = 0.540$), and gender and individual income level ($r = 0.394$). In each of the three models, the group of ES served as the reference group. All statistical analyses were performed using SPSS version 26.0.

Results

[Figure 1](#) gives an overview of the proportions of EL, RL, ES and RS among older workers, aged 53 or 59 in 2018, for the three forms of occupational change: change of profession, employer and work tasks. The most common changes are changes of work tasks (45.1%), 13.4 per cent reported a change of employer and 10.5 per cent a change of profession. There were more EL (7.1%) than RL (3.9%) among employer changers, but considerably more RL (24.8%) than EL (6.5%) among work task changers. However, for all forms of occupational change the majority of older workers were stayers. Yet, within this group, considerable numbers of RS were found. With regard to changes of profession, employer and work tasks, the proportions of RS (17.6, 13.2 and 8.9%, respectively) were higher than the respective proportions for EL. About every third RS (unsuccessfully) attempted to change profession, about every second RS attempted to change employer and two out of three RS attempted to change work tasks.

[Figure 2](#) depicts the overlap of occupational changes. Here, only participants with valid responses to all change questions could be included. Most of the changes of profession went along with changes of employer or work tasks. Only a few participants changed employer without changing work tasks and/or profession. Expectedly, a change of profession or employer usually implied a change of work tasks; 33.5 per cent of all participants reported changes of work tasks without a change of profession or employer. Further, 49.0 per cent of all employed participants reported no change whatsoever within the past four years.

The results of the three multinomial logistic regression analyses are shown in [Table 2](#). Overall, each of the change groups, EL, RL and RS, showed patterns of socio-demographic factors, health and job factors which were different to those of the reference group of ES. Most pronounced were the differences in terms of

Table 1. Socio-demographic factors, health and job factors in the full sample in 2014

	N	%	Mean (SD)
Socio-demographic factors:			
Gender:	2,835		
Male		44.9	
Female		55.1	
Birth year:	2,835		
1959		45.1	
1965		54.9	
Partner:	2,832		
Yes		87.7	
No		12.3	
Job task requirement level:	2,809		
Un-/semi-skilled task		6.6	
Skilled task		55.7	
Complex task		18.3	
Highly complex task		19.4	
Health:			
Mental health ¹	2,822		55.6 (10.1)
Physical health ¹	2,822		49.9 (8.9)
Job factors:			
Weekly working hours:	2,835		
Full time		66.7	
Part time		29.0	
Marginal employment		4.3	
Seniority (in years)	2,793		16.4 (10.5)
Income level (€):	2,787		
Up to 450		4.5	
450–1,499		32.0	
1,500–2,999		48.5	
3,000 and more		15.0	
Physical workload:	2,834		
Never		23.1	
Up to one-quarter of the time		27.8	
More than one-quarter of the time		49.1	
Leadership quality ¹	2,770		54.4 (23.3)
Influence at work ¹	2,833		38.9 (26.5)
Possibilities for development ¹	2,835		63.1 (20.8)
Work–family conflict ¹	2,830		35.0 (26.8)

Notes: SD: standard deviation. 1. Range from 0 to 100. High scores indicate a high expression of the concept or good health.

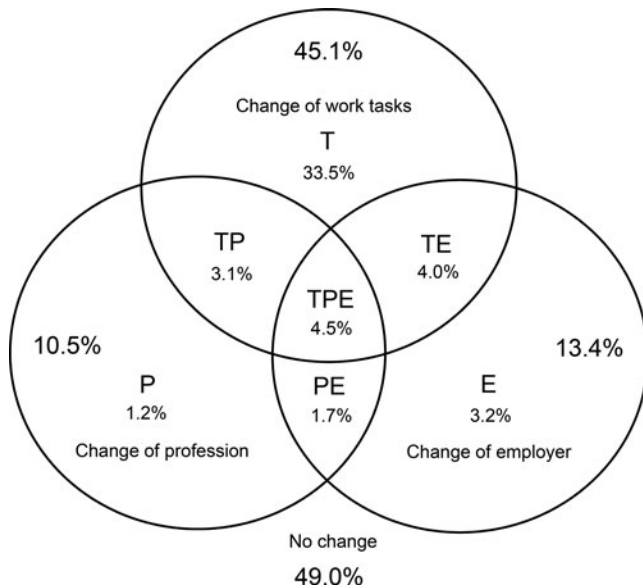


Figure 2. Combinations and overlap of occupational changes between 2014 and 2018.
 Notes: N = 2,781. T: change of work tasks. P: change of profession. E: change of employer.

birth year, seniority, income level and leadership quality. Below, each group of EL, RL and RS is briefly characterised in contrast to the ES.

Change of profession

The leavers of profession (EL and RL) were younger, had more un-/semi-skilled tasks or highly complex tasks, less often worked part time, had a shorter seniority and more often had a lower income level. The RS showed a different pattern as they were younger, had poorer mental health, a shorter seniority, lower leadership quality and a higher work–family conflict.

Change of employer

The EL were younger, more often had a partner, had better physical health, a shorter seniority, more often had a lower income level and a lower leadership quality. The EL (employer) were the only group having more often a partner and reporting better physical health than the respective ES. Like the EL, the RL were less often part-time workers, had a shorter seniority and more often a lower income level, and they reported lower leadership quality. The RS (employer) showed the same pattern as the RS (profession).

Change of work tasks

The EL more often were female workers, had a shorter seniority, reported more possibilities for development and a higher work–family conflict. It was the only

Table 2. Multinomial logistic regression

	Change of profession		Change of employer			Change of work tasks		
	EL/RL	RS	EL	RL	RS	EL	RL	RS
N	254	465	175	96	353	168	662	235
Socio-demographic factors:								
Gender (Ref. Female)	0.906	0.885	0.908	1.398	0.962	0.413***	0.884	0.818
Birth year (Ref. 1965)	0.600***	0.525***	0.695*	0.775	0.738*	0.723	0.970	0.899
Partner (Ref. Yes)	0.985	1.269	0.507*	0.735	0.993	1.532	0.914	1.084
Job task requirement level (Ref. Skilled task):								
Un-/semi-skilled task	1.732*	1.361	1.422	0.880	1.096	0.496	0.772	0.831
Complex task	1.292	0.877	0.761	0.917	0.950	1.124	1.145	1.329
Highly complex task	1.712**	1.088	1.455	0.735	1.103	1.126	1.037	1.273
Health:								
Mental health ¹	0.994	0.979***	0.987	0.991	0.986*	0.995	0.983**	0.989
Physical health ¹	0.999	0.999	1.029**	0.989	0.996	0.984	0.987*	1.009
Job factors:								
Weekly working hours (Ref. Full time):								
Part time	0.590**	1.172	0.811	0.499*	0.845	0.742	0.962	1.002
Marginal employment	0.382	1.138	0.713	0.423	0.460	0.720	0.809	1.530
Seniority (in years)	0.961***	0.978***	0.894***	0.918***	0.971***	0.980*	1.011*	0.989

(Continued)

Table 2. (Continued.)

	Change of profession		Change of employer			Change of work tasks		
	EL/RL	RS	EL	RL	RS	EL	RL	RS
Income level (€) (Ref. 1,500–2,999):								
Up to 450	4.150**	0.544	3.802*	2.440	0.876	1.448	0.522	0.150*
450–1,499	2.176***	0.965	2.301***	2.504**	1.322	1.245	0.993	0.641*
3,000 and more	1.048	0.961	1.244	0.994	0.774	1.814*	0.975	1.201
Physical workload (Ref. Never):								
Up to one-quarter of the time	0.852	0.995	1.052	1.002	0.906	0.905	1.110	1.105
More than one-quarter of the time	0.879	1.158	1.042	0.845	1.105	0.850	1.317*	1.454
Leadership quality ¹	0.994	0.989***	0.982***	0.981***	0.975***	0.992	0.995*	0.992*
Influence at work ¹	0.999	1.000	1.004	0.994	1.003	1.006	1.000	1.005
Possibilities for development ¹	0.998	0.995	0.997	1.002	1.002	1.017***	1.007*	0.989*
Work–family conflict ¹	1.003	1.005*	1.006	0.995	1.003	1.011**	1.007***	1.011***
Nagelkerke R^2	0.115		0.201			0.106		

Notes: Values are odds ratios/Exp(B). EL: enthusiastic leavers. RL: reluctant leavers. RS: reluctant stayers. ES: enthusiastic stayers. Ref.: reference group. The change groups refer to changes between 2014 and 2018. ES was the reference group in all three models. Socio-demographic factors, health and job factors were surveyed in 2014. 1. Range from 0 to 100. High scores indicate high expression of the concept or good health.

Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

group more often reporting higher income levels than the respective ES. The large group of RL showed another noticeable pattern as they more often reported both poorer mental and physical health, a longer seniority, a high physical workload, lower leadership quality, more possibilities for development and a higher work–family conflict. This group was the only one reporting significantly poorer physical health, a longer seniority and more often performing physical work than the reference group. Also, the RS exhibited a characteristic pattern: although they less often reported lower income levels, many work indicators were rated adversely: lower leadership quality, less possibilities for development (only significant in this group) and a higher work–family conflict.

The underlying main reasons for all voluntary and desired changes are presented in Table 3. Responses in italics are in concordance with findings from the multinomial logistic regression analyses. Here, three aspects stand out. First, some main reasons were mentioned frequently such as *better working conditions* (especially among RS), *better salary* and *occupational career*. Second, the most frequent main reasons for the three types of occupational change differ clearly. While the reasons *better working conditions* and *better salary* are prominent among employer changes, the reason *avoiding unemployment* is common among change of profession and the reason *want to do something new* is common among changes of work tasks. Last, the most frequent main reasons for EL and RS differ in some respect. For example, while *avoiding unemployment* is common among EL of profession, only few RS aimed to change profession to avoid unemployment.

Discussion

Our results showed that in Germany, occupational change is common among older workers. In the period of four years, almost half of the participants had changed work tasks, and even the proportions of participants who had changed employer or profession were considerable. In many cases the occupational changes coincide. Most changes of profession were accompanied by employer changes, while changes of work tasks often took place without further occupational changes. In addition to actual changes, however, it was also shown that many workers often would have liked to have changed without doing so. Our results confirm that the occupational change groups EL, RL and RS differ from the ES with respect to socio-demographics, job factors and health. Additionally, the self-reported main reasons for realised or wanted changes highlight differences between the three types of change and the stayers and leavers investigated in this study. In the following, we will discuss the results structured by the three types of occupational change.

