Empowerment of injured claimants

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Investigating claim factors, procedural justice and e-health

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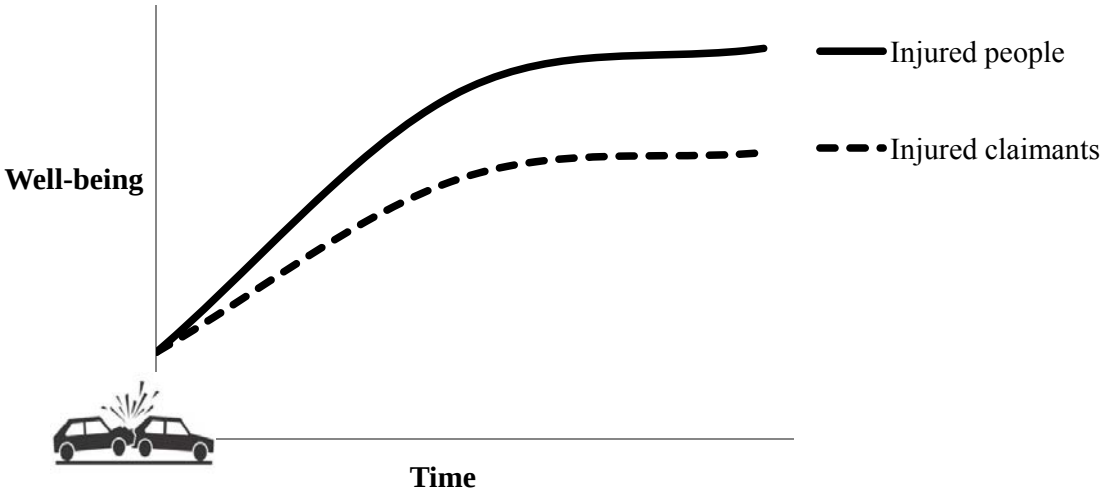
Introduction

On the motorway, Peter is hit from behind by a truck driver who fell asleep behind the wheel. He ends up in the crash barrier and his car is a total loss. It was a very terrifying experience. For a moment, Peter was convinced he would die. Luckily, he has ‘only’ a broken arm and shoulder pain. All things considered, he should be back on his feet and working within a couple of months.

A year later, Peter is still at home. His arm healed well but he still has pain in his shoulder, is overtired and has problems with concentration. Six months ago, Peter received a letter from the insurance company that liability has been acknowledged, but that there are doubts as to whether the remaining complaints have been caused by the accident. They wanted to see all the records of his visits to the general practitioner. After reading the letter, he decided to engage a lawyer. His lawyer warned him: ‘Be prepared for a long fight. That insurer is merciless’. He has not heard from his lawyer since. Meanwhile, he has undergone a number of examinations by several different medical experts, and each time he has to tell his story again. This compensation process has taken so long, he has no idea what is going on and what will happen in the future. Will he be able to pay his mortgage if his condition does not improve? Worrying keeps him awake at night. His symptoms increase.

Injured people who are involved in compensation processes do not recover as well as those with similar injuries who do *not* claim compensation (e.g. Gabbe et al., 2007). This problem may look like the graph that is shown below: after a car accident, people are injured and obviously do not feel very well, but during time they recover; however, the people who claim compensation only do not recover as well as injured people who do *not* claim compensation.



The literature often explains this phenomenon twofold. The first theory is that the compensation process provides a monetary incentive not to get better as long as the compensation process lasts, because in order to receive compensation, the claimant needs to be injured. The second explanation is that people do not recover because they are stressed by the adversarial nature of the compensation process and the way in which claims are settled.

This PhD thesis investigates the second theory. What aspects of the compensation process are hampering claimants? How can claimants' well-being be improved? Hardly any research is conducted on both topics and the designs of the studies that have been conducted are criticised. From a public health perspective, it is important that the causes and the scope of this problem is investigated and that

claimants, legal professionals and health providers are given some tools to be able to improve the claimants' well-being.

The content of this PhD thesis is as follows. In **chapter 1**, an overview is provided about what is known from the empirical literature about the effect of compensation on claimants' well-being. In **chapter 2,** a meta-analysis is conducted examining the effect of being involved in compensation processes on mental health. In **chapter 3,** it is assessed whether certain claim factors can explain the claimants' reduced recovery: i.e. the kind of compensation scheme (i.e. no-fault versus common law), the number of medical assessments, and involvement in legal disputes, using an Australian database. In **chapter 4**, claimants are interviewed about their lawyer and the lawyer-client interaction, determining positive lawyer characteristics that are associated with claimant satisfaction. **Chapter 5** concerns a study on perceived fairness of the compensation procedure, provided information, and interaction with lawyers and insurance companies, and also examines the association between procedural justice and claimants' well-being. **Chapter 6** reports about the content and validation of the e-health intervention that was developed to improve empowerment and well-being. Furthermore, the research design, i.e. a randomised controlled trial, is explicated. In **chapter 7**, it is revealed whether the e-health intervention has an effect on claimant empowerment and health. Finally, **chapter 8** the overall findings, the limitations and the implications of this thesis are discussed, and suggestions for further research are provided.

