

Sosiaalivakuutuksen rooli pysyvien työkyvyttömyysriskien hallinnassa

Vakuutusiltapäivä
3.12.2022
Jarna Pasanen

TAUSTAA

- Jarna Pasanen, KTT

- yliopisto-opettaja, vakuutus ja riskienhallinta
- Johtamisen ja talouden tiedekunta, Tampereen yliopisto

- Tutkimushankkeita 2015-2018

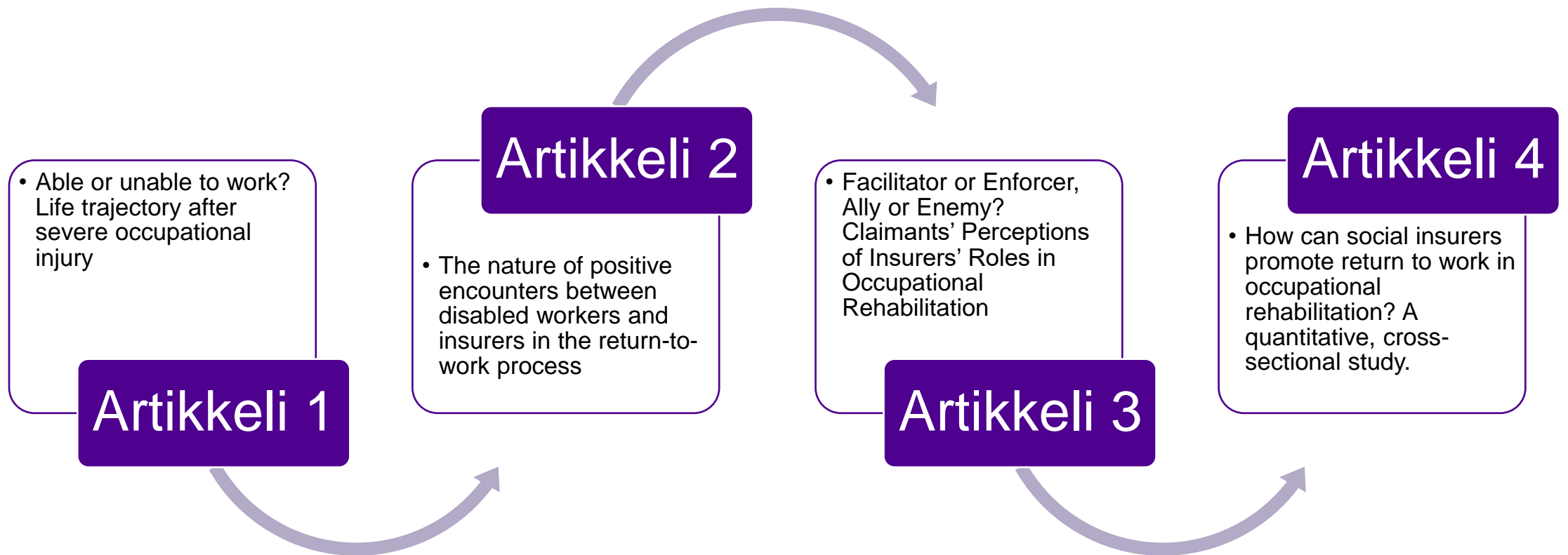
- Kulmala, J. (2016). Työssä, työkyvyttömänä vai työttömänä? Vakavassa työtapaturmassa vahingoittuneiden rekisteriaineistoon perustuva viisivuotisseuranta 2008–2013. Helsinki: Tapaturmavakuutuskeskus. Tapaturmavakuutuskeskuksen julkaisusarja 1/2016.
- Kulmala, J., & Luoma, A. (2017). Vakavan työtapaturman jälkeinen työhön paluu ja työtapaturman aiheuttama täysi työkyvyttömyys: Rekisteritietoihin perustuva tilastollinen analyysi. Helsinki: Tapaturmavakuutuskeskus. Tapaturmavakuutuskeskuksen julkaisusarja 2/2017.
- Kulmala, J. (2017). Palveluverkoston toteuttaman työeläkekuntoutuksen vaikuttavuus.
- Pasanen, J. (2018). ”Mä rupesin näkemään auringon taivaalla.” Kuntoutujien kokemuksia palveluverkoston toteuttamasta kuntoutuksesta.

- Väitöskirja -prosessi 2015 →

- Pasanen, J. (2022). The Role of Earnings-related Social Insurance in Permanent Disability Risk Management. Academic dissertation. Tampere University.
 - Kulmala, J., Luoma, A., & Koskinen, L. (2019). Able or unable to work? Life trajectory after severe occupational injury. *Disability and rehabilitation*, 41(18), 2192-2198.
 - Pasanen, J. (2021). The nature of positive encounters between disabled workers and insurers in the return to work process. *Work*, 70(1), 287-300.
 - Pasanen, J., & Luoma, A. (2021). How can social insurers promote return to work in occupational rehabilitation? A quantitative, cross-sectional study. *BMC public health*, 21(1), 1-11.
 - Pasanen, J. (2022). Facilitator or enforcer, ally or enemy? Claimant's perceptions of insurers' roles in occupational rehabilitation. *Qualitative Research in Financial Markets*, (ahead-of-print).