Change of profession

In our study, changes of profession were the least common type of change (10.5% of all participants). According to Blau and Lunz (1998), older workers are likely to have found jobs with a high work–life balance, they are more committed to their profession and have less need to change. Their mobility self-efficacy, *i.e.* the perceived ability to change profession, may decrease with age and seniority, which

Table 3. Main reasons for change among enthusiastic leavers and reluctant stayers

	Enthusiastic leavers		Reluctant stayers	
Change of profession ¹	N = 291 ²		N = 419	
	14.4	Occupational career	31.0	<i>Better working conditions</i>
	11.0	Avoiding unemployment	13.4	<i>Health reasons</i>
	10.3	Better working conditions	11.8	Better salary
	7.6	Health reasons	10.4	Occupational career
	5.5	<i>Better working hours</i>	9.6	Better working hours
	5.2	<i>Better salary</i>	5.3	<i>Work–family conflict</i>
Change of employer	N = 199		N = 370	
	29.1	<i>Better working conditions</i>	42.4	<i>Better working conditions</i>
	15.1	<i>Better salary</i>	15.7	Better salary
	14.1	Occupational career	7.3	Better working hours
	10.1	Better working hours	6.8	Occupational career
	8.0	Work–family conflict	6.5	Work–family conflict
	5.5	Health reasons	6.2	<i>Health reasons</i>
Change of work tasks	N = 182		N = 249	
	23.6	<i>Occupational career</i>	26.1	<i>Better working conditions</i>
	20.3	Want to do something new	20.5	Want to do something new
	17.0	Better working conditions	20.1	<i>Occupational career</i>
	14.8	Health reasons	12.0	Health reasons
	8.2	Better salary	8.4	Better working hours
	4.9	Better working hours	4.8	Better salary

Notes: Values are percentages. The first six most frequent main reasons are displayed. 1. No differentiation between enthusiastic and reluctant leavers. 2. Missing responses = 74. Italic: In concordance with findings from the multinomial logistic regression analyses.

may explain the relatively few changes of profession and why only one-third of all RS attempted to change profession (Otto *et al.*, 2009). This is also in line with our findings that EL/RL and RS have a significantly shorter seniority than the ES. Thus, changers of profession are a special group often driven by financial aspects of the job, which is reflected by the main reasons *better salary* and by the fact that leavers more often reported a lower income level. Further, the group is characterised by employment security needs, expressed in the main reasons *occupational career* and *avoiding unemployment*.

Of all three forms of occupational change, the proportion of RS was clearly highest (17.6%). The reluctance to change profession seems justified as older workers are faced with limited opportunities to change; a change of profession is a greater step than an employer change and bears substantial risks for employment, finances and professional identity (Bailey and Hansson, 1995). Although the propensity to change profession may be low among older workers, they may find themselves forced to change profession when the person–job fit becomes low, be it because of age-related changes in health and functioning or changes in work demands (Trinczek, 2011; Huyse-Gaytandjieva *et al.*, 2013). In our sample, the RS reported poorer mental health while wanting a change due to *health reasons* and reported lower leadership quality and a higher work–family conflict, which reflects the person–job misfit which, indeed, Hom *et al.* (2012) have attributed to the RS. Also their predominantly selected main reasons for the desire to change *better working conditions* and *work–family conflict* correspond to the results in the regression analysis and the motivational states by Hom *et al.* (2012). Our findings are in line with Canivet *et al.* (2017), who showed that older workers in secure employment are often reluctant to change profession, despite possible negative impacts of their current jobs on their mental health.

Change of employer

In relation to changes of profession, employer changes seem to be more common in Germany: 13.4 per cent of all participants changed employer, 7.1 per cent voluntarily. According to research, these voluntary employer changes (EL) are associated with positive consequences for the individual: increase in work ability, leadership quality, social support from colleagues, possibilities for development, and a decrease in work–family conflict and quantitative demands (Garthe and Hasselhorn, 2020), an increase of status and self-esteem, decreased physical strain, less burnout, better psycho-social health (Canivet *et al.*, 2017) and higher job satisfaction (Chadi and Hetschko, 2014). In line with Hom *et al.* (2012), who assumed that EL may change to follow relocating spouses and who have conflicts with supervisors, in our study, the EL more often had a partner and reported lower leadership quality. Moreover, the misfit between the former jobs and the workers is reflected by the most frequently reported main reason for changing: *better working conditions*. As reviewed by Hom *et al.* (2012), EL need to have the physical capacity to change, *e.g.* health resources. Indeed, our results showed that the EL were the only group who reported better physical health than the respective ES. Additionally, financial reasons were prominent among the EL, who often had a lower income and changed to increase their income.

However, our results also show that many workers would like to change their employer (RS), but apparently cannot. They may find themselves in a ‘locked’ work situation (Huyse-Gaytandjieva *et al.*, 2013), *e.g.* due to restrictive external factors such as family-related immobility, a temporary employment contract (Hom *et al.*, 2012) or because changes remain risky as it is difficult for older workers to find a new job (Heywood and Jirjahn, 2016). However, reluctant staying bears personal risks for motivation, work performance (Hom *et al.*, 2012) and mental health (Canivet *et al.*, 2017). These findings are in line with our results as the RS

had poorer mental health and lower leadership quality. However, although they had significantly poorer mental health, only few RS wanted to change for *health reasons*. The most frequently reported main reason, *better working conditions*, rather reflects a person–job misfit.

While many older workers wanted to change their employer, our data also indicated that a considerable degree of older workers in Germany were forced to change due to dismissal (RL). Such a reluctant change is usually preceded by conflicts with supervisors, poor performance or when an entire company is affected, such as lay-offs, or when a company closes down (Canivet *et al.*, 2017). Here, the analysis confirms that the RL reported a significantly lower leadership quality than the ES, which may represent these conflicts.

Change of work tasks

The fact that in our study almost every other worker reported significant work task changes during the past three years indicates that work is in constant change – requiring older workers to apply individual adaptation strategies (Ng and Law, 2014). The high proportion of workers with employer-induced changes is striking (RL, 24.8%). A crucial question is whether these changes occurred with or without considering the individual workers' needs. Job enrichment, job rotation or job enlargement are positive examples of how employers may change the work tasks of their employees to improve their work and professional development (Chung and Ross, 1977). However, the high proportion of employer-induced changes may in part also be due to organisational restructuring, where the single worker will find less consideration (Jimmieson *et al.*, 2004). Our analysis allows more insight into this probably heterogeneous group of RL and shows that they clearly differ from RL of profession and employer. RL (work tasks) reported both poorer mental and physical health while more often having high physical workload. One interpretation of these findings is that the employers reacted to the reduced physical and mental resources of the workers and attempted to alleviate the physically demanding job situation by adapting the work tasks. Although the RL reported lower leadership quality, they apparently had more possibilities for development in their jobs, which may be indicative of a supportive work organisation. The group also stands out because they had a significantly longer seniority than the ES, thereby possibly constituting a core workforce in the organisation with strong ties to the employer. This may also contribute to why their employers would rather change their work tasks than dismiss them.

However, many older workers changed work tasks on their own initiative (EL) *to do something new*, for *better working conditions* or *health reasons*, which is in line with the theory on job crafting, where workers are regarded as active constructors of their work (Wrzesniewski and Dutton, 2001) and where workers improve and adjust their work with the aim of improving their work ability (Tims *et al.*, 2013). Our findings, that EL more often had a higher income level, had more possibilities for development and changed to promote the *occupational career* and *to do something new*, indicate that EL (work tasks) have more flexibility to initiate work task changes within their jobs. They may constitute a somewhat privileged group with a higher status within the organisation, more income, and more

flexibility and possibilities to adapt their work tasks. Such flexibility increases the structural and social resources of the employees, their wellbeing, engagement and job satisfaction (Tims *et al.*, 2013), and the motivation to work longer among older workers (Moen *et al.*, 2016). It is noticeable that this group reported a higher work–family conflict, while this conflict was a rarely mentioned main reason for the change.

With respect to the RS, a range of obstacles for work task changes may be thought of. Some types of jobs are difficult to change, such as assembly-line work or jobs requiring high task interdependence with co-workers (Wrzesniewski and Dutton, 2001). For workers in low hierarchy levels and/or with low decision latitude, changes on their own initiative may be more difficult to realise although they may exhibit the highest need, due to poorer working conditions, higher work strain and lower wages (Siegrist *et al.*, 2009). These assumptions are supported by our analyses as the RS had fewer possibilities for development, reported a lower leadership quality and would like to change to improve their working conditions. Yet, they reported higher income levels.

Like the EL and RL, the RS (work tasks) reported higher work–family conflicts, but did not mention it as reason for their desire to change. This follows a certain logic as – in contrast to changes of profession or employer – work task changes may have less potential to improve a work–family conflict. However, the significantly higher work–family conflict in the three groups EL, RL and RS may also be indicative of a specifically low work–family conflict in the reference group, the ES (work tasks). The latter may constitute a selective group of workers in the organisations who are widely satisfied with their work situation, just as the typical ES as characterised by Hom *et al.* (2012).

In summary, our results provide a broad empirical overview of changes of profession, employer and work tasks, and a characterisation of the enthusiastic as well as reluctant stayers and leavers among older workers. Each change group revealed a characteristic pattern in terms of socio-demographic background, health and work situation. Most of our findings on the three forms of occupational change could be plausibly explained on the basis of existing theoretical and empirical literature. Interestingly, the different occupational change groups for all three forms of occupational change were in line with the group descriptions by Hom *et al.* (2012), although their *motivational states of staying and leaving* are based on reviewing employer changes.

Strengths and limitations

Strengths of our study are the large size allowing for in-depth sub-group analyses, the age-homogenous sample, the longitudinal study design and the representativeness for the German socially insured working population of similar age. Another strength of this study is that we could measure actual changes rather than using proxy measures such as change intentions or job search.

Limitations to our study are that we were not able to measure multiple changes, only the last change was registered, that we could not differentiate between voluntary and involuntary changes of profession, and that we cannot exclude misclassification of occupational change in our study.

Conclusions

Occupational changes are a normal part of the working life. The results of the lidA Cohort study indicate that this is also the case for older workers in Germany: in the course of four years, every second older employee had an occupational change. Our findings indicate that these changes are multifaceted. Employees change profession, employer and/or work tasks to a different degree, under different circumstances, among different groups of employees and for different reasons. While in most of the cases the older workers change profession and employer voluntarily, changes of work tasks happen predominantly involuntarily due to an employer's decision.