Reference

Gabbe, B.J., Cameron, P.A., Williamson, O.D., Edwards, E.R., Graves, S.E., & Richardson, M.D. (2007). The relationship between compensable status and long-term patient outcomes following orthopaedic trauma. *The Medical Journal of Australia, 187*, 14-17.

Chapter 1

What do we know about the well-being of claimants in compensation processes?

'Het is een continu gevecht tegen mezelf,
tegen hoe mensen tegen me aan kijken,
tegen allerlei instanties.'

Elbers, N.A., Akkermans, A.J., Cuijpers, P., & Bruinvels, D.J. (2012). What do we know about the well-being of claimants in compensation processes? *Recht der Werkelijkheid, (33) 2,* 65-78.

Abstract

Dutch reports concluded that a lengthy compensation process and the attitude of lawyers and insurance companies are not beneficial for claimants' health. However, their conclusions were based on mostly qualitative study designs and biased samples, so these findings cannot be applied to the general claimant population. From a public health and cost perspective, it is important to know whether being involved in a compensation process has a negative effect on the overall claimant population. The abundance of international quantitative research may be able to answer this question. This article provides an overview of the existing empirical literature. The overview shows that the majority of studies found that injured claimants have lower health than injured non-claimants. It also demonstrates that a lot of claim and non-claim factors have been investigated but that there is mostly conflicting evidence about what is causing this lower health. Finally, the review shows that it is possible to improve the health of claimants by changing the way of handling compensation claims and claimants.

Introduction

For some time now, there has been discussion among lawyers in the Netherlands about the position of personal injury victims in liability law. Questions have been raised as to how victims experience the compensation procedure. Several aspects have been criticised, such as the role of lawyers and insurance companies. A study done by Stichting De Ombudsman (2003) showed that lawyers sometimes forget to inform the claimant, do not explain the procedure, are slow to do their work, or are not competent to deal with the matter. Insurance company representatives were found to portray claimants as liars, to decline requests for advances, and to adopt a rude attitude towards claimants. Additionally, a study commissioned by the Dutch Ministry of Justice demonstrated that there is an exclusive focus on financial compensation rather than on victims' non-material needs (Huver, Van Wees, Akkermans, & Elbers, 2007). Victims want, for example, to be acknowledged and to be taken seriously. They also want to know precisely what happened and to obtain justice. However, legal professionals often do not take time to deal with these aspects. This was considered to be particularly striking because in the field of personal injury the law holds that recovery takes precedence over compensation (Akkermans, 2009). Finally, in his study, Weterings (1999) observed that claims settlement processes are often both lengthy and costly, which is frustrating claimants and impeding recovery.

In general, the studies above concluded that a lengthy compensation process and the attitude of lawyers and insurance companies are not beneficial to claimants' health. This conclusion was based on mostly qualitative data and quite biased research samples, so no conclusions could be drawn about whether this negative effect is experienced by only dissatisfied claimants or that it is an extensive problem affecting the overall claimant population. If the latter is the case, this could mean that the current way of handling claims is a serious threat for public health, which would imply that legal professionals inevitably need to think about improving it. Therefore, it is important investigate the quantitative research on the association between being involved in a compensation process and health, measuring the extent to which the compensation process has an effect on health of

claimants in general.[1] This article provides an overview,[2] discussing three main themes: (1) Is being involved in a compensation process bad for health? (2) What is causing the negative compensation effect? and (3) How can claimants' well-being be improved?

Is being involved in a compensation process harmful for health?

A number of empirical studies have investigated whether being involved in compensation processes has a negative effect on people's well-being (e.g. Gabbe et al., 2007; Littleton et al., 2010). This was often done by comparing a group of individuals who were involved in compensation processes and a group of individuals *not* involved in these processes. Many of these studies have been grouped and summarised in systematic reviews (e.g. Binder & Rohling, 1996; Harris, Mulford, Solomon, van Gelder, & Young, 2005). Many of these reviews concluded that being involved in a compensation process is bad for health.