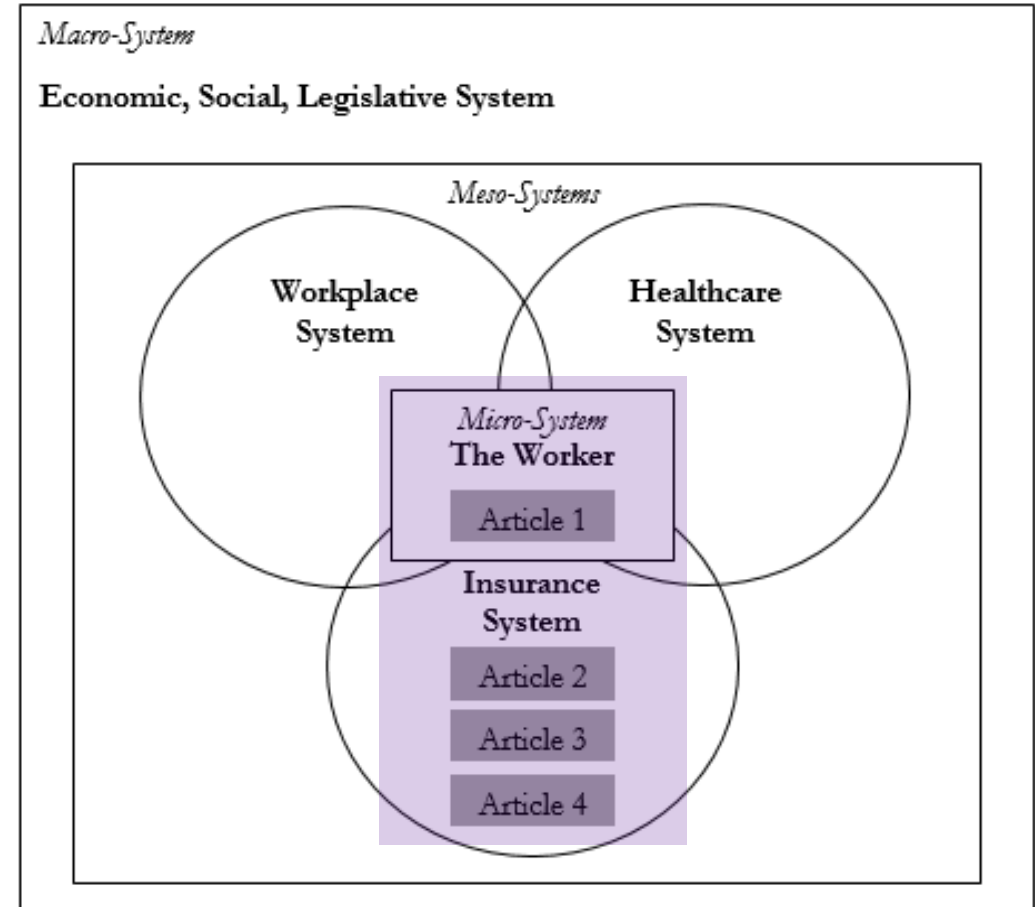
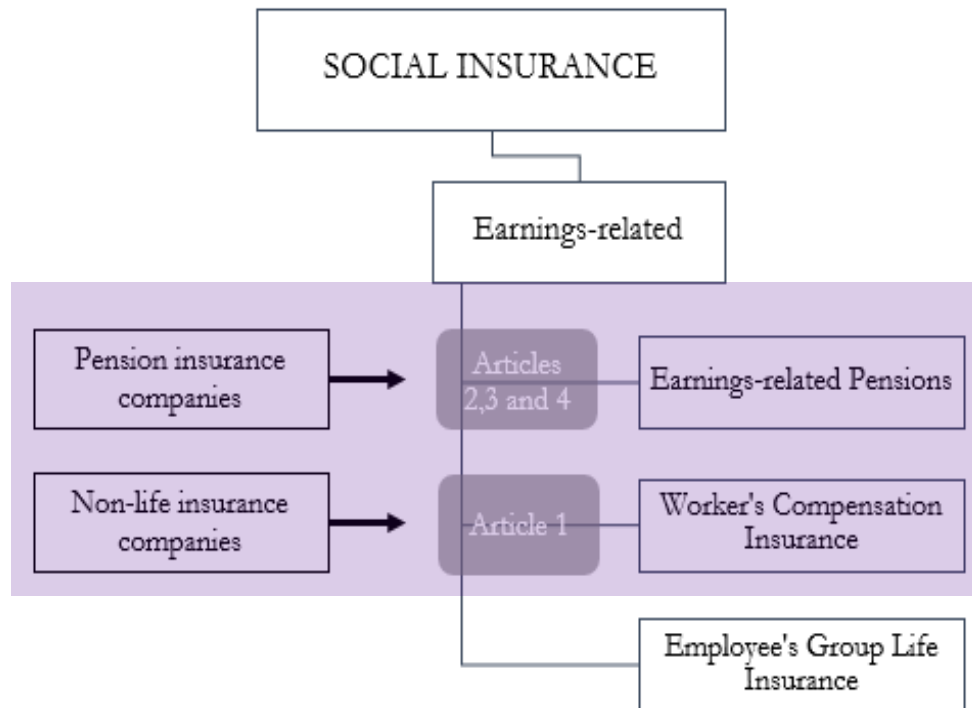
The Role of Earnings-related Social Insurance in Permanent Disability Risk Management: a summary



Väitöskirjatutkimuksen tarkoitus

- The purpose of the dissertation is to explore the role and significance of earnings-related social insurance system in the permanent disability risk management
- The dissertation addresses the following questions:
 1. What worker- and insurer-related factors predict a successful return to work after injury or illness absence?
 2. What is the role of social insurers within the RTW process?
 3. Through what underlying mechanisms do social insurers affect the outcomes of the RTW process?

Väitöskirjan aseointi 1/2



Väitöskirjan asemointi 2/2

Primaaripreventio

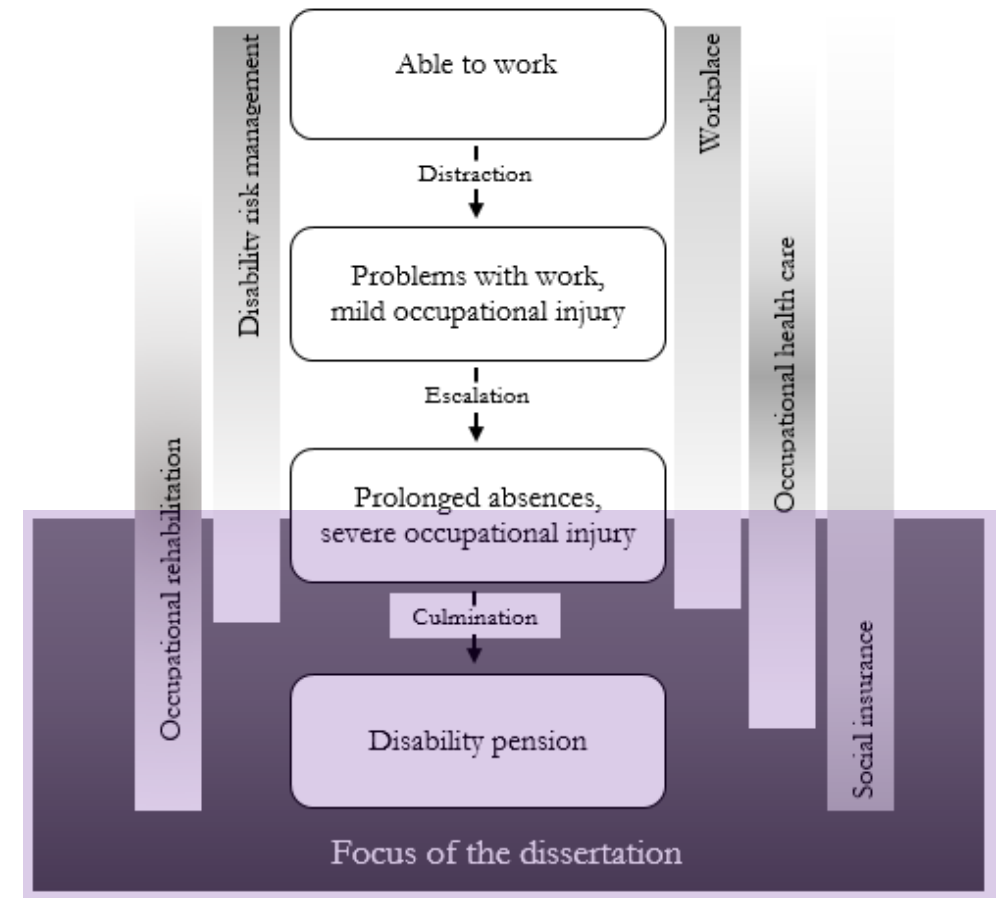
- pyritään ehkäisemään tapaturmia tai sairauksia jo ennen niiden ilmaantumista
- kohteena terveet ja vahingoittumattomat ihmiset (esim. työturvallisuus, rokotukset, terveysneuvonta)