However, occupational changes do not only happen, they are even more often desired and unfulfilled. Changes in later working life are risky and opportunities as well as resources may be lacking. Our data show that there are more older workers with a wish to change profession, employer or work tasks (RS) than those who are actually changing on their own initiative (EL). The RS stand out due to poorer mental health and lower leadership quality than the ES. Thus, there is a risk that desired and yet unfulfilled changes have negative consequences for older workers, e.g. on health, wellbeing and motivation, and for the organisation, because they may constitute a risk group to poor performance and low work motivation.

Yet, occupational changes – when successful – may provide substantial chances for the worker, the enterprise and even the national economy. It is surprising that in times of ageing populations, the topic of occupational change among older workers and its potential for employment participation does not receive much attention in society, policy and research.

So far, empirical research in the field of occupational change has largely focused on employer changes, however, a stronger focus on the other forms of occupational change is needed. Further, more evidence is needed on immediate, medium- and even long-term effects of occupational changes among older workers, with respect to wellbeing, health, work ability, wealth and employment participation in later working life. Finally, the group of RS requires more scientific attention. There is a need to investigate what prevents these older workers from attempting and realising a desired change, how reluctant staying will affect the older workers' personal and work situations in the long run, and how these needs and desires for change can be met by human resource management and social policies.

Author contributions. NG and HMH designed the study, NG performed the analyses, NG wrote the first draft of the manuscript, and HMH and NG critically reviewed and revised the manuscript and approved the final article.

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Conflict of interest. The authors declare no conflicts of interest.

Ethical standards. Design and conduct of the lidA study have been approved by the Ethics Committee of the University of Wuppertal dated from 5 December 2008 and 20 November 2017 (MS/BB 171025 Hasselhorn). Participants were fully informed about the aim and procedure of this study prior to giving consent to participate. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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Study II

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Leaving and staying with the employer—Changes in work, health, and work ability among older workers

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Abstract

Objective The aim of this prospective study was to examine employer changes among older workers and to relate them to psychosocial work factors, health, and work ability. Four groups of employees as elaborated by Hom et al. (2012) were distinguished: Enthusiastic leavers (EL), reluctant leavers (RL), enthusiastic stayers (ES), and reluctant stayers (RS).

Methods Repeated Measures ANOVA analyses were based on data from the second and third waves (2014, 2018) of the German lidA Cohort Study, a representative study of employees born in 1959 or 1965.

Results The largest proportion of participants was ES (73.3%), 13.2% stayed with their employer although they would have preferred to leave (RS). 7.1% changed employer between 2014 and 2018 voluntarily (EL), 6.4% involuntarily (RL). Analyses confirmed that the four groups already differed in 2014 in terms of health, work ability, and psychosocial work factors and that these outcomes change in different characteristic patterns over time. Most outcomes improved substantially following the change among EL. RS already reported poor outcomes in 2014 and exhibited a further deterioration while staying at the undesired workplace.

Conclusion Our findings indicate that an employer change is followed by improvements of work, health, and work ability. We conclude that an inclusive labor market policy for older workers allowing for high job mobility may have the potential to contribute to considerable improvements of workers' individual working conditions, health, and work ability, thereby increasing the work participation. Also, the considerable group of RL requires increased political and scientific attention.

Keywords Employer change · Older workers · Job lock · Psychosocial work factors

Introduction

The demographic change in Germany leads to an aging and shrinking workforce. A consequence for many workers is the extension of their working lives. This raises the question on how older workers can manage to work until, or possibly longer than the statutory retirement age. According to the international JPI UEP working group “the positive impact of work factors that promote longer working lives and help retain workers should be given greater attention in retirement studies” (Hasselhorn and Apt 2015). One strategy proposed is the change of employer at higher working age. Such a

change may exhibit the potential to improve the fit between the older workers and their work, with regard to work factors, qualifications, motivation, work ability, and health, and therefore to extend the personal working life (Behrens 1998; Jahn and Ulbricht 2011; Morschhäuser 2002).

When investigating employer changes among older workers, voluntary and involuntary changes need to be differentiated. While a voluntary change is often a planned transition, losing one's job may often be unexpected, it can lead to unemployment, job search and—at best—to a new job with many uncertainties. This may constitute a substantial challenge—not least for older workers (Brauer and Clemens 2010)—and might rather bear health risks than benefits. However, comparative research on consequences of voluntary and involuntary changes is rare (Chadi and Hetschko 2014; Wagenaar et al. 2012).

But also voluntary employer changes offer not only chances but also bear risks, especially for older workers. Behrens (1998) pointed out that employer changes cannot

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be a general recommendation for all older workers who find themselves in inappropriate work situations. Beyond the risk of becoming unemployed, further obstacles keep older workers from changing, such as concerns about reduced pay after a change (Schneider 2010), the expectation of a temporary contract or a misfit of skills, and knowledge in the new job (Bailey and Hansson 1995). Morschhäuser (2006) described in her qualitative study that older workers with poor health and physically demanding work did not want to leave familiar workplaces and showed low confidence in managing a change. These psychological and further obstacles are covered by the theories on job lock and stuck at work, which point out that such a locked occupational situation may have negative impact on work and health (Huysse-Gaytandjieva et al. 2013). The aspect of involuntary staying with one's employer in contrast to voluntary staying should thus also be considered when investigating employer changes and older workers' work motivation, work ability, health, and employment perspective.

Theoretical background and hypotheses

Based on their review of employee turnover, Hom et al. (2012) presented a theory on motivational states of staying and leaving, depicting four groups of employees with different cognitive states concerning staying with or leaving the employer. The combination of two dimensions, (a) desired staying or leaving and (b) high or low perceived control of this preference, leads to four groups covering the scenarios discussed above: Enthusiastic leavers (EL), who want to and can leave, reluctant leavers (RL), who have to leave because they are forced to, reluctant stayers (RS), who stay because they feel they cannot leave although they would prefer to, and enthusiastic stayers (ES), who want to stay and feel no external pressure to leave their employer.

In all groups, work factors, especially psychosocial work factors, as well as health and work ability play a central role. EL may want to leave their employer due to a lack of person–work fit and want improvements (Mobley 1977; Trevor 2001). The work situation is perceived similarly by RS, yet they cannot leave due to diverse obstacles. Workers belonging to this group may develop work avoidance and counterproductive workplace behaviors and quit psychologically (Mobley et al. 1979; Hulin et al. 1985; Mowday et al. 1982). In contrast, RL may have to leave their employer, for example, due to low performance, and have to find a new job, which may constitute a great challenge, not least for older workers (Jackofsky 1984; Bäcker et al. 2017). Finally, ES may have a satisfying person–work fit and good work performance (Mobley 1977; Lee et al. 1999).

Previous empirical studies usually examined singular groups of the four, primarily EL (Reineholm et al. 2012), the most frequent outcomes were mental health indicators

(Liljegren and Ekberg 2008), and the most frequently investigated group are middle-aged employees (Rubenstein et al. 2018). Most studies are cross-sectional investigations using change proxies, such as job mobility intentions (Alcover and Topa 2018), instead of examining actual changes in longitudinal studies (Raeve et al. 2008).

This article aims to empirically investigate all four groups of EL, RS, RL, and ES in a longitudinal study in terms of differences and changes over time with respect to mental and physical health, work ability, and psychosocial work factors among older workers. The assumptions compiled by Hom et al. (2012) lead to two hypotheses:

H1: The groups differ significantly in terms of health, work ability, and psychosocial work factors.

H2: The groups change significantly differently over time in terms of health, work ability, and psychosocial work factors.

Methods

Data and sample

The analyses are based on data from the German lidA Cohort Study on Work, Age, Health and Work participation, a representative cohort study of older employees in Germany (www.lida-studie.de). The aim of lidA is to investigate work and employment in the aging workforce. Initially employed people subject to social security contributions (no self-employed or sworn civil servants), born in either 1959 or 1965, are interviewed every three to four years in their homes (computer-assisted personal interviewing, CAPI). The data used here are derived from the second and third waves of the study, 2014 (t1) and 2018 (t2) with 4244 and 3586 participants, respectively. In 2018 the participants were 53 and 59 years old. A more detailed description of the lidA Cohort Study and its design has been given elsewhere (Hasselhorn et al. 2014; Rauch et al. 2015).

In all, 3232 workers participated in t1 and t2. In order to focus on employer changes, study participants were excluded if they were not employed full time, part time, or marginally in any of the waves. As a result, the sample consists of 2811 participants.

Measures

Employer change groups

The change of employer was assessed in the third wave in 2018 (t2) by the question: “Have you changed your employer since the last interview? (Yes/No).” Participants, who reported a change, were asked whether they changed on their

own initiative (enthusiastic leavers), or on the initiative of their employer (reluctant leavers). Participants, who reported no change, were asked whether they would have liked to change since the last study interview in 2014 (reluctant stayers) or not (enthusiastic stayers). Thus, the four groups differentiate the participants whether they changed or not and wanted to change or not between 2014 (t1) and 2018 (t2).

Mental and physical health

The outcomes mental and physical health were assessed with the Short Form Health Survey (SF-12) (Nübling et al. 2006; Ware et al. 1995). Component scores ranging from 0 to 100 with a high score indicating better health were calculated. Both SF-12 scales were found to have acceptable psychometric properties and validity (Ware et al. 1996).

Work ability

To measure work ability, the second dimension of the Work Ability Index was used, which consists of three questions. Two questions refer to the actual self-assessed work ability with respect to mental and physical demands at work, respectively. The answers were weighted by the response to a third question, indicating whether the participant is mainly mentally active in the main job, mainly physically active or both equally. The resulting sum score ranges from 2 (no work ability) to 10 (high work ability). The second dimension of the Work Ability Index was shown to be a suitable short measure for work ability in occupational health research and employee surveys (Ebener and Hasselhorn 2019).

Psychosocial work factors

Psychosocial work factors were assessed with scales from the Copenhagen Psychosocial Questionnaire (COPSOQ-II, middle version, Pejtersen et al. 2010). Six psychosocial work factors were generated with scores ranging from 0 to 100: Leadership quality, social support from colleagues, work–family conflict, possibilities for development, quantitative demands, and influence at work. High scores indicate a high expression of the concept. A detailed description of the scale construction in lidA is given by Willner (2013). Following recommendations by Willner (2013), one item was deleted to generate the sum score for possibilities for development.