Recently, eleven reviews were grouped and summarised in a systematic meta-review (Spearing & Connelly, 2010). Nine of them reported an association between compensation and poor health outcomes. However, the authors concluded that only one review was conducted properly, and that particular one found strong evidence for *no* association between litigation and poor health. These, and several other researchers, pointed to significant limitations in studies, an observation which may temper conclusions about compensation and health (Carroll et al., 2011; Grant & Studdert, 2009). One criticism, for example, is that studies measure 'the effect of compensation processes', without accurately describing what the compensation process entails. Health researchers plainly describe compensation schemes in rough categories as being tort, no-fault, workers compensation, common law, or litigation. However, tort can be partly no-fault, and no-fault compensation schemes can apply different time limits, monetary thresholds, and injury severity thresholds (Cameron & Gabbe, 2009; Carroll et al., 2011). Workers

[1] Compensation processes include both litigation and non-litigation procedures, both fault-based and no-fault (workers') compensation schemes.

[2] Methodological justification: Several studies were found after conducting a systematic review about the effect of compensation on mental health; the majority was collected by snowballing. As the overview includes several systematic reviews, it is hypothesised to be fairly robust.

compensation is generally no-fault but the implications of the system can be very different between countries. Common law procedures rely on general tort law but in some countries some aspects have been changed because of tort reform legislation. And 'litigation' can refer to all kinds of disputes (Carroll et al., 2011). Sometimes, the wrong compensation label is used, e.g. confusing litigation with compensation (Carroll et al., 2011; Grant & Studdert, 2009), and considering lawyer involvement to be similar to being involved in compensation (Blanchard et al., 1998). A more accurate description of the compensation scheme and the actual procedure claimants are subjected to is needed to understand 'the compensation effect'. Additionally, another criticism that follows on from the variety in compensation processes is that the results based on one compensation scheme may not apply fully to countries with another compensation scheme, so researchers often question the generalisability of study results.

Another limitation of the compensation and health studies under discussion is the fact that researchers use an observational study design. It does not become clear whether a difference between claimants and non-claimants is caused by being involved in the compensation process or by other differences that have not been investigated. To draw conclusions about the effect of being involved in a compensation process, randomised controlled trials (RCTs) are required (Grant & Studdert, 2009). However, allocating injured people randomly to either a compensation or a non-compensation condition would be unethical and legally impossible (Carroll et al., 2011). Another limitation is that studies sometimes use indirect outcome measures as proxies for health outcomes, such as time-to-claim closure (Spearing & Connelly, 2010). Overall, we conclude that there is a lot of evidence that shows that claimants involved in compensation processes have poorer health outcomes than injured non-claimants, but that it should be noted that this evidence is based on research that has limitations. This should be kept in mind and may bias the findings.

What is causing the negative compensation effect?

In contrast to the large number of studies investigating the effect of compensation on health, the question as to what is causing this negative compensation effect has

received far less attention (The Royal Australasian College of Physicians, 2001). This chapter takes stock of the empirical evidence as to what particular claim factors, which professionals, and what individual, injury-related or accident-related characteristics have an effect on the claimants' health.

Claim factors

In compensation and health literature, several claim factors affecting claimants' health are examined. First, health researchers often hypothesised that fault-based compensation schemes (i.e. based on tort law) are more adversarial than no-fault schemes: so claimants who are involved in fault-based compensation schemes are expected to be worse off than those in no-fault compensation schemes. This hypothesis seems to be confirmed by two studies showing that a legislative change from fault (tort) to no-fault resulted in fewer whiplash complaints (Cameron et al., 2008; Cassidy et al., 2000). However, these studies do not give unambiguous support for removal of 'fault', because it could also be that the removal of financial compensation for pain and suffering reduced the reported symptoms. In addition, another study did not show a health difference between claimants involved in a (predominantly) no-fault compensation scheme and those involved in a fault-based scheme (Greenough & Fraser, 1989). As the evidence is not only ambiguous but also conflicting, no conclusion can be drawn about whether no-fault schemes are better for the claimants' well-being than fault-based tort.

A related claim factor that was thought to have an effect on health is whether claimants are involved in litigation/court procedure or in an out-of-court compensation process. Again, studies show conflicting results. One study showed that people who were involved in litigation processes were more traumatised than those in out-of-court settlements (Cotti, Magalhães, Pinto da Costa, & Matos, 2004). A meta-analysis analysing 211 studies, however, did not show a health difference between claimants in litigation procedures and those involved in out-of-court settlements (Harris et al., 2005).