Sekundaaripreventio

- estetään jonkin ongelman paheneminen ja sairauden puhkeaminen
- (esim. terveysarvojen seuranta, seulonnat)

Tertiaaripreventio

- estetään taudin paheneminen ja lisäoireiden kehittyminen
- (esim. kuntoutus)



Väitöskirjan tutkimus- aineistot ja eteneminen

	Register-based data	Survey data	Interview data
2015	Data gathering & combining		
2016			
2017	Data analysis	Data gathering	
2018			Data gathering & analysis
2019	Article 1		Data analysis
2020		Data analysis	
2021 →		Article 4	Article 2
			Article 3

Rekisteriaineisto

- Yhdistelmäaineisto TVK:n ja ETK:n rekistereistä (n=11 585)
- TVK
 - vuonna 2008 sattuneet vakavat työtapaturmat taustatekijöineen
 - näistä vahingoista maksetut tapaturmakorvaukset vuosilta 2008–2014
 - muut otoshenkilöille sattuneet työtapaturmat tarkastelujakson aikana
- ETK
 - ansaintarekisteristä poimitut tiedot ansaintajaksoista, vuosiansioista ja palkattomista ajoista
 - eläkerekisteristä poimitut tiedot maksetuista eläkkeistä.

Kyselyaineisto

- Otosjoukko: KuntoutuNET-verkkopalvelussa vuonna 2015 päättyneet tapaukset (n=2264)
- Vastausprosentti: 29 % (n=661)

	%
Gender	
female	48,0
male	52,0
Age	
25-34	9,3
35-44	27,0
45-54	39,0
55-63	24,7
Level of education	
primary school	2,4
secondary school	13,4
vocational college	68,4
general upper secondary school	6,8
university of applied sciences	3,8
university	5,2

Monthly net income (€)	%
0-499	1,2
500-999	13,4
1000-1499	23,7
1500-2499	44,5
2500-3999	14,5
4000-	2,6
Cause of rehabilitation	
Musculoskeletal diseases	66,4
Mental disorders	13,4
Other cause	20,2
Life situation at the time of the survey	
Rehabilitation ongoing	15,2
Successful RTW	30,1
Unemployed	20,9
Unable to work	27,1
Other situation	6,7
Self-rated ability to work at the time of the survey	
Poor (grade 4)	18,9
Tolerable (grades 5 to 6)	23,7
Good (grades 7 to 8)	41,4
Very good (grades 9 to 10)	16,0
Rehabilitation outcome (binary variable)	
Success	59,6
Failure	40,4

The rehabilitation was regarded as successful if the respondent had fully returned to work successfully or if the self-rated ability to work was 7 (satisfactory) or higher.

TAUSTATIEDOT JA TILANNE ENNEN TYÖELÄKEKUNTOUTUKSEN ALKUA
- sukupuoli - ikä - elämän- ja työtilanne - tulot - aloite kuntoutukseen - terveydellinen syy kuntoutukseen - koettu työkyky - motivaatio, odotukset ja tavoitteet
TYÖELÄKEKUNTOUTUS JA PALVELUVERKOSTON TOIMIJAT
- työhönpaluu suunnitelma (syntyminen, osallisuus, sisältö) - tyytyväisyys eri toimijoihin - työeläkelaitos (laitos, toiminta ja rooli -patteristo, palaute) - palveluntuottaja (palveluntuotaja, toiminta ja rooli -patteristo, palaute) - toimeentulo - toimijoiden yhteistyö
TILANNE KUNTOUTUKSEN JÄLKEEN
- koettu työkyky - elämän- ja työtilanne - tulot - kuntoutuksen onnistuminen, tulokset ja merkitys - tulevaisuuden suunnitelmat

Haastatteluaineisto

Table 1
Description of the participants of the study

= “rehabilitation succeeded”			= “rehabilitation succeeded and failed”			= “rehabilitation failed”		
Informant number	Age	Gender	Informant number	Age	Gender	Informant number	Age	Gender
1	30	Female	9	28	Male	17	38	Female
2	34	Male	10	33	Female	18	46	Male
3	37	Male	11	47	Female	19	47	Female
4	45	Male	12	52	Female	20	56	Female
5	46	Female	13	53	Male	21	57	Male
6	52	Female	14	53	Female	22	58	Female
7	53	Female	15	53	Female	23	60	Male
8	56	Male	16	61	Female	24	61	Female

Theme	Subtheme/Question	Ally or enemy
Background information	Level of education? Career and occupation before the rehabilitation?	
Before the occupational rehabilitation	The cause of disability? The rehabilitation initiative – How, when, who was involved? – The content of the initiative? – The role of the insurer? Rehabilitation motivation, expectations and goals? Compensation decision – Thoughts, pros and cons?	
During the occupational rehabilitation	Rehabilitation plan – How, when, who was involved? – The content of the plan? – The role of the insurer? Rehabilitation measures – How, when, who was involved – Evaluation: pros and cons – The role of the insurer? Follow-up control – How, when, who was involved – The role of the insurer?	
After the occupational rehabilitation	Life situation? Employment situation? Ability and motivation to work?	
Evaluation of the occupational rehabilitation	How would you describe the role of the insurer in occupational rehabilitation as a whole; why? How would you rate the success of the occupational rehabilitation for you; why? On your opinion, what explains the outcomes; why? How would you describe the role of the insurer in terms of outcomes; why? Where did the insurer succeeded/failed; why? Comments, development suggestions, questions?	