Demographics and employment background information

Sociodemographic and employment background information from t1 was considered in the analyses. This includes

gender (male/female), year of birth (1959/1965), vocational education (low: no qualification, vocational operational education; off-the-job training / medium: technical school; master school / high: higher vocational education, university education), and weekly working time (full time/part time/marginal employment). Additionally, seniority at t1, indicating the duration of employment with the same employer (quantified in years), was considered.

Statistical analyses

First, sociodemographic and employment variables were tested for significant differences between the groups using the χ^2 statistic and one-way analyses of variance.

Second, the group means of mental and physical health, work ability, and the six psychosocial work factors were compared across the three waves. GLM Repeated Measures ANOVAs were performed to investigate within group and between group differences occurring between t1 and t2. Three effects were tested: The main time effect, indicating a significant change of the outcome over time, the main group effect, indicating a significant difference between the four groups in the outcome, and the interaction effect group*time, indicating significant different group changes over time. In addition to the main group effect, Post hoc tests (Bonferroni corrected) were conducted to indicate which groups differ in which way from each other. A significant main group effect supports Hypothesis 1 and a significant interaction effect group*time supports Hypothesis 2. All statistical analyses were performed using SPSS version 25.0.

Results

Group descriptions

Of the eligible 2811 participants, 13.5% changed employer between t1 and t2, 7.1% were EL and 6.4% were RL (Table 1). The largest proportion of participants was ES (73.3%), 13.2% stayed with their employer although they preferred to leave (RS). Among EL there were more women and among ES more older participants than in the other groups. Participants with low vocational education were overrepresented in RS and marginal workers in EL. Seniority at t1 was in both leavers' groups, EL and RL, substantially lower than in RS and ES.

H1. Group differences in health, work ability, and psychosocial work factors

Sample and group means as well as confidence intervals for mental and physical health, work ability, and the six psychosocial work factors at t1 and t2 are shown in Table 2.

Table 1 Sample and group characteristics

	Sample (<i>n</i> = 2811, 100.0%)		Enthusiastic leavers (<i>n</i> = 199, 7.1%)		Reluctant leavers (<i>n</i> = 179, 6.4%)		Reluctant stayers (<i>n</i> = 370, 13.2%)		Enthusiastic stayers (<i>n</i> = 2063, 73.4%)	
	%	M (SD)	%	M (SD)	%	M (SD)	%	M (SD)	%	M (SD)
Gender* ^a										
Male	44.9		34.7		43.0		43.0		46.4	
Female	55.1		65.3		57.0		57.0		53.6	
Year of birth***										
1959	44.9		35.2		34.1		38.4		47.9	
1965	55.1		64.8		65.9		61.6		52.1	
Vocational education										
Low	20.3		19.8		27.5		21.3		19.6	
Medium	56.8		58.9		51.1		57.9		56.9	
High	22.9		21.3		21.3		20.8		23.6	
Weekly working time***										
Full time	66.7		54.8		66.5		68.1		67.6	
Part time	29.0		35.2		26.3		30.3		28.5	
Marginal employment	4.3		10.1		7.3		1.6		3.9	
Seniority***		16.3 (10.4)		8.8 (8.0)		10.1 (9.3)		15.1 (9.4)		17.8 (10.4)

M mean, *SD* standard deviation

^aChi-square or one-way ANOVA significant group difference, **p* < .05, ****p* < .001

The results of the Repeated Measures ANOVA support H1 (main group effect, Table 3): The groups differ significantly in terms of health, work ability, and psychosocial work factors. Notably, the main group effect of leadership quality shows a high effect size ($\eta^2 = 0.08$) in contrast to the other outcomes. The Post hoc tests indicate that in all cases the group of RS significantly differ from one or more other groups. This group exhibited the most adverse mean scores for work ability, the health indicators, and all psychosocial work factors.

H2. Group changes over time

The Repeated Measures ANOVAs support H2 for most outcomes (interaction effect group*time, Table 3): The groups differ significantly with respect to changes over time in terms of mental, but not physical health, in terms of work ability and the psychosocial work factors, leadership quality, work–family conflict, possibilities for development, and quantitative demands. Again, the greatest effect size was found for the interaction effect for leadership quality ($\eta^2 = 0.03$).

Table 2 provides insight of these changes: In the group of EL, the ratings for the new job at t2 indicate substantial improvements for mental health, work ability, and leadership quality, work–family conflict, possibilities for development, and quantitative demands in relation to the previous job (t1). RL reported, on one hand, improvements in work ability,

leadership quality, and support from colleagues, and on the other hand, deteriorations in influence at work. RS reported deteriorations in leadership quality, possibilities for development, influence at work, and work–family conflict. Among ES the mean scores for the outcomes changed only slightly over time.

Discussion

In our analyses we find that the four employer change groups depicted by Hom et al. (2012) already differ at t1 in terms of health, work ability, and psychosocial work factors and that these outcomes change in different characteristic patterns over time. There were only marginal changes of outcomes in the group of ES. Most outcomes improved substantially over time among EL, some also among RL. RS already reported poor outcomes in 2014 and exhibited a further deterioration while staying at the undesired workplace.

In relation to economically liberal countries, the frequency of employer changes tends to be low in the German labor market (Buchholz 2008). However, in our study, the proportion of EL (7.1%) and RL (6.4%) over four years is notably high, considering that older employees, in particular, were found to have substantial obstacles to employer change and change rarely (Bailey and Hansson 1995; Carless and Arnup 2011). The high proportion of RS found in the study

Table 2 Group means and confidence intervals

	Sample	Enthusiastic leavers (EL)		Reluctant leavers (RL)		Reluctant stayers (RS)		Enthusiastic stayers (ES)	
		n	95% CI	n	95% CI	n	95% CI	n	95% CI
Mental health	n	2798		196		169		2045	
	t1	50.6	48.6–52.5	49.0	47.4–50.6	50.1	48.5–51.8	48.3	47.2–49.4
	t2	51.7	49.8–53.6	53.7	52.4–55.0	50.6	49.1–52.1	48.4	47.4–49.5
Physical health	n	2798		196		169		2045	
	t1	49.9	48.2–51.7	51.9	50.7–53.0	48.8	47.3–50.2	49.2	48.3–50.1
	t2	48.1	46.3–49.9	49.2	47.9–50.4	47.6	46.2–49.0	47.0	46.0–47.9
Work ability	n	2803		196		171		2044	
	t1	8.0	7.7–8.2	7.9	7.7–8.2	7.7	7.4–8.0	7.6	7.4–7.8
	t2	7.8	7.5–8.1	8.3	8.1–8.5	8.0	7.7–8.3	7.2	7.0–7.4
Leadership quality	n	2748		187		161		2011	
	t1	54.4	49.8–58.9	50.9	47.5–54.3	50.3	46.3–54.3	43.4	40.9–45.9
	t2	53.0	48.3–57.5	59.4	55.8–63.0	56.1	52.5–59.7	36.5	34.3–38.9
Support from colleagues	n	2694		179		156		1957	
	t1	72.6	68.5–77.2	73.5	70.1–76.9	72.8	69.1–76.4	68.8	66.3–71.4
	t2	76.1	72.2–80.3	79.8	76.9–82.7	75.8	72.3–79.4	69.9	67.5–72.3
Work-family conflict	n	2804		196		178		2059	
	t1	35.0	29.7–40.3	36.7	32.9–40.6	34.9	30.5–39.3	40.7	38.0–43.4
	t2	36.5	31.4–41.9	30.8	27.2–34.5	35.9	31.8–40.0	46.8	44.1–49.5
Possibilities for development	n	2809		196		171		2049	
	t1	63.1	59.0–67.2	58.5	55.1–61.9	60.8	57.3–64.2	60.9	58.7–63.1
	t2	62.7	58.9–66.5	65.7	62.8–68.6	62.3	59.1–65.5	55.8	53.8–57.8
Quantitative demands	n	2808		197		171		2051	
	t1	45.7	41.1–50.2	46.3	42.9–49.6	39.4	35.8–43.2	49.6	47.2–51.9
	t2	45.3	41.0–49.5	39.7	36.8–42.7	39.6	36.1–43.2	51.4	49.3–53.6
Influence at work	n	2809		196		171		2050	
	t1	38.8	33.7–44.0	38.4	34.5–42.2	35.5	31.9–39.2	36.5	33.9–39.0
	t2	36.2	31.2–41.2	37.1	33.3–41.0	32.7	29.1–36.4	30.9	28.5–33.2

Table 3 Repeated Measures ANOVA

		Hypothesis supported	Significant post-hoc comparison at $p > .05$ (Bonferroni-corrected)
<i>Mental health</i>			
Main time effect	$F(1, 2787) = 27.19, p < .001, \text{partial } \eta^2 = .01$	–	–
Main group effect	$F(3, 2787) = 16.36, p < .001, \text{partial } \eta^2 = .02$	Yes	ES > RS, EL > RS
Interaction effect group*time	$F(3, 2787) = 9.54, p < .001, \text{partial } \eta^2 = .01$	Yes	–
<i>Physical health</i>			
Main time effect	$F(1, 2787) = 59.11, p < .001, \text{partial } \eta^2 = .02$	–	–
Main group effect	$F(3, 2787) = 4.98, p < .01, \text{partial } \eta^2 = .01$	Yes	EL > RS, EL > RL
Interaction effect group*time	$F(3, 2787) = 1.42, p = .236, \text{partial } \eta^2 = .00$	No	–
<i>Work ability</i>			
Main time effect	$F(1, 2793) = 1.75, p = .186, \text{partial } \eta^2 = .00$	–	–
Main group effect	$F(3, 2793) = 20.09, p < .001, \text{partial } \eta^2 = .02$	Yes	ES > RS, EL > RS, RL > RS
Interaction effect group*time	$F(3, 2793) = 12.22, p < .001, \text{partial } \eta^2 = .01$	Yes	–
<i>Leadership quality</i>			
Main time effect	$F(1, 2698) = 4.57, p < .05, \text{partial } \eta^2 = .00$	–	–
Main group effect	$F(3, 2698) = 73.73, p < .001, \text{partial } \eta^2 = .08$	Yes	ES > RS, EL > RS, RL > RS
Interaction effect group*time	$F(3, 2698) = 23.42, p < .001, \text{partial } \eta^2 = .03$	Yes	–
<i>Support from colleagues</i>			
Main time effect	$F(1, 2628) = 19.65, p < .001, \text{partial } \eta^2 = .01$	–	–
Main group effect	$F(3, 2628) = 10.32, p < .001, \text{partial } \eta^2 = .01$	Yes	ES > RS, EL > RS, RL > RS
Interaction effect group*time	$F(3, 2628) = 1.87, p = .133, \text{partial } \eta^2 = .00$	No	–
<i>Work-family conflict</i>			
Main time effect	$F(1, 2795) = 0.79, p = .374, \text{partial } \eta^2 = .00$	–	–
Main group effect	$F(3, 2795) = 17.26, p < .001, \text{partial } \eta^2 = .02$	Yes	ES < RS, EL < RS, RL < RS
Interaction effect group*time	$F(3, 2795) = 8.49, p < .001, \text{partial } \eta^2 = .01$	Yes	—
<i>Possibilities for development</i>			
Main time effect	$F(1, 2805) = 2.20, p = .138, \text{partial } \eta^2 = .00$	–	–
Main group effect	$F(3, 2805) = 10.97, p < .001, \text{partial } \eta^2 = .01$	Yes	ES > RS
Interaction effect group*time	$F(3, 2805) = 18.95, p < .001, \text{partial } \eta^2 = .02$	Yes	–
<i>Quantitative demands</i>			
Main time effect	$F(1, 2804) = 3.68, p = .055, \text{partial } \eta^2 = .00$	–	–
Main group effect	$F(3, 2804) = 14.68, p < .001, \text{partial } \eta^2 = .02$	Yes	ES < RS, ES > RL, EL < RS, RL < RS
Interaction effect group*time	$F(3, 2804) = 7.24, p < .001, \text{partial } \eta^2 = .01$	Yes	–
<i>Influence at work</i>			
Main time effect	$F(1, 2803) = 17.32, p < .001, \text{partial } \eta^2 = .01$	–	–
Main group effect	$F(3, 2803) = 6.09, p < .001, \text{partial } \eta^2 = .01$	Yes	ES > RS
Interaction effect group*time	$F(3, 2803) = 2.25, p = .081, \text{partial } \eta^2 = .00$	No	–