Comparable to what Weterings (1999) observed in his study, empirical researchers also suggest that the length of time involved in a compensation procedure is a

factor influencing well-being (Shuman, 2000). However, we only found one study that showed that being involved in a compensation process of longer than one year increased the trauma (Cotti et al., 2004). In contrast, a meta-analysis of 211 studies did not find an effect of length of time on health (Harris et al., 2005), so the evidence that claim duration has no impact on health seems to be much stronger.

Furthermore, it is hypothesised that lump sum and periodical payments may have a different influence on claimants' recovery (Grant & Studdert, 2009). To our knowledge, only one study investigated whether lump sum or intermittent payments had a different effect on the claimants' health and found that claimants who received lump sum payments reported greater psychological disturbance and more unemployment than those who were paid intermittently (Greenough & Fraser, 1989). The authors of this study did not explain this effect, but maybe the intermittent payments relieved the financial insecurity that some claimants have to deal with. Again, more research is needed.

A final topic in compensation and health studies is the frequent suggestion that a claim settlement can 'cure' the victim, implying that once claimants receive their compensation, they miraculously recover from their injury (Miller, 1961). Regardless of whether this reasoning is correct, studies found contradictory evidence, as some studies showed that people with settled claims reported better health compared to those with pending claims (Guest & Drummond, 1992; Miller, 1961), whereas other studies did not show a correlation between claim settlement and mental health or recovery (Blanchard et al., 1998; Mendelson, 1995). In conclusion, more research is needed to draw conclusions on what particular claim factors are responsible for decreased well-being.

Professionals

Empirical studies also suggested that professionals may have a negative effect on the claimants' well-being. Generally, the literature addresses three categories of professionals: insurance company representatives, medical experts and lawyers. Insurance company representatives are said to have an adversarial attitude towards claimants (O'Donnell, Creamer, McFarlane, Silove, & Bryant, 2010). Also the fact

that they sometimes delay the payment of funds is suggested to be harmful for claimants' well-being (Blanchard et al., 1998; Ehlers, Mayou, & Bryant, 1998). Medical experts were accused of reinforcing the sick role and exacerbating the trauma by over-investigating patients (Fulcher, 2004; Harris, 2007; Lippel, 2007; Littleton et al., 2010; Murgatroyd, Cameron, & Harris, 2011). However, quantitative studies investigating the effect of the attitude of insurance representatives and the involvement of medical experts on claimants' health have not yet been conducted.

In contrast, the association between lawyer involvement and claimants' health has been explored in quantitative studies several times. Several studies (Gun et al., 2005; Harris, Murgatroyd, Cameron, Young, & Solomon, 2009) found that lawyer involvement is negatively associated with claimants' well-being. There was one exception to this (Casey, Feyer, & Cameron, 2011). However, the true explanation as to why lawyers seem to be 'bad for health' has not been assessed yet. Some researchers hypothesised that claimants who engage a lawyer probably also have more severe injuries or more problematic claims (Dichraff, 1993). However, studies that controlled for injury severity still found a negative effect (Harris, Young, Jalaludin, & Solomon, 2008). Others suggested that lawyers implicitly encouraged their clients to maintain sickness behaviour (Aurbach, 2011). Still others suggested that lawyers inflicted emotional harm on clients by communicating poorly (Schatman, 2009), or that they did not sufficiently take into account their clients' emotions and non-material needs (Akkermans & Van Wees, 2007). More research is needed to investigate the cause of this negative relationship.

Individual, injury-related, or accident-related characteristics

Perhaps health differences have nothing to do with the compensation process? Could it be that claimants just have different individual, injury-related, or accident-related characteristics to those of non-claimants, so that these other factors explain the health difference?

Individual characteristics

It could be that claimants have more pre-injury psychopathology or psychological vulnerability than non-claimants (e.g. Littleton et al., 2010). However, several studies did not show such differences (Benight, Cieslak, Molton, & Johnson, 2008; Gabbe et al., 2007), and one even found that claimants had *less* psychopathology than non-claimants (O'Donnell et al., 2010). Another hypothesis is that claimants and non-claimants may differ in the way they deal with problems and stress (*coping style*; Wayte, Samra, Robbennolt, Heuer, & Koch, 2002). However, the coping style that is associated with poorer well-being and slower recovery is a palliative or avoidance coping style (Bryant & Harvey, 1995; Buitenhuis, Spanjer, & Fidler, 2003), whereas claimants are often associated with a rather active or decisive coping style (Benight et al., 2008).