Table 2.
Interview topic list

Väitöskirjan artikkelit

Article 1: Able or unable to work? Life trajectory after severe occupational injury

- *Purpose.* To study the probabilities and permanence of return to work, inability to work and rehabilitation, and to explore the connection between these life situations and later working after a serious occupational injury.
- *Materials and Methods.* A historical cohort of Finnish workers with a serious occupational injury during 2008 (N=11585) were followed up annually on the outcomes of return to work over a 5-year observation period. We examined transition probabilities from one life situation to another with Markov chain analysis, and applied logistic regression with generalized estimating equations to assess the effect of register-based determinants on return to work.
- *Results.* Within the five anniversaries, 85% of the injured were working, 9% were unable to work (fully or partly) and 2% received rehabilitation. Age, gross annual income, type of work, injured body part, injury type and the injured's annual condition subsequent to the work injury were significant determinants of return to work.
- *Conclusions.* The probability of return to work decreased with time, but, on average, one fifth of the injured workers succeeded in return to work after being unable to work on the previous anniversary, which indicates that it is worthwhile to conduct efforts for this target group in order to promote return to work.

Table 2. Markov chain analysis of transition possibilities between consecutive anniversaries from one life situation to another.

		2. anniversary					
1. anniversary		working %	fully unable to work %	partly unable to work %	rehabilitation %	other situation %	In total %
working	%	84.1	1.1	0.0	0	14.7	100
fully unable to work	%	28.8	35.7	3.2	10.6	21.6	100
partly unable to work	%	43.5	13.0	30.4	4.3	8.7	100
rehabilitation	%	5.3	13.2	0.0	71.1	10.5	100
other situation	%	26.5	0.5	0.1	0.1	72.8	100

		3. anniversary					
2. anniversary		working %	fully unable to work %	partly unable to work %	rehabilitation %	other situation %	In total %
working	%	86.1	0.8	0.0	0.1	13.0	100
fully unable to work	%	18.2	52.0	3.1	9.4	17.3	100
partly unable to work	%	15.2	6.1	51.5	15.2	12.1	100
rehabilitation	%	5.7	20.0	9.5	60.0	4.8	100
other situation	%	22.6	0.3	0.0	0.1	77.1	100

		4. anniversary					
3. anniversary		working %	fully unable to work %	partly unable to work %	rehabilitation %	other situation %	In total %
working	%	86.5	0.5	0.0	0.0	13.0	100
fully unable to work	%	18.6	60.6	0.7	7.9	12.2	100
partly unable to work	%	16.7	0.0	73.8	7.1	2.4	100
rehabilitation	%	3.7	16.5	10.1	66.1	3.7	100
other situation	%	16.5	0.2	0.1	0.0	83.2	100

		5. anniversary					
4. anniversary		working %	fully unable to work %	partly unable to work %	rehabilitation %	other situation %	In total %
working	%	86.6	0.1	0.0	0.0	13.3	100
fully unable to work	%	10.1	77.2	0.0	3.5	9.2	100
partly unable to work	%	2.0	2.0	81.6	4.1	10.2	100
rehabilitation	%	5.0	16.8	10.9	59.4	7.9	100
other situation	%	14.0	0.1	0.0	0.0	85.9	100

Table 3. Logistic regression of potential determinants of working after a severe occupational accident.

	N (%)	Odds ratio	95% CI for odds ratio
Age***			
14–34	2728 (24)	3.24***	2.94–3.32
35–49	4064 (35)	3.12***	3.01–3.48
50–68	4793 (41)	1.00	
Gross annual income (€)***			
0–10,000	926 (8)	1.00	
10,001–20,000	1204 (10)	1.18**	1.05–1.32
20,001–30,000	2550 (22)	1.78***	1.60–1.97
30,001–40,000	3428 (30)	2.16***	1.95–2.40
40,001–50,000	1767 (15)	2.44***	2.18–2.74
50,001–60,000	715 (6)	2.24***	1.95–2.58
60,001–	519 (5)	2.45***	2.08–2.88
Type of work***			
mining, quarrying and construction work	1628 (14)	1.00	
manufacturing	3465 (30)	1.04	0.95–1.13
transportation and traffic work	1132 (10)	1.24***	1.11–1.38
agriculture, forestry and fishing	367 (3)	1.11	0.94–1.30
student	92 (1)	1.30	0.86–1.98
service sector work	1451 (13)	1.19***	1.08–1.32
technical, scientific, legal, humanistic and artistic work	681 (6)	1.42***	1.24–1.62
commercial work	463 (4)	1.35***	1.15–1.58
administrative and office work	991 (9)	1.25***	1.11–1.40
health care and social work	1315 (11)	1.37***	1.23–1.52
Part of body injured***			
neck	135 (1)	1.00	
whole body or multiple locations	568 (5)	1.20	0.92–1.58
head	205 (2)	1.00	0.74–1.37
back	491 (4)	1.15	0.88–1.51
torso and organs	465 (4)	1.29	0.98–1.71
upper extremities	5526 (48)	1.56***	1.22–1.99
lower extremities	4132 (36)	1.58***	1.24–2.02
other parts of body	17 (0)	0.99	0.51–1.93
unspecified	46 (0)		
Type of injury*			
concussion and internal injuries	1394 (12)	1.00	
traumatic amputations (Loss of body parts)	157 (1)	1.06	0.83–1.36
multiple injuries	137 (1)	1.10	0.84–1.45
dislocations, sprains and strains	4131 (36)	1.02	0.94–1.12
wounds and superficial injuries	1154 (10)	1.12*	1.00–1.25
bone fractures	4289 (37)	1.13**	1.03–1.23
other specified injuries	211 (2)	1.11	0.90–1.36
unspecified	112 (1)		
Previous situation in life***			
fully unable to work (due to work accident)	203–677 (2–6)	1.00	
working	6803–8168 (59–71)	15.15***	13.06–17.57
partly unable to work (due to work accident)	23–52 (0)	0.52**	0.33–0.83
accident rehabilitation	38–109 (0–1)	0.14***	0.09–0.22
other situation	2702–4456 (23–39)	0.94	0.81–1.09
R ²		0.419	
N		10984	

 *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Article 2: The nature of positive encounters between disabled workers and insurers in the return-to-work process

- *Objective.* To explore and conceptualize perceived positive encounters between disabled workers and insurers in order to identify the mechanisms that support successful rehabilitation outcomes.
- *Methods.* This qualitative study explored the experiences of twenty-four disabled workers who had undergone an occupational rehabilitation process. Data were collected with semi-structured interviews, transcribed, coded, and analyzed using inductive content analysis.
- *Results.* Four main themes arose from the 24 key concepts relating to the positive encounters: (1) process flow, (2) customer orientation, (3) information and guidance, and (4) service attitude. The results also reveal that perceived positive encounters promote the return to work not only directly, but also indirectly by improving the informants' motivation, which has previously been found to be one of the most significant factors explaining the outcomes of rehabilitation.
- *Conclusions.* The positive relationship between disabled workers and insurers during an occupational rehabilitation could be better understood through a conceptualization of perceived positive encounters. Underlining the importance of positive encounters and their ability to improve the rehabilitee's motivation may contribute to better support methods for the return to work.