EL enthusiastic leavers, RL reluctant leavers, ES enthusiastic stayers, RS reluctant stayers

(13.2%), however, may be interpreted as the effect of the obstacles mentioned above.

Enthusiastic leavers

As theorized by Hom et al. (2012), the psychosocial work factors improved substantially with a voluntary change of employer. At t1, several factors clearly showed more adverse mean scores among the EL than for RS or ES, namely leadership quality, possibilities for development, and

work–family conflict, all established causes for voluntary change (Raeve et al. 2008; Rubenstein et al. 2018; Nouri and Parker 2013). Also work ability and mental health improved strongly after the change, but not physical health, indicating the relevance of differentiation of health when investigating work and health. These results are in line with those from Liljegren and Ekberg (2008) who found job mobility to be a predictor of mental, but not physical health, though mental health not as a predictor of job mobility.

Another observation makes the group of EL outstanding: At t2 the EL reported the best mental health, work ability and leadership quality, and the lowest work–family conflict of all four groups depicted by Hom et al. (2012).

Reluctant leavers

According to our findings, the group of RL is, before the change, characterized by low leadership quality, low influence at work, and very low quantitative demands. However, the involuntary change seems to go along with considerable improvements, such as work ability, leadership quality, and support from colleagues, but also deteriorations for influence at work. Our analyses can neither confirm nor reject the assumptions that RL were low performers as described in Jackofsky's model on turnover and job performance from 1984.

There were no changes in the two health outcomes over time, showing the importance of a conceptual distinction of health and work ability. Even if the workers' health does not change, work ability can be improved by adapting the work situation (Ebener and Hasselhorn 2016).

Reluctant stayers

Already at t1, the group of RS stands out with respect to several work exposures and outcomes and stands particularly in contrast to the EL. In terms of leadership quality, work–family conflict, possibilities for development, quantitative demands, and influence at work, this group already exhibited poor or even worst mean scores in the sample which then further deteriorated over the next four years. These results may reflect lack of person–work fit in this group as concluded by Hom et al. (2012) and also assumptions based on the job lock and stuck at work theories (Huyse-Gaytandjieva et al. 2013): Specifically those with poor work find it difficult to change to a better job due to a lack of opportunities and low qualifications.

Also work ability declined in this group which is in line with conclusions from the international JPI UEP working group, that work ability declines with age, especially in jobs with physically strenuous tasks and that some older workers may be “locked” in such jobs (Hasselhorn and Apt 2015). In terms of health, our results indicate stable mental health over time, at a very low level, however, and a deterioration of physical health, which is of comparable size as in the other groups. A Swedish working group found that being locked-in is detrimental to well-being (Stengård et al. 2016).

Enthusiastic stayers

As described by Hom et al. (2012) the group of ES differs clearly from all others: While there are many significant and

different changes over time among EL, RL, and RS, only very small changes were found in this largest group, the ES. Although it is a large group, deteriorations in physical health and work ability were found, which may be attributed to aging (Kooij 2015). Notable is that the ES had the highest seniority at t1 (Table 1), which may be indicative of a long-lasting person–work fit for many (Hom et al. 2012).

Strengths and limitations

The strength of the lidA study is that the four occupational change groups suggested by Hom et al. (2012) can be identified and examined in depth, over time and among older workers, because of the large age-homogeneous sample size and the longitudinal study design. Another advantage is the representativeness of the sample for the older German socially insured working population of similar age. Limitations are that the study focuses on psychosocial work factors only, did not include employees, who became unemployed, and that the different group sizes may impede comparability between the groups of EL, RL, and RS and the greatest group of ES.

Conclusions

Concluding, we confirm theoretical suggestions that a change of employer may lead to considerable improvements among a range of psychosocial work factors for older workers, especially when the step is taken voluntarily, but also following reluctant leaving. Our research results imply that older workers generally take the initiative to change their employer because they want to improve adverse psychosocial working conditions. Yet, voluntary changes have the potential to improve mental health and work ability as well.

If both changing groups—those changing voluntarily and involuntarily—benefit from an employer change, we may conclude that an inclusive labor market policy for older workers allowing for high job mobility may have the potential to contribute to considerable improvements of workers' individual working conditions, health, and work ability, thereby increasing work participation of older workers and extending working lives.

Further, our results indicate that the group of reluctant stayers requires special attention from employers and policy and might also benefit from an inclusive labor market policy. This group of workers rates its own work situation increasingly poorer while staying at the undesired workplace. It may pose a risk group with regard to work ability, work motivation, and therefore employment participation at higher working age.

Considering the overall relevance of this topic and the growing availability of good data, research should dedicate more resources to this field. Thereby, research should differentiate voluntary and involuntary changes and not overlook the great risk group of reluctant stayers. Conceptually, physical and mental health should be differentiated from work ability. Finally, besides investigating the determinants, future studies should look into the short- and long-term consequences of actual and desired employer changes among older workers and their relation to working life duration and quality.

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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval The lidA Study has received ethical approval from the Ethics Commission of the University of Wuppertal dated from 05.12.2008 and 20.11.2017 [MS/BB 171025 Hasselhorn].

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Study III

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ORIGINAL ARTICLE

Open Access



The relationship between voluntary employer change and work ability among older workers: investigating the honeymoon-hangover effect

Nina Garthe* and Hans Martin Hasselhorn

Abstract

The aim of the study was to investigate the effect of voluntary employer changes on self-reported work ability among older workers in Germany and whether a honeymoon-hangover effect (HHE) exists here. In research on job satisfaction, three typical periods around a voluntary employer change characterize a HHE: a deterioration in the old job (deterioration), an initial increase in the new job (honeymoon) and a subsequent decline over time (hangover). Whether a HHE exists in respect to work ability following a voluntary employer change remained open. The analyses are based on data from the first three waves of the lidA study (2011, 2014, 2018), a representative cohort study of older employees in Germany born in 1959 or 1965. Data from 2502 workers who participated in all three study waves was analyzed. Fixed-effects regression analyses including lag and lead variables were conducted. A deterioration, honeymoon and hangover period were found. Work ability increased substantially following the voluntary employer change. Our study shows that voluntary employer changes have the potential to maintain work ability at higher working age, but not to increase the work ability in the long-term perspective. However, despite the existence of a hangover period, the positive overall effect of the voluntary change should not be underestimated.

Keywords: Turnover, Older workers, Work ability, Honeymoon-hangover effect, Cohort study, Fixed-effects regression

1 Introduction

At times of worldwide extended working life policies, maintaining work ability at higher working age has received increased public and policy attention (Nilsson et al. 2011). Work ability can be defined as the result of the fit between the individual's resources and his or her work demands (Tuomi et al. 1997) and may answer the question 'How good is the worker at present, in the near future, and how able is he or she to do his or her work with respect to work demands, health, and mental resources?' (Tuomi et al. 1991). Therefore, work ability

depends on the actual work situation (Frieling and Kotzab 2014) and is not limited to the individual worker's resources such as health and functioning (Ebener and Hasselhorn 2019). For over 30 years, work ability has been assessed worldwide with the work ability index (WAI), which has shown to predict various employment-related outcomes such as work motivation (Feißel et al. 2018), long-term sick leave, early exit from work and disability (Ebener and Hasselhorn 2019). Today, the WAI is used globally in occupational health practice to assess and maintain the workers' work ability (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin 2013).

Strategies to sustain the fit between older workers and their work are needed as work ability often decreases with age (de Wind et al. 2015; Oakman et al. 2018). One strategy for older workers might be a voluntary change

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of employer, which enables the worker to leave unsuitable workplaces and thereby actively adapt unfavorable working conditions. The change bears the potential to attain suitable working conditions and to increase the ability to work longer at higher working age (Wilke et al. 2019).

The large body of research on voluntary employer changes mainly focuses on determinants such as job satisfaction, performance, health, leadership quality (see meta-analysis by Rubenstein et al. 2018) and also work ability (e.g. Rongen et al. 2014). The focus on determinants—in contrast to outcomes—was often due to limitations of the data, which did allow researchers to track employees up to the change, but not subsequently. Thus, there is still little research on the consequences of employer changes. The few previous studies confirm that voluntary employer changes have a positive effect on mental health (Liljegren and Ekberg 2009) and job satisfaction (Chadi and Hetschko 2014) and is associated with improved working conditions such as increased job security, reduced working hours (Carless and Arnup 2011), better salary, better possibilities for development and more appropriate work tasks (Grund 2009). To our knowledge, there is no scientific report about the effect on the workers' work ability.