What about age, gender, and education differences between claimants and non-claimants that may explain the health difference? Age for example, is negatively associated with health. Maybe people who lodge a claim are older than injured people who do not lodge a claim, so age would explain the health difference between claimants and non-claimants rather than the compensation process itself. However, studies did not show age differences between claimants and non-claimants (Benight et al., 2008; Blanchard et al., 1998; Bryant & Harvey, 2003; Littleton et al., 2010). We moreover found some studies reporting that claimants were *younger* than non-claimants (Gabbe et al., 2007; O'Donnell et al., 2010; Suter, 2002). The same story goes for gender: women generally show higher illness morbidity and longer impairment than men. Maybe women tend to claim more often than men, which could explain the health differences between claimants and non-claimants. However, again the compensation studies that we investigated did not report significant differences (Benight et al., 2008; Gabbe et al., 2007; Littleton et al., 2010; O'Donnell et al., 2010). Finally, we checked whether studies reported education differences, as higher education is associated with better health. It could be that people with higher levels of education tend to refrain from lodging a claim. Indeed, some studies found that claimants were those with lower levels of education compared to non-claimants (Benight et al., 2008; O'Donnell et al., 2010). However, other studies did not report differences in

education level (Gabbe et al., 2007; Littleton et al., 2010; Suter, 2002). Based on the literature that we studied, no conclusion can be drawn about the effect of education.

Injury characteristics

It is often suggested that claimants probably have more severe injuries than people who do not claim, which may explain why claimants report poorer health than injured non-claimants. Indeed, there is one study that showed that injured people who were involved in compensation processes suffered from more severe injuries than those who did not claim compensation (Suter, 2002). However, two studies even found the opposite, i.e. that the compensation effect was associated with mild injuries rather than severe complaints (Binder & Rohling, 1996; Sterling, Hendrikz, & Kenardy, 2010). Several other studies did not show severity of injury differences between groups (Blanchard et al., 1998; Bryant & Harvey, 2003; Littleton et al., 2010; O'Donnell et al., 2010). This means that there does not seem to be support for injury severity explaining poorer health.

Claim managers often seem to assume that claimants with whiplash injuries recover less well than claimants with other injuries. Remarkably, we found only one empirical study that compared the health of claimants with whiplash injuries to those with orthopaedic injury. This study showed that claimants with whiplash injuries reported similar psychological complaints but more pain than those with orthopaedic injury (Mayou & Bryant, 2002). The question is whether whiplash claimants are more likely to claim compensation. There is one study that investigated a group of people with whiplash injuries and asked them whether they were claiming compensation: 55% of the sample claimed, 45% did not (Sterling et al., 2010). Furthermore, Dutch insurance companies report that about 32% of their claimants have whiplash injuries, which is quite high, but more studies are needed to investigate whether whiplash injury explains the health difference between claimants and non-claimants.

Accident characteristics

Could it be that claimants experienced more severe accidents than non-claimants, as more severe accidents are probably associated with more severe injury and thus poorer health? There were two studies that found that claimants were more often injured in road accidents, whereas those who did not claim were predominantly injured in falls (Gabbe et al., 2007; O'Donnell et al., 2010). However, the compensation effect was also present in samples of motor vehicle accidents only (Blanchard et al., 1998; Bryant & Harvey, 2003; Littleton et al., 2010), which suggests that accident trauma cannot be a predominant explanation.

A final hypothesis is that claimants experience more blame towards the offender, and blame is associated with stress and anger, so blame could explain why claimants show poorer well-being than non-claimants (Littleton et al., 2010). However, only one study showed the association between responsibility for the accident and being involved in litigation, and it appears that claimants in litigation and those not involved in litigation equally often consider the other to be responsible (Benight et al., 2008).

How to improve claimants' well-being?

The fact that little is known about what is causing the negative effect of being involved in compensation processes on health has not discouraged initiatives to enhance claimants' satisfaction and health outcomes. Some evidence was found that more client-friendly claims settlement could improve claimants' well-being.

Client-friendly claims settlement

There are two studies concerning insurance companies that changed their ways of claims settlement, improving claimants' well-being and satisfaction. One insurance company in New South Wales, Australia, applied a new claims settlement approach, which consisted of a variety of changes such as following a consistent communication protocol, risk screening, psychological screening, prompt approval of treatments, proactively resolving disputes, and facilitating early return to work. The new approach was found to reduce depression and to improve return to normal activities, compared to the usual claim handling (Schaafsma, De Wolf, Kayaian, &

Cameron, 2012). Another initiative was undertaken by a Dutch loss adjusters company, changing the claims handling of people with whiplash injuries. All legal and medical discussions were banned for one year, claimants were supported by case managers, got access to any treatment they preferred, and all costs were fully compensated by the participating insurance companies. The satisfaction score of the participants in the pilot was 0.5 point higher than the average satisfaction score in regular cases (which was 7.3 on a scale from 1 to 10; Van Driel, 2011).