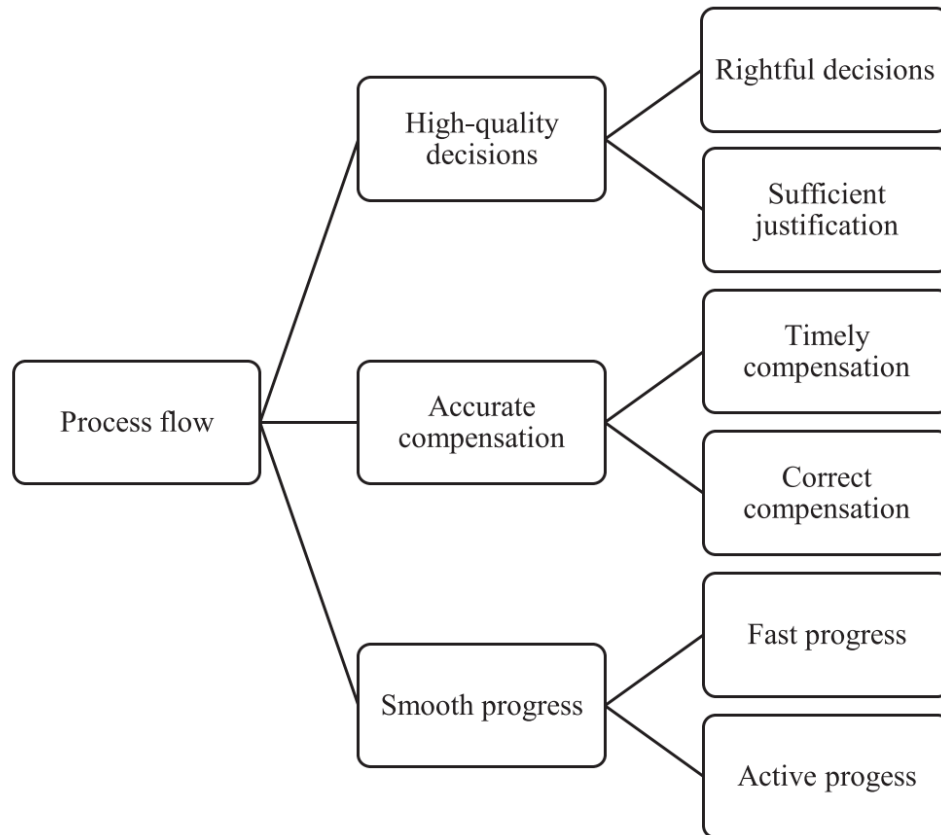


Fig. 1. Perceived positive encounters related to process flow.

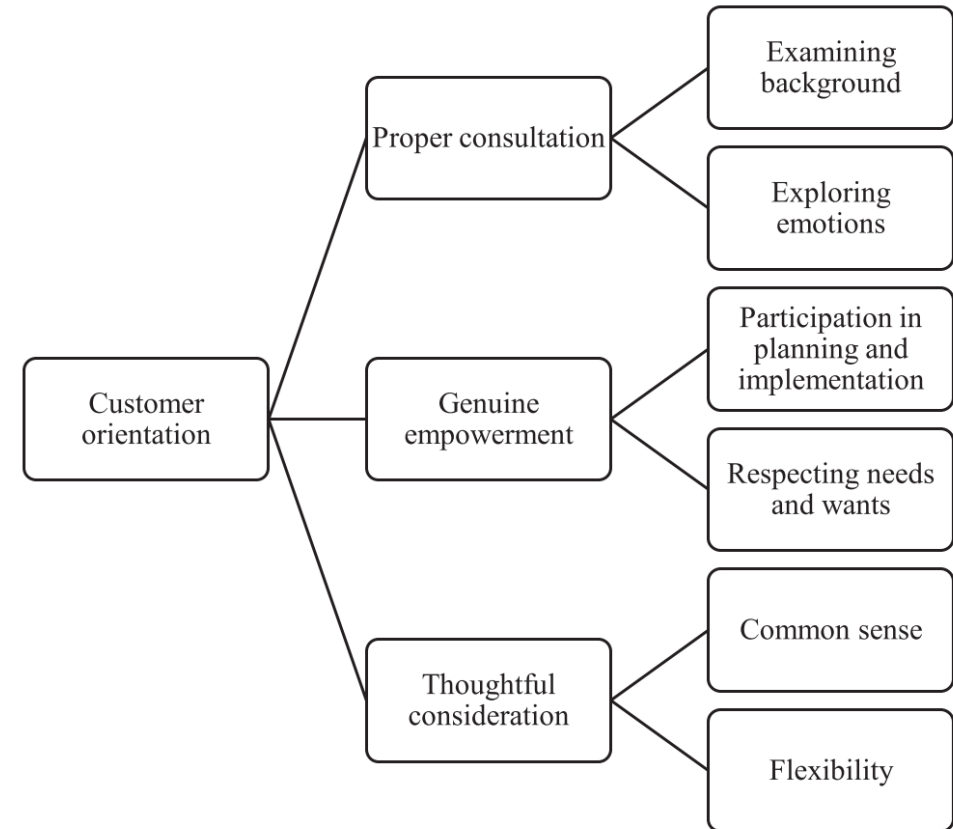


Fig. 2. Perceived positive encounters related to customer orientation.