In some studies, it was observed that the positive effects found following the employer change faded over time (Boswell et al. 2005, 2009, Chadi and Hetschko 2014). In theory, this phenomenon is called the honeymoon-hangover effect (HHE) (Boswell et al. 2005). Boswell et al. (2005) first described and examined the honeymoon-hangover effect in voluntary employer changes with respect to job satisfaction. According to the authors, three periods describe the honeymoon-hangover effect:

- (1) In the first period, which may be called deterioration, employees experience a decline in job satisfaction in the old job. This job dissatisfaction precedes turnover.
- (2) After turnover, job satisfaction strongly increases. This is referred to as the honeymoon period. The increase is explained by organizations creating an overly positive picture of the job for new hires, as well as the employee's tendency to portray the new organization in a positive light due to high expectations. Unfavorable information about the new job is suppressed.
- (3) The initially high job satisfaction with the new job declines over time to an individual 'normal' level, which is called the hangover period. The longer tenure with the new job brings along increased knowledge of the organization and employees begin

to recognize the less attractive aspects of the job; a subsequent disappointment and disillusionment.

The honeymoon-hangover effect was confirmed for job satisfaction in three different studies. Boswell et al. (2005) investigated the HHE by measuring job satisfaction in one-year intervals and found the three periods of the HHE in three to four subsequent years. In 2009, Boswell et al. conducted a similar study with four measurement points (day 1, 3 months, 6 months, 1 year). Within this year, they identified the periods honeymoon and hangover for job satisfaction. A third study by Chadi and Hetschko (2014) distinguished between employer changes due to quitting on own initiative, mutual agreement, dismissal and plant closure. They found a strong HHE for employees, who changed on own initiative and a slight HHE for employees, who changed due to mutual agreement. No HHE was found among employees, who changed due to dismissal or plant closure. Furthermore, Clark et al. (2008) found that life satisfaction significantly decreased before and increased after layoffs, but this increase was not long-lasting. However, voluntary employer changes were not investigated.

Inspired by the studies on the HHE, we aimed to investigate the effect of voluntary employer changes on the work ability of older workers in Germany and whether HHE exist here. However, HHE may not develop in parallel for all possible outcomes (Roe 2008). Oakman et al. (2018), who investigated pathways of work ability over 6 years, state that sustained changes in work are required to change work ability and that these changes in work take time to make an impact. Thus, while an employer change may affect the course of job satisfaction immediately, this is followed by a re-adaptation after a shorter period of time. We suspect that for work ability, a longer time period is required for re-adaptation as the workers have to adapt to the new work situation, taking into account their health, competencies and values (Tuomi et al. 1997).

Now, the German IIdA Cohort Study provides the opportunity to investigate the HHE for work ability among older workers in a large representative sample. In line with the theory on the *honeymoon-hangover effect*, we expect that the work ability of the employer changers is deteriorating in the old job and is therefore lower than the work ability after the change. Therefore, we postulate the following hypothesis:

Hypothesis 1 The work ability in the old job is deteriorating before a voluntary employer change (*deterioration*).

Further, we expect an increase of the work ability following the employer change due to the new, probably more appropriate working conditions and the positive expectations in the new job:

Hypothesis 2 The work ability at the new job is initially higher than the work ability with the old job (honeymoon).

Lastly, we suppose that the higher work ability declines over time up to a level which is similar to the employees who have stayed with their employer, as the voluntary employer changers adapt to the new work situation and negative aspects of the job are also recognized.

Hypothesis 3 The initial high work ability in the new job will decline over time (*hangover*).

2 Methods

2.1 Data and sample

The data used for this study derive from the German lidA Cohort Study on Work, Age, Health and Work participation, a representative cohort study of older employees in Germany. Initially, employed people subject to social security contributions (no self-employed or sworn civil servants), born in either 1959 or 1965, are interviewed every three to four years in their homes (computer-assisted personal interviewing, CAPI). The analyses are based on data from the first three waves of the study, 2011 ($n=6585$), 2014 ($n=4244$) and 2018 ($n=3586$). In 2018, the participants were 53 and 59 years old. A more detailed description of the lidA Cohort Study and its design has been given elsewhere (Hasselhorn et al. 2014; Rauch et al. 2015).

For this study, participants were excluded if they were not employed full time, part time or marginally in any of the waves, if they were self-employed and if they had an involuntary change of employer between any of the waves. This balanced sample allows examination of intra-individual changes in work ability over the course of the three study waves. In all, 2502 workers were included who participated in all three study waves.

2.2 Measures

2.2.1 Groups of voluntary employer change

In wave two (2014) and three (2018), the participants were asked whether they changed employer on their own initiative. If the participants had multiple changes between two waves, only the last change was measured.

In the analyses we distinguish four groups: (1) participants, who had no change, either between 2011 and 2014 nor between 2014 and 2018, thus, they stayed in the

same job for all three waves (Job A, Job A, Job A; AAA), (2) participants, who had no change between 2011 and 2014 and changed between 2014 and 2018, thus, they had a new job since wave 3 (Job A, Job A, Job B; AAB), (3) participants, who changed between 2011 and 2014 and had no change between 2014 and 2018, thus, they had a new job since wave 2 (Job A, Job B, Job B; ABB) and (4) participants, who changed between 2011 and 2014 and between 2014 and 2018, thus, they had new jobs in wave 2 and also in wave 3 (Job A, Job B, Job C; ABC).

2.2.2 Work ability

In each wave, work ability was measured by the second dimension (WAI2) of the Work Ability Index (WAI). The WAI is an established questionnaire to assess work ability in occupational health research. Short measures such as the WAI2, which assesses the work ability in relation to the demands of the job, were recommended for large surveys and shown to be suitable short measures for work ability in occupational health research and employee surveys (Ebener and Hasselhorn 2019). The WAI2 consists of three questions: In two questions the participants were asked to rate their actual work ability with respect to mental and physical demands at work, respectively (very poor/rather poor/moderate/rather good/very good). The answers were weighted depending on the third question, which measures whether the participant was mainly mentally active in the main job, mainly physically active or both equally. The weighting of the WAI2 is described by Hasselhorn and Ebener (2016). The resulting sum score ranges from 2 (no work ability) to 10 (high work ability).

2.2.3 Socio-demographics

Socio-demographic information includes gender (male/female), year of birth (1959/1965), vocational education (low/medium/high) (based on Jöckel et al. 1998) as time-independent variables and having a partner (yes/no) assessed in each wave.

2.2.4 Work factors

The work factors include working hours (full time/part time/marginal employment), mental and physical work (mainly mental/mainly physical/both) and the income level (up to 1500 Euro/1500 to 3000 Euro/3000 Euro and more), each assessed in each wave.

2.2.5 Health

Mental and physical health were assessed with the Short Form Health Survey (SF-12) (Ware et al. 1995, Nübling et al. 2006). The component scores range from 0 to 100 with high scores indicating better health. Both SF-12

scales were found to have acceptable psychometric properties and validity (Ware et al. 1996).

2.2.6 Statistical analyses

The analysis consists of two steps, the description and the regression analysis.

In the description, the four groups of voluntary employer change described above were compared in terms of socio-demographics, work factors, health and work ability across the three study waves. For work ability, the group means were displayed along with confidence intervals for each wave. This allows depicting the course of work ability for each group over time.

The regression analysis is conducted as a fixed effects regression analyses including lag and lead variables for employer changes in order to investigate the individual changes of work ability before and after a voluntary employer change. To examine the individual effect of voluntary employer changes, only participants who reported a change in one or more of the waves were included in the regression analyses. With the fixed effects transformation, the individual mean value for work ability over the three waves is subtracted from each single work ability score for each participant. Through this transformation, the individual relationship between the values of each participant remains the same, but potential level differences between the participants are eliminated. Therefore, the fixed effects regression analyses allow to investigate individual work ability changes and unobserved individual heterogeneity, i.e. level differences between study participants, is removed from the work ability data.

The honeymoon-hangover effect is examined by including lag or lead dummy variables for voluntary employer changes, respectively. The three study waves allow to integrate two lag variables, which indicate whether a participant has a new job since one or two waves (examining the honeymoon and hangover period, models 1 and 2). Similarly, two lead variables could be integrated, which indicate whether a participant will have a new job in one or two waves (examining the deterioration period, models 3 and 4). In Models 2 and 4 control variables are added. Sensitivity analyses were conducted by performing separate analyses for men and women and for participants born in 1959 and 1965.

All statistical analyses were performed using SPSS version 26.0.

3 Results

3.1 Description

Table 1 shows the socio-demographics, work factors, health and work ability in the total sample and across the change groups. The majority of the participants stayed with their employer over the seven years (89.6%;

AAA). 9.2% of the participants changed once (AAB, ABB) and 1.2% changed twice (ABC). In some aspects, these three change groups differed from the group of stayers. Women and the younger cohort born in 1965 were overrepresented in all change groups. Participants with medium educational level were overrepresented in groups AAB and ABB and participants with low educational level were overrepresented in group ABC. In all change groups, participants more often had a partner. Participants who changed once were less likely to work full-time in each of the waves. Only in wave one, those marginally employed were overrepresented among the three change groups. In wave three, participants working full-time were overrepresented in the ABC group. Furthermore, participants, who work mainly physically, were overrepresented among all change groups. After changing, these participants more often did both, physical and mental work. More participants with a low income changed employer voluntarily. Mental health increased after a voluntary change. In relation to the stayers, changers reported worse mental health before a change and better physical health afterwards.

Figure 1 displays the course of work ability for the four groups of voluntary employer change over time. The figure indicates different patterns for each groups' work ability: the work ability of the stayers (AAA) slightly deteriorated over time and the work ability of the group, who changed twice (ABC), considerably improved after each change. The groups, who changed once (AAB, ABB), had reverse patterns. The work ability of group ABB initially improved following the change and then deteriorated considerably while staying with the new employer. The work ability of group AAB slightly deteriorated while staying with the old employer and improved following the change. Overall, these patterns indicate a honeymoon-hangover effect, as the work ability of the group AAB deteriorated before the change (deterioration), the work ability of all change groups (AAB, ABB, ABC) improved after the change (honeymoon) and the work ability of the group ABB deteriorated while staying with the new employer (hangover). This supports hypotheses 1, 2 and 3.