Lawyers have also probably tried to improve their way of claims settlement in order to enhance their clients' health, although these initiatives have not been quantitatively investigated, at least not to our knowledge. Nevertheless, several articles about lawyer-client interaction suggested that improving psychosocial skills could improve claimant satisfaction. For instance, it was argued that lawyers should focus on identifying aspects of legal procedures that may lead to anxiety, distress and depression (Patry, Wexler, Stolle, & Tomkins, 1998). Other articles suggested that lawyers should improve their interpersonal, listening, interviewing, and counselling skills (Sternlight & Robbennolt, 2008), and that they should involve the client in decision-making in order to enhance client satisfaction (Binder, Bergman, & Price, 1990; Kruse, 2006). It would be interesting to empirically investigate such improvements.

In organisational settings, it was found that increasing procedural fairness, i.e. workers getting the opportunity to express their views and feelings (Thibaut & Walker, 1975), being treated with dignity and respect (Bies & Moag, 1986), and being provided with reasonable, timely, and specific information and explanations (Colquitt, 2001; Shapiro, Buttner, & Barry, 1994), was associated with better health (Ybema & Van den Bos, 2010). Possibly improving procedural justice could also enhance well-being in compensation processes. Currently, lawyers and insurance companies are more concerned with determining the compensation amount than focussing on procedural justice. However, this does not seem to be right as research has shown that people consider fair procedures to be more important than fair outcomes (Thibaut & Walker, 1975). More research is needed

to investigate whether enhancing procedural justice in compensation processes would lead to increased well-being among claimants.

Claimant empowerment via e-health

To make claimants less dependent on lawyers and insurance companies, we propose an additional, innovative way to improve the well-being of claimants in compensation processes: claimant empowerment via e-health interventions. Empowerment is a well-known tool in health care. Empowerment interventions have already been developed for a wide variety of physical (e.g. arthritis, cancer, diabetes) and mental health problems (e.g. post-traumatic stress, depression, anxiety). The methodologies of the interventions differ widely, but a lot of them provide information and cognitive behavioural therapy, challenging dysfunctional cognitions and behavioural patterns related to the health problem.

Nowadays, empowerment interventions are increasingly offered via the internet, called *e-health* interventions (Carlbring et al., 2005; Kaltenthaler et al., 2006). They may even have several advantages over face-to-face interventions: they are anonymous, the costs are low, and they can be consulted at any time and any place (Griffiths, Lindenmeyer, Powell, Lowe, & Thorogood, 2006). Furthermore, they are particularly suitable for mild symptoms (Andersson & Cuijpers, 2008). Although e-health interventions also have some problematic issues, such as a high drop-out rate of participants and a need for some interaction to be effective, they are expected to become a part of regular health care in the future (Andersson & Cuijpers, 2008).

E-health interventions may help claimants who are involved in compensation processes. Claimants could benefit from an independent, online intervention providing information about the various steps and possible difficulties in the claims settlement process. Furthermore, claimants could also benefit from cognitive behavioural techniques, teaching how to recognise and tackle negative and irrational thoughts, how to communicate effectively with lawyers and insurance companies, and how to cope with inevitable, unpleasant aspects such as

proving liability and causation. Further research is needed to investigate whether claimants in compensation processes may benefit from e-health interventions.

Conclusion

What does the empirical literature tell us about the well-being of claimants in compensation processes? It can be concluded that injured claimants in general recover less well than injured people who do not claim compensation. However, we should be careful in generalising the study results across jurisdictions because of the variety of compensation schemes across the world, and we should also be cautious about drawing causal conclusions because the observational study designs do not permit that.

No conclusion can be drawn about whether certain claim factors can explain the association between compensation processes and health. Although some studies found that fault-based compensation schemes, litigation, duration, lump sum payments, and claim settlement have a negative effect on claimants' health, there are also other studies that either found no association or showed contrasting evidence. Nothing can be said about the effect of the attitude of insurance companies as no empirical research has been conducted about the matter. The same applies to the hypothesis that medical experts and numerous medical assessments hinder claimant recovery as only one qualitative study showed an association, which is too limited to be able to make a judgement. Lawyer engagement, in contrast, is a factor that has been well investigated and was found to have a negative influence on the health of claimants, but further research is needed to explain why. Conflicting evidence was found regarding a possible confounding effect of certain non-claim characteristics on well-being, such as previous psychopathology, coping style, age, gender, education, injury severity, type of injury, accident trauma, and the extent of blame. Once again no conclusion could be drawn based on the empirical studies done so far.