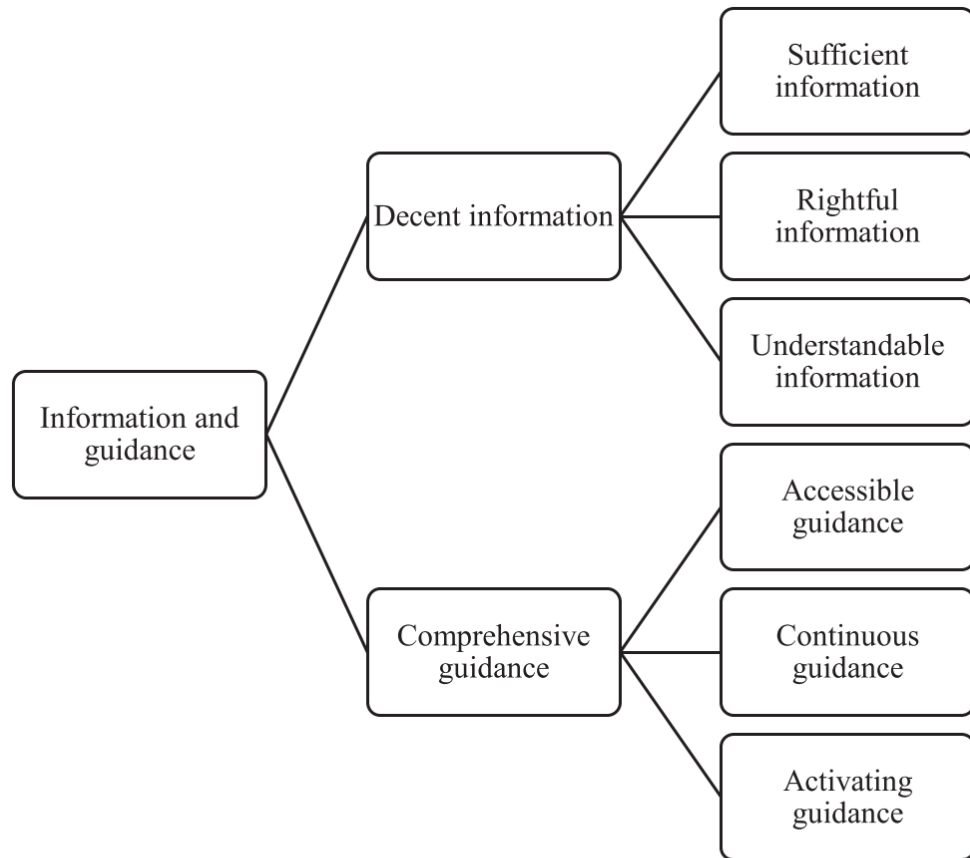


Fig. 3. Perceived positive encounters related to information and guidance.

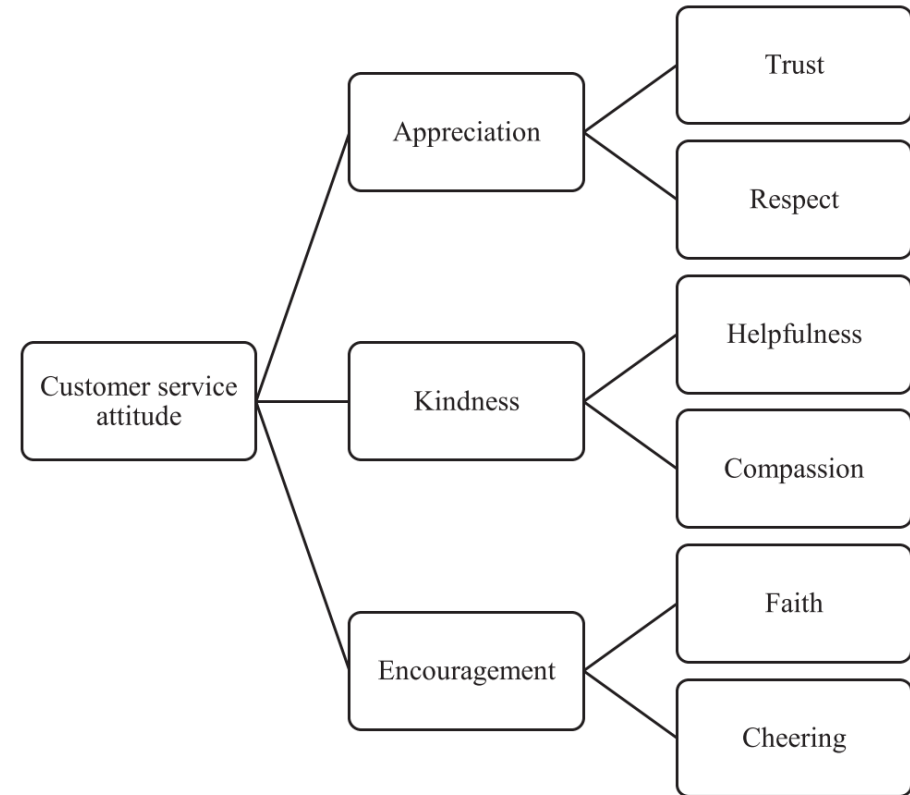


Fig. 4. Perceived positive encounters related to the customer service attitude.