3.2 Regression analyses

The regression analysis provides further insight into the honeymoon-hangover effect, while controlling for socio-demographic information and work factors. The fixed-effects transformation of the outcome work ability allows prediction of the individual changes of work ability, as positive values do not indicate high work ability, but higher work ability in relation to another observation of the same individual. In all models, only

Table 1 Sample socio-demographics, work factors, health and work ability in the total sample and across change groups

Groups of voluntary employer change (jobs in 2011, 2014, 2018)									
Total sample		Job A, Job A, Job A (AAA)		Job A, Job A, Job B (AAB)		Job A, Job B, Job B (ABB)		Job A, Job B, Job C (ABC)	
n (%)	Mean (SD)	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)
Socio-demographic factors									
Gender	n = 2502								
Male	45.3	$\chi^2_{(3)} = 11.98, p = 0.007$		33.8		38.0		34.5	
Female	54.7			66.2		62.0		65.5	
Year of birth	n = 2502	$\chi^2_{(3)} = 19.79, p = 0.000$							
1959	45.6			34.5		30.4		31.0	
1965	54.4			65.5		69.6		69.0	
Vocational education	n = 2488	$\chi^2_{(6)} = 5.31, p = 0.504$							
High	23.1			19.0		16.3		20.7	
Medium	57.2			61.3		62.0		51.7	
Low	19.7			19.7		21.7		27.6	
Partner (2011)	n = 2493	$\chi^2_{(3)} = 3.89, p = 0.273$							
Yes	88.2			92.8		89.1		a	
No	11.8			7.2		10.9		a	
Partner (2014)	n = 2499	$\chi^2_{(3)} = 6.07, p = 0.108$							
Yes	88.1			93.5		91.3		a	
No	11.9			6.5		8.7		a	
Partner (2018)	n = 2480	$\chi^2_{(3)} = 3.36, p = 0.339$							
Yes	86.9			91.4		89.1		89.7	
No	13.1			8.6		10.9		10.3	
Work factors									
Working hours (2011)	n = 2502	$\chi^2_{(6)} = 43.07, p = 0.000$							
Full time	67.5			52.5		53.3		69.0	
Part time	27.5			33.8		38.0		20.7	
Marginal employment	5.0			13.7		8.7		10.3	
Working hours (2014)	n = 2502	$\chi^2_{(6)} = 39.62, p = 0.000$							
Full time	66.9			51.8		55.4		62.1	
Part time	29.3			36.7		a		a	
Marginal employment	3.9			11.5		a		a	
Working hours (2018)	n = 2502	$\chi^2_{(6)} = 26.05, p = 0.000$							
Full time	67.5			51.1		58.7		72.4	

Table 1 (continued)

		Groups of voluntary employer change (jobs in 2011, 2014, 2018)											
Total sample		Job A, Job A, Job A (AAA)			Job A, Job A, Job B (AAB)			Job A, Job B, Job B (ABB)			Job A, Job B, Job C (ABC)		
N = 2502 (100.0)		n = 2242 (89.6)			n = 139 (5.5)			n = 92 (3.7)			n = 29 (1.2)		
n (%)	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)	%
Part time	29.4		28.0		a		a		a		a		a
Marginal employment	3.0		3.1		a		a		a		a		a
Mental and physical work (2011)	n = 2502		$\chi^2_{(6)} = 17.36, p = 0.008$										
Mainly mental	50.0		50.8		41.7		42.4		48.3		48.3		48.3
Mainly physical	9.9		9.1		15.1		18.5		17.2		17.2		17.2
Both	40.1		40.1		43.2		39.1		34.5		34.5		34.5
Mental and physical work (2014)	n = 2502		$\chi^2_{(6)} = 16.48, p = 0.011$										
Mainly mental	51.0		52.3		40.3		40.2		34.5		34.5		34.5
Mainly physical	9.9		9.5		14.4		10.9		13.8		13.8		13.8
Both	39.2		38.2		45.3		48.9		51.7		51.7		51.7
Mental and physical work (2018)	n = 2502		$\chi^2_{(6)} = 13.98, p = 0.030$										
Mainly mental	51.0		52.1		41.0		44.6		a		a		a
Mainly physical	7.4		7.3		7.9		9.8		a		a		a
Both	41.6		40.5		51.1		45.7		62.1		62.1		62.1
Income level (2011)	n = 2404		$\chi^2_{(6)} = 50.43, p = 0.000$										
Up to 1500 Euro	40.1		37.8		63.3		57.8		50.0		50.0		50.0
1500 to 3000 Euro	47.0		49.1		28.1		27.8		32.1		32.1		32.1
3000 Euro and more	12.9		13.1		8.6		14.4		17.9		17.9		17.9
Income level (2014)	n = 2459		$\chi^2_{(6)} = 56.32, p = 0.000$										
Up to 1500 Euro	34.7		32.4		59.0		51.6		44.8		44.8		44.8
1500 to 3000 Euro	49.7		51.7		30.6		31.9		34.5		34.5		34.5
3000 Euro and more	15.7		15.9		10.4		16.5		20.7		20.7		20.7
Income level (2018)	n = 2438		$\chi^2_{(6)} = 46.85, p = 0.000$										
Up to 1500 Euro	27.1		25.1		48.9		40.7		37.9		37.9		37.9
1500 to 3000 Euro	52.4		53.8		38.3		42.9		44.8		44.8		44.8
3000 Euro and more	20.5		21.1		12.8		16.5		17.2		17.2		17.2
Health	n = 2495		$F(3, 2491) = 0.766, p = 0.513, \text{partial } \eta^2 = 0.00$										
Mental health ^b (2011)		52.1 (9.5)		52.2 (9.4)		52.6 (10.0)		50.7 (10.7)		51.9 (9.1)		51.9 (9.1)	

Table 1 (continued)

n (%)	Total sample n = 2502 (100.0)	Groups of voluntary employer change (jobs in 2011, 2014, 2018)							
		Job A, Job A, Job A (AAA)		Job A, Job A, Job B (AAB)		Job A, Job B, Job B (ABB)		Job A, Job B, Job C (ABC)	
		n = 2242 (89.6)	Mean (SD)	n = 139 (5.5)	Mean (SD)	n = 92 (3.7)	Mean (SD)	n = 29 (1.2)	Mean (SD)
Mental health ^b (2014)	n = 2490	F(3, 2486) = 3.170, p = 0.023, partial η ² = 0.00	50.7 (9.9)	48.5 (11.4)	51.7 (9.4)	53.4 (7.7)			
Mental health ^b (2018)	n = 2495	F(3, 2491) = 1.777, p = 0.149, partial η ² = 0.00	50.6 (10.0)	50.7 (9.9)	51.7 (9.4)	53.4 (7.7)			
Physical health ^b (2011)	n = 2495	F(3, 2491) = 0.632, p = 0.595, partial η ² = 0.00	51.7 (9.7)	53.2 (9.9)	51.9 (9.3)	53.9 (7.5)			
Physical health ^b (2014)	n = 2490	F(3, 2486) = 3.253, p = 0.021, partial η ² = 0.00	50.3 (8.8)	50.8 (8.8)	51.3 (8.0)	51.0 (7.3)			
Physical health ^b (2018)	n = 2495	F(3, 2491) = 2.928, p = 0.033, partial η ² = 0.00	50.0 (8.8)	49.8 (8.9)	50.9 (8.5)	53.7 (7.7)			
Work ability			48.2 (9.2)	48.0 (9.2)	49.9 (8.4)	50.5 (7.2)			
Work ability ^c (2011)	n = 2493	F(3, 2489) = 1.359, p = 0.253, partial η ² = 0.00	8.1 (1.5)	8.1 (1.5)	8.1 (1.6)	7.7 (1.6)			
Work ability ^c (2014)	n = 2494	F(3, 2490) = 5.022, p = 0.002, partial η ² = 0.01	8.0 (1.4)	7.9 (1.4)	8.5 (1.4)	8.3 (1.1)			
Work ability ^c (2018)	n = 2497	F(3, 2493) = 7.727, p = 0.000, partial η ² = 0.01	7.8 (1.5)	7.7 (1.5)	7.9 (1.4)	8.6 (1.2)			

SD standard deviation

For each socio-demographic and work factor Chi-square tests and for health and work ability one-way ANOVAs are shown for the groups comparisons between the four groups AAA, AAB, ABB and ABC

^a This data cannot be shown for reasons of data protection

^b Range from 0 to 100. High scores indicate good health

^c Range from 2 to 10. High scores indicate high work ability

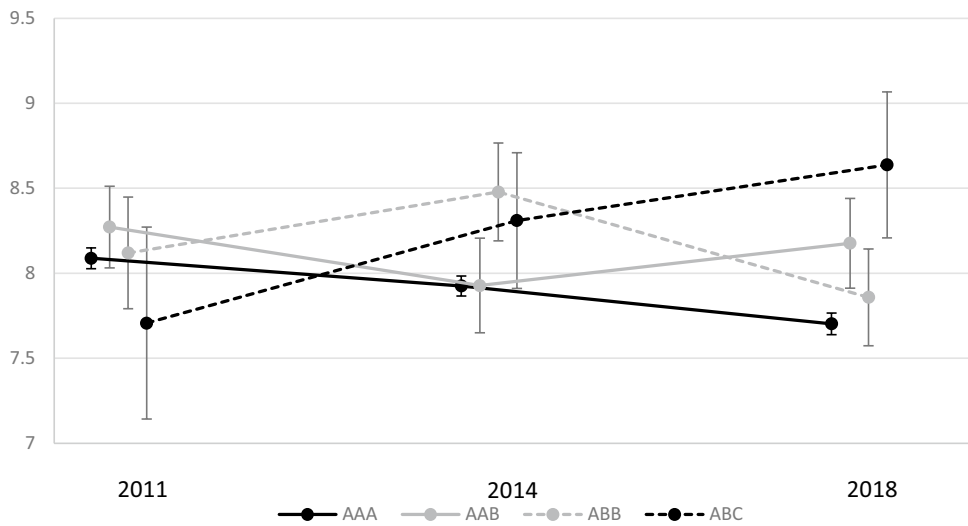


Fig. 1 Work ability of voluntary employer changers between 2011 and 2018 with confidence intervals (2011: $n = 2493$, 2014: $n = 2494$, 2018: $n = 2497$). Notes: Possible range from 2 (no work ability) to 10 (maximal work ability). AAA: Job A, Job A, Job A ($n = 2234$ – 2237); AAB: Job A in 2011, Job A in 2014, Job B in 2018 ($n = 138$ – 139); ABB: Job A in 2011, Job B in 2014, Job B in 2018 ($n = 92$); ABC: Job A in 2011, Job B in 2014, Job C in 2018 ($n = 29$)

observations of participants reporting a change (groups AAB, ABB; ABC) were included (Table 2).