Finally, we conclude that it is possible to improve claimants' well-being by applying a different way of claims settlement, as was shown by two insurance companies. Some articles suggested that lawyers can also improve their clients'

recovery by improving their way of claim handling, but the effectiveness of such change has not been empirically investigated yet. We propose empowering claimants via evidence based e-health interventions, but further research is needed to investigate whether this method is also effective in improving claimants' well-being.

More research is needed to be able to find what is causing the compensation process to have a negative effect on claimants' health, and more initiatives need to be undertaken to improve the situation. It appears to be both necessary and possible to make compensation procedures more beneficial for clients in terms of physical health outcomes, psychological well-being and perceived justice, so it is obvious that we need to do something. The health of a large number of people is at stake.

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Chapter 2

Do compensation processes impair mental health? A meta-analysis

'Als je helemaal gezond bent en je hebt alles nog,
dan is zo'n letselschadeafwikkeling niet zo heel erg belastend.
Maar als je én geen geld meer verdient, én ziek bent, én pijn hebt,
dan is het heel belastend.'

Elbers, N.A., Hulst, L., Cuijpers, P., Akkermans, A.J., & Bruinvels, D.J. (2012). Do compensation processes impair mental health? A meta-analysis. *Injury*. doi: 10.1016/ j.injury.2011.11.025

Abstract

Background: Victims who are involved in a compensation processes generally have more health complaints compared to victims who are *not* involved in a compensation process. Previous research regarding the effect of compensation processes has concentrated on the effect on *physical* health. This meta-analysis focuses on the effect of compensation processes on *mental* health.

Method: Prospective cohort studies addressing compensation and mental health after traffic accidents, occupational accidents or medical errors were identified using PubMed, EMBASE, PsycInfo, CINAHL, and the Cochrane Library. Relevant studies published between January 1966 and 10 June 2011 were selected for inclusion.

Results: Ten studies were included. The first finding was that the compensation group already had higher mental health complaints at baseline compared to the non-compensation group (standardized mean difference (SMD)= -0.38; 95% confidence interval (CI) -0.66 to -0.10; p= .01). The second finding was that mental health between baseline and post measurement improved less in the compensation group compared to the non-compensation group (SMD= -0.35; 95% CI -0.70 to -0.01; p= .05). However, the quality of evidence was limited, mainly because of low quality study design and heterogeneity.

Discussion: Being involved in a compensation process is associated with higher mental health complaints but three-quarters of the difference appeared to be already present at baseline. The findings of this study should be interpreted with caution because of the limited quality of evidence. The difference at baseline may be explained by a selection bias or more anger and blame about the accident in the compensation group. The difference between baseline and follow-up may be explained by secondary gain and secondary victimisation. Future research should involve assessment of exposure to compensation processes, should analyse and correct for baseline differences, and could examine the effect of time, compensation scheme design, and claim settlement on (mental) health.

Keywords: Compensation process; Litigation; Secondary gain; Secondary victimisation; Mental health; Meta-Analysis.

Introduction

Victims who are involved in a compensation process generally have a worse recovery than victims who are *not* involved in a compensation process (Bhandari et al., 2008; Gabbe et al., 2007; Harris, Young, Jalaludin, & Solomon, 2008; Miller, 1961; O'Donnell, Creamer, McFarlane, Silove, & Bryant, 2010). This hampered recovery of victims who claim monetary compensation for the injuries, costs, and losses relating to an accident is often explained by the theory that being involved in claims settlement creates an unconscious financial incentive for victims *not* to get better as long as the settlement lasts (*secondary gain*; Shuman, 1994). Another explanation is that the compensation process is a stressful experience (Murgatroyd, Cameron, & Harris, 2011): victims suffer from renewed distress caused by the claims settlement process (*secondary victimisation*; Cotti, Magalhães, Pinto da Costa, & Matos, 2004).

Previous research regarding the effect of compensation has concentrated on investigating the effect on *physical* health, such as the level of pain, disability, disease symptoms, and (more indirectly) return-to-work. Several systematic reviews were conducted regarding the correlation between compensation and physical well-being (Binder & Rohling, 1996; Harris, Mulford, Solomon, Van Gelder, & Young, 2005; Scholten-Peeters et al., 2003) and also a systematic meta-review has been performed over eleven systematic reviews that all concern the effect of compensation on physical health (Spearing & Connelly, 2010). Although most studies found an association between compensation and poor health outcomes, the quality of the existing evidence on the association between compensation and worse health outcomes has become the subject of debate (Cassidy, Bendix, Rasmussen, Carroll, & Cote, 2011; Grant & Studdert, 2009; Spearing & Connelly, 2011).