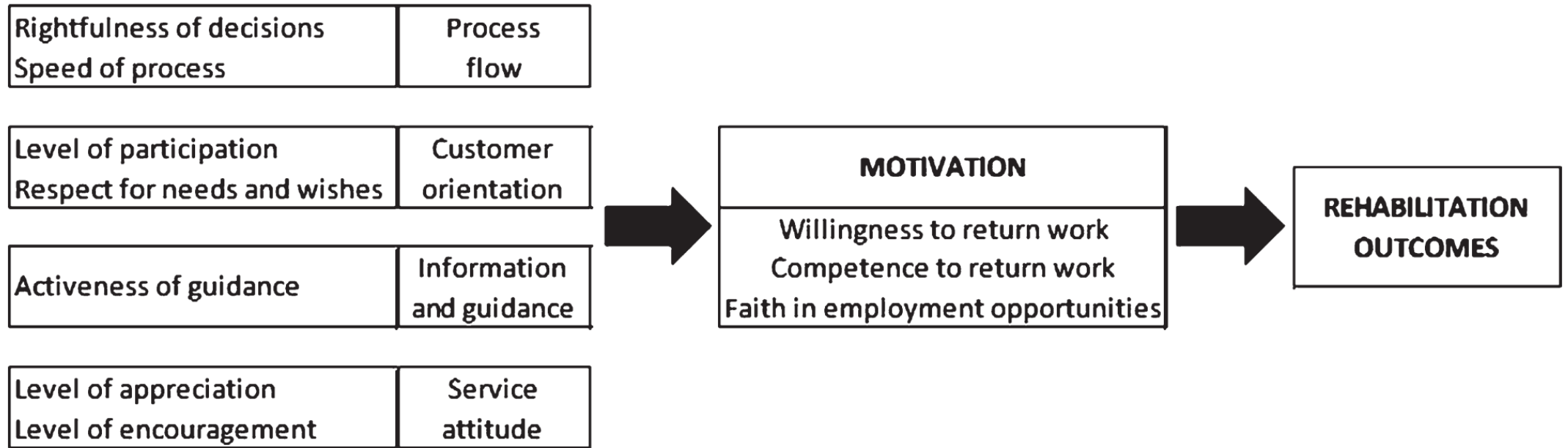
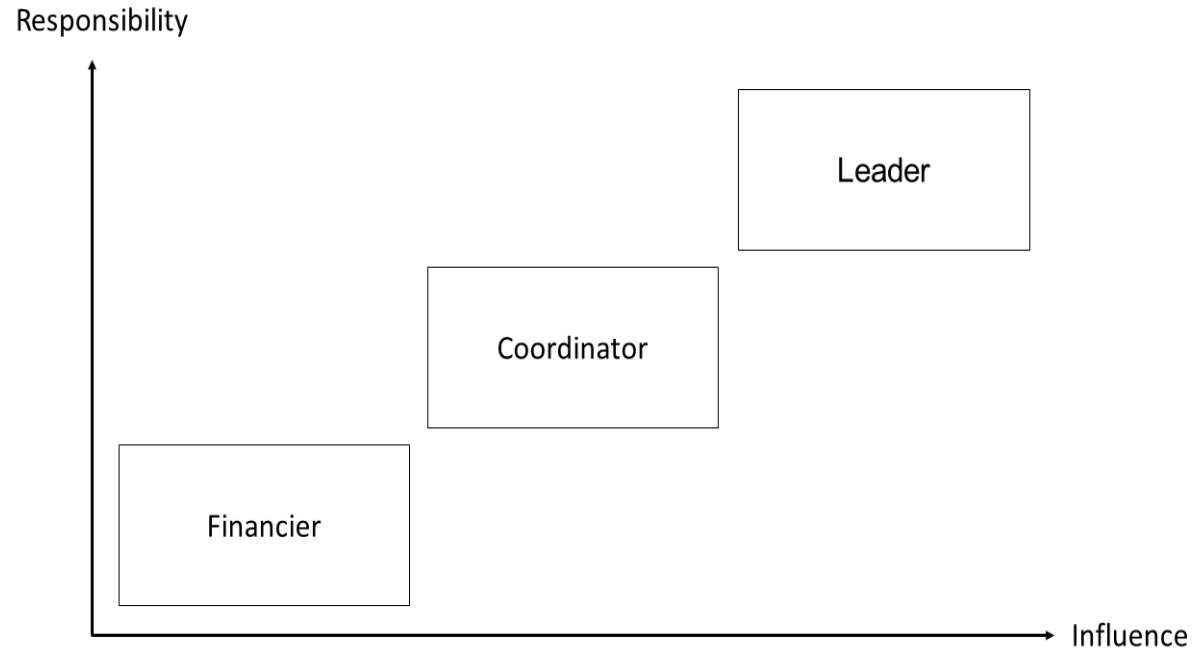


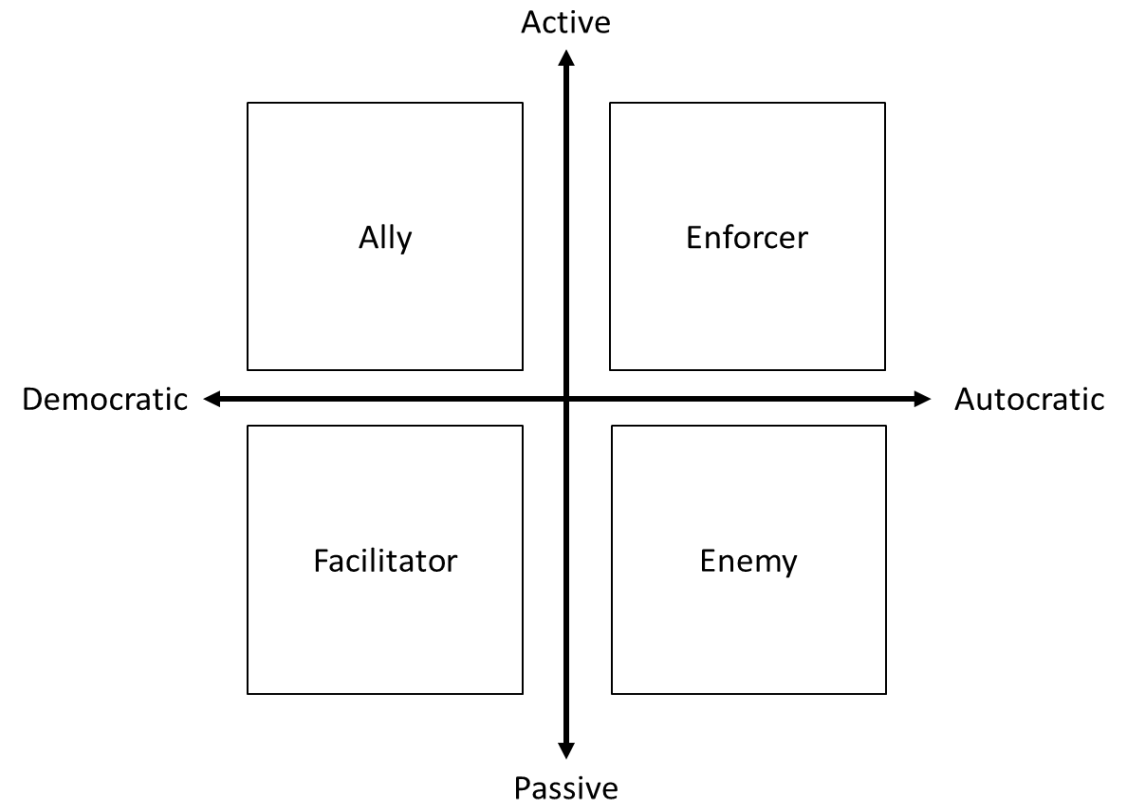
Fig. 6. The indirect effect of positive encounters on rehabilitation outcomes.

Article 3: Facilitator or Enforcer, Ally or Enemy? Claimants' Perceptions of Insurers' Roles in Occupational Rehabilitation

- *Purpose.* This study aimed to deepen the understanding of insurers' role within the return-to-work process by uncovering and categorizing the multiple roles assumed by the insurer based on the claimant's perceptions and identifying the underlying mechanisms that explain the relationship between perceived insurer roles and occupational rehabilitation outcomes.
- *Design/methodology/approach.* We used a qualitative approach with theory-guided content analysis to examine 24 semi-structured interviews with occupational rehabilitation claimants who had undergone occupational rehabilitation within the earnings-related pension insurance system in Finland.
- *Findings.* We uncovered three perceived insurer roles in relation to other stakeholders in the rehabilitation network: (1) financier, (2) coordinator, and (3) leader. These roles have different perceived responsibilities and influences on rehabilitation outcomes. Additionally, we found four perceived insurer roles in relation to the claimants, which varied according to their democracy and activity levels: (1) ally, (2) facilitator, (3) enforcer, or (4) enemy. Based on this study, we recommend that insurers adopt democratic and participatory actor roles (ally and facilitator) to promote the return-to-work process in occupational rehabilitation.