Models 1 and 2 include the two lag variables, which allow to investigate the effect of being in a new job since one or two waves on work ability. The two lag variables are dummy variables indicating if a participant was in a new job since one or two waves, respectively. The models show that the work ability in the new job was significantly higher one wave after the change. The lag variable ‘new job since 2 waves’ showed no significant effect, which indicates that the work ability was not significantly higher two waves after the change. This supports hypotheses 2 and 3 and the existence of a honeymoon and hangover period.

Models 3 and 4 include the two lead variables, which allow to examine if and how the individual work ability before changing the employer differed from work ability following the change. The two lead variables are dummy variables indicating if a participant will be in a new job in one or two waves, respectively. The models show that work ability in the wave prior to the change was significantly lower than after the change, which is indicated by the negative regression coefficient. The lead variable ‘new job in 2 waves’ showed no significant effect. This result supports hypothesis 1 and the *deterioration* period, as the work ability one wave before the change was significantly lower than after the change (significant negative regression coefficient), but not two waves before (no significant regression coefficient).

The inclusion of control variables in models 2 and 4 did not affect these results. In the sensitivity analyses (not shown), similar patterns as described above were found for men and women, participants born in 1965 and 1959 and when including the observations of all participants (groups AAA, AAB, ABB and ABC) in the regression analyses. However, significant regression coefficients were only found for women and younger workers, which may be due to the low number of cases among male participants and participants born in 1959 reporting a voluntary employer change. In further sensitivity analyses covering not only those who changed job but all participants ($n = 2479$) and observations ($n = 7437$), the findings and significances remained largely stable. However, the corrected within R^2 was considerably lower which may be explained by a dilution effect due to the—logically—reduced within-panel variation of the lag and lead variables.

4 Discussion

In summary, our data indicate that voluntary employer changers are a specific group of employees among older workers. In this study younger and female employees were overrepresented among changers. The higher proportion of female changers may be due to the fact that women are more likely to work in jobs with more opportunities and needs to change employer. For example, in part-time and marginal employment, in jobs with a lower income level and in occupations which more easily allow

Table 2 Fixed effects regression analyses. Work ability before and after voluntary employer change

	Model 1	Model 2	Model 3	Model 4
Leads				
New job in 2 waves			− 0.005	− 0.005
New job in 1 wave			− 0.114**	− 0.106**
Lags				
New job since 1 wave	0.132***	0.135***		
New job since 2 waves	− 0.038	− 0.039		
Working hours (Ref.: full time)				
Part time		0.005		0.009
Marginal employment		0.015		0.012
Mental and physical work (Ref.: mainly mental)				
Mainly physical		− 0.059		− 0.055
Both		0.006		0.015
Income level (Ref.: 1500–3000 Euro)				
Up to 1500 Euro		− 0.004		− 0.003
3000 Euro and more		− 0.016		− 0.008
Number of observations	777	750	777	750
Number of individuals	259	250	259	250
Corrected within R ²	0.017	0.015	0.010	0.005

Regression coefficients: Standardised beta (β). * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Only participants reporting a change were included

for changes such as social and health care professions. Many changers seem to leave marginal employment over time and tend to change to full-time employment. Also, a higher proportion of employees with low or medium vocational education and mainly physical work changed employer voluntarily; groups with a higher risk for early retirement in Germany (Brussig 2015). Moreover, employees with a lower income level, a partner and better physical health changed more frequently.

The work ability patterns over time shown in Fig. 1 and the regression analyses supported all three hypotheses: (1) The work ability in the old job had deteriorated before a voluntary employer change, (2) the work ability at the new job was initially higher than the work ability with the old job, and (3) the initial high work ability at the new job declined over time.

4.1 The role of time

Our findings confirm that the time interval matters. Boswell et al. (2005), who investigated the HHE for job satisfaction, measured job satisfaction in five consecutive years and found a deterioration period two years before the employer change, a honeymoon period in the assessment one year after the change and a hangover period one year later. In our study, we also found an HHE, although work ability was measured in three- to four-year periods. Roe (2008) assumed that the time period until the onset of effects can widely differ. In our case, employer changes may have an immediate impact on some and a delayed

effect on other outcomes. We suppose the latter when it comes to work ability. This is because the employer change may go along with many small changes in work and private life to which the employees have to adapt to and which are eventually integrated into everyday life. For example, the new job may require shorter commuting allowing for more time at home, for hobbies, friends, household and sports. It may therefore have a positive effect on leisure activities, physical and mental health and life satisfaction, which, in turn, increase resilience to stress and workload.

4.2 The honeymoon-hangover effect for work ability

In theory, the honeymoon-hangover effect constitutes three periods, deterioration, honeymoon and hangover (Boswell et al. 2005). In our study, we identified a deterioration period for work ability. However, the work ability prior to changes (in AAB and ABB) was not significantly lower than that of the stayers (AAA, see Fig. 1). Therefore, low work ability does not seem to be a primary reason for a voluntary employer change among older workers, unlike job satisfaction as indicated by most of the turnover theories and models (see review by Hom et al. 2017). To what extent the deterioration period can be attributed to poor working conditions or age effects, remains open. Nevertheless, Garthe and Hasselhorn (2020) showed that older voluntary employer changers reported significantly worse psychosocial working

conditions before their change than stayers indicating a strong impact of work.

Furthermore, we confirmed the existence of a honeymoon period for work ability. Work ability improved substantially following a voluntary change of employer. Theory on the honeymoon-hangover effect explains the honeymoon period for job satisfaction by the assumption that the new organization creates an overly positive picture of the job and that the employees portray the new organization in a positive light (Boswell et al. 2005). Yet, we suppose that there is more to it than that, when it comes to work ability. Many working conditions can change due to a voluntary employer change, which may have a direct impact on work ability—and of course job satisfaction—such as leadership quality, work-privacy conflict, travel time to work, colleagues, work tasks, influence at work, working environment and work equipment (Grund 2009; Carless and Arnup 2011; Garthe and Hasselhorn 2020). Several studies confirmed the relationship between physical and psychological working conditions and work ability (Alavinia 2008; van den Berg et al. 2008; Sanders et al. 2011; Attarchi et al. 2014; Weale et al. 2019). It can also be assumed that only those employees change, who expect an improvement, which implies that changers to some degree may constitute a selective group. Thus, there may be real positive changes in work that can cause a honeymoon period; it is not just a question of perception.

Although we assume that the voluntary change actually improves the work situation, we found a hangover period for work ability. Figure 1 depicts (see pattern of ABB), and the regression analysis confirms that voluntary employer changes had a strong positive effect on the work ability in the following wave, which did not hold until the next wave. As assumed in theory, the adaptation to the new job, the routine, the knowledge of the organization and the negative aspects of the job appear with time and may affect the self-reported work ability as well (Boswell et al. 2009). We suppose that this hangover period cannot be explained solely by age effects, as the self-reported work ability deteriorates strongly to a 'normal' level after the honeymoon period within four years. Furthermore, we did not find a hangover period among the participants who changed twice (ABC). In contrast to the single time changers, this group seems to experience another honeymoon period. Gielen (2013) examined the relationship between repeated job quits and job satisfaction in men and found a strong increase of job satisfaction after each employer change and a slight decrease in job satisfaction, when the participants stayed with the new employer. She concludes that most of the repeated job quits were stepping stones to find the most preferred job. For our study, we cannot exclude a hangover period

for these participants when they stay for a longer period of time with their current employer.

In conclusion, although we detected a hangover period, we suppose that the change was not in vain and is a strategy to maintain work ability at higher working age for three reasons. First, a voluntary change actually goes along with improvements of working conditions and work ability. Second, the voluntary change has the potential to induce a better match between the work and the aging workers, whose health and work ability are likely to deteriorate at higher working age (Frieling and Kotzab 2014). Third, we assume that the changers might have experienced a considerable deterioration in their work ability if they had not taken the opportunity to change. Studies on job lock and stuck at work showed that workers' health and job satisfaction deteriorated over time while staying with a non-desired employer (Huyse-Gaytandjieva et al. 2013; Canivet et al. 2017).

4.3 Limitations

In addition to its strengths, this study also has limitations. First, we had no data on work ability before 2011 and after 2018 to investigate the work ability pattern of the changers two periods before or after the change. Second, we only had data with a 3- and a 4-year period between waves and could not investigate in-between changes in work ability. Third, we could not exclude selection effects, because we only included employees, who participated in all three waves.

5 Conclusions

Maintaining the work ability of older employees is relevant for the society and the employers, who will be increasingly dependent on older workers and certainly for the older employees themselves, who want to, or have to work longer. Our study shows that voluntary employer changes have the potential to maintain work ability at higher working age, but not to increase work ability long-lasting. We found a honeymoon-hangover effect for work ability, meaning a substantial increase of work ability shortly after the change and a decrease of the work ability over time, while staying with the new employer. On the one hand, our analyses suggest that the increase of work ability should not be overestimated in its duration or sustainability. On the other hand, the findings indicate that despite the decrease in the work ability, the potential positive overall effect of the voluntary change should not be underestimated.

Our study is the first to investigate the consequences of voluntary employer changes on older workers' work ability. Future studies should examine in depth, why there is a hangover period, while staying with the new employer, although real improvements in working conditions can

be expected. Another question is, if the changers' work ability remains higher than the work ability of the stayers over time. Further, shorter time intervals should be considered to investigate short-term effects. In addition to the employer changers, employees who are stuck at their work and employer, need to be investigated over time, because among them a stronger decrease in work ability can be expected than among employees, who voluntarily stay with their employer.

Abbreviations

HHE: Honeymoon-hangover effect; AAA: Job A, Job A, Job A (in the years 2011, 2014 and 2018); ABB: Job A, Job B, Job B (in the years 2011, 2014 and 2018); AAB: Job A, Job A, Job B (in the years 2011, 2014 and 2018); ABC: Job A, Job B, Job C (in the years 2011, 2014 and 2018).

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Authors' contributions

NG conceptualized and wrote the manuscript, analyzed and interpreted the data. HHM contributed to the interpretation of the data and the writing of the manuscript. Both authors have read and approved the final manuscript.

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Availability of data and materials

The datasets used for the current analysis are not publicly available due to protection of data privacy (www.lida-studie.de). A Scientific Use File will be available in 2023.

Declarations

Competing interests

The authors declare that they do not have competing interests.

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