Article 3: Network roles of insurers



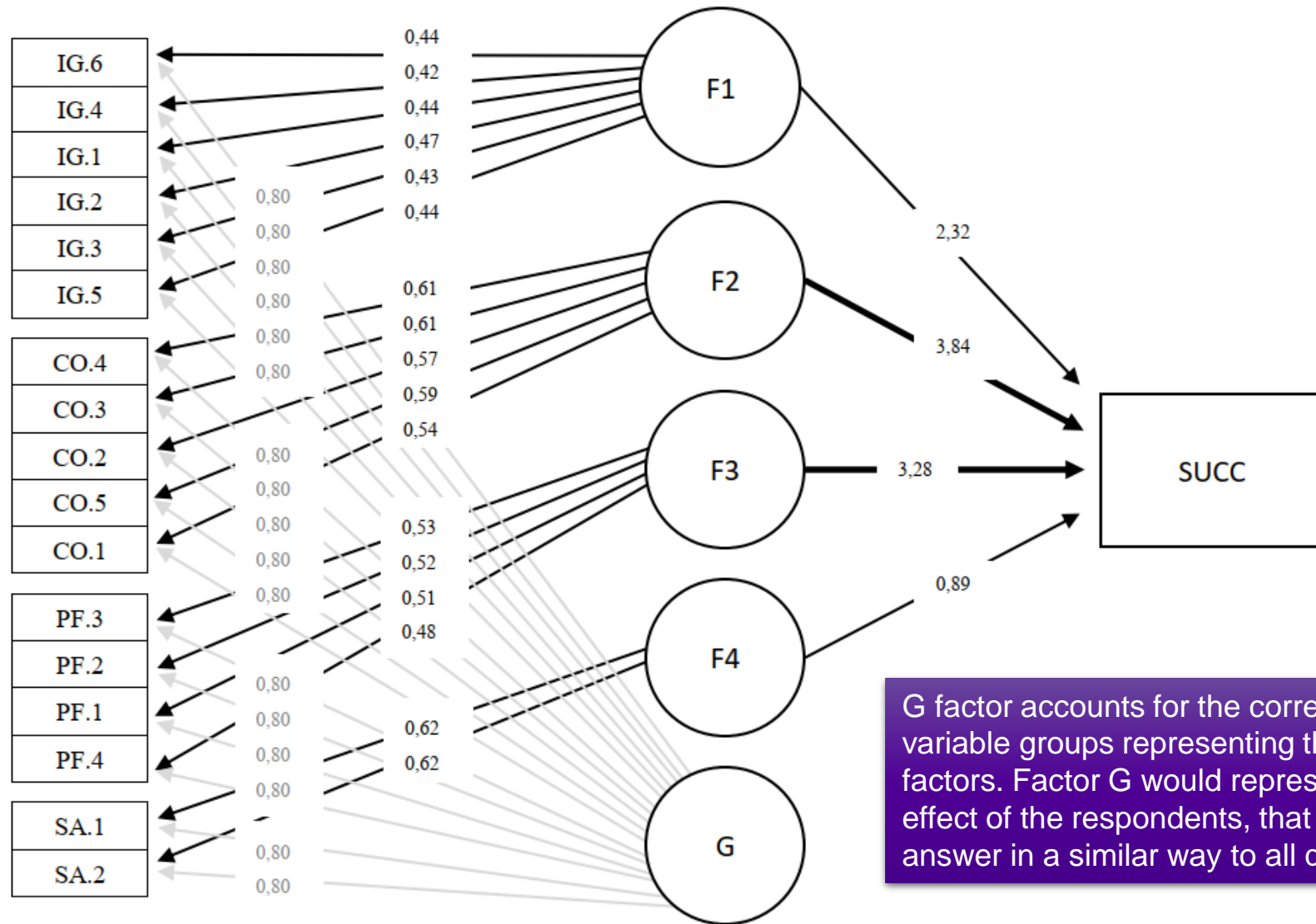
Article 3: Actor roles of insurers

Article 4: How can social insurers promote return to work in occupational rehabilitation? A quantitative, cross-sectional study.

- *Background.* Earlier studies indicate a correlation between disability claims experience and return to work outcomes. Thus, the insurer's role and actions may affect the self-rated health of the disabled worker and the outcomes of occupational rehabilitation. This study diversifies the existing empirical evidence on the role of the insurer in the rehabilitation process and reveals the critical actions that best promote success.
- *Materials and methods.* Explorative factor analysis (EFA) and confirmatory factor analysis (CFA), followed by binary regression, were used to analyse survey data of disabled workers (n=661) who had undergone an occupational rehabilitation within an earnings-related pension insurance system in Finland.
- *Results.* The claimant's perceptions of the insurer's (1) high-quality informing and guidance, (2) customer orientation, (3) smooth process flow and (4) positive service attitude had substantial and statistically significant effects on the success of occupational rehabilitation after adjusting for all likely confounding variables.
- *Conclusions.* The insurer's actions are significant predictors of the outcome of occupational rehabilitation. The insurer can promote the health of rehabilitees most effectively by ensuring a smooth process flow and adopting a customer-oriented approach.

Table 4 Dimensions of the insurer role and their measures in the questionnaire

Insurer role -dimensions	Measure	Item code
Informing and guidance	I received sufficient information from the insurer	IG1
	The insurer's instructions, announcements and information were clear and understandable	IG2
	I received expert service from the insurer	IG3
	The insurer's staff were easily accessible	IG4
	The different rehabilitation options were adequately discussed	IG5
	I received sufficient information at all stages of the rehabilitation process	IG6
Customer orientation	The insurer considered my personal situation and individual needs	CO1
	The return to work plan reflected my own views and aspirations	CO2
	The return to work plan was feasible	CO3
	The content of the rehabilitation met my needs	CO4
	I had the opportunity to influence the rehabilitation process	CO5
Process flow	I was satisfied with the insurer's compensation decision regarding rehabilitation	PF1
	The insurer started the settlement of rehabilitation at an appropriate time.	PF2
	The insurer carried out the rehabilitation measures quickly enough	PF3
	The rehabilitation process proceeded on schedule	PF4
Service attitude	The insurer's customer service was friendly	SA1
	The insurer sought to highlight the positive aspects and opportunities	SA2



G factor accounts for the correlations between the variable groups representing the independent factors. Factor G would represent the individual effect of the respondents, that is, their tendency to answer in a similar way to all questions.

Article 4: The effects of the insurer's (1) high-quality informing and guidance, (2) customer orientation, (3) smooth process flow and (4) positive service attitude on the success of occupational rehabilitation after adjusting for all likely confounding variables.

Kiitos.



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