In contrast to physical health, few studies investigated the association between compensation procedures and *mental* health. Similar to physical health, most studies measuring mental health found that victims who are involved in compensation claims had higher levels of depression, anxiety and post-traumatic stress disorder (PTSD) than non-compensated victims (Blanchard et al., 1998;

Ehlers, Mayou, & Bryant, 1998; Mayou, Bryant, & Ehlers, 2001). However, another study did not find a relation between compensation procedures and mental health (Mayou, Bryant, & Duthie, 1993). To be able to draw a general conclusion about the effect of compensation procedures on mental health of trauma victims, we conducted a systematic review and meta-analysis. To our knowledge, no meta-analytic study has yet investigated the overall effect of compensation on mental health. Considering the negative effect of the compensation procedure on physical health and the fact that the compensation procedure can be stressful, we hypothesised that victims involved in a compensation process have higher mental health problems compared to victims who are not involved in a compensation process.

Method

Study selection

A literature search was conducted using five electronic databases: PubMed, EMBASE, PsycINFO, CINAHL, and Cochrane library on studies published from 1966 to 10 June 2011. No language restrictions were applied. Search terms included *compensation*, *workers' compensation*, or *litigation*, combined with empirical study designs, i.e. *epidemiological* -, *clinical* -, *cohort* -, *longitudinal* -, *follow-up* -, *prospective* -, *retrospective studies* or *meta-analysis*, combined with type of accidents, i.e. *traffic accidents*, *occupational accidents*, or *medical errors*. We also included *whiplash injuries*, because this injury could be associated with traffic accidents without specifically mentioning the accident. Various synonyms were used for each concept. We used subject heading terms when available. The exact search strategy is available from the authors.

Eligible studies were selected in three steps. First, titles and abstracts were screened and studies were excluded if title and abstract did not meet any of the following inclusion criteria: (1) participants were injured by traffic accidents, occupational accidents, or medical errors; (2) some participants were involved in a compensation process; (3) some other participants were not involved in a compensation process; (4) outcome measure was mental health related (e.g. depression, anxiety, or PTSD); (5) type of study was a follow-up design with at

least two measurements (baseline and follow up). In the second step, we retrieved full text articles of the remaining studies. Studies were excluded if they did not fulfil the inclusion criteria mentioned above. We excluded according to the following order: (1) outcome, (2) non exposed group (i.e. non-compensation group), (3) study design, (4) type of accident, and (5) exposed group (i.e. compensation group). If a study was excluded based on one criterion, then the remaining criteria were not investigated further. Finally, we searched the reference lists of the included studies to find additional publications. The study selection was conducted independently by two investigators (NE and LH). Disagreements were resolved by a third investigator (DB).

Data extraction

We extracted information about the number of participants at the start of the study, percentage of males, average age, type of accident, and type of injury. Furthermore, we collected information about the recruitment setting, country, the kind of compensation system (i.e. third party, no fault, worker's compensation, litigation), and we calculated the percentage of participants who were involved in a compensation process (versus not involved in compensation). In addition, we extracted when the baseline and follow-up measurements were conducted, the percentage of participant drop-out, the mental health instruments, and all mental health outcome data. If studies did not report sufficient data or dichotomous data only, authors of these studies were contacted. If studies did not report standard deviations, we calculated the standard deviations according to guidelines in the Cochrane handbook (Higgins & Green, 2011). Finally, we investigated whether studies reported significant differences between cohorts regarding gender, age, education, occupational status before injury, injury severity, and mental health/psychopathology before injury. Data extraction was performed by the primary investigator (NE) and randomly checked by another investigator (DB).

Quality assessment

We used the Newcastle Ottawa Scale (NOS; Wells et al., cited 2011 July) to assess the quality of the included studies. The scale is praised for its simplicity of use (Higgins & Green, 2011). A disadvantage is its unknown validity (Stang, 2010).

We chose this scale because it was recommended for evaluation of cohort studies by the Cochrane Handbook (Higgins & Green, 2011).

We slightly modified the NOS for this review. We interpreted the item about the representativeness of the exposed cohort as a question about whether the researchers recruited their participants from a valid setting and whether all eligible participants were equally approached to participate. The item about whether the outcome of interest was present at the start of the study was removed. This was done because we wished to investigate whether there is a *difference* in mental health rather than examining the *presence* of a disease or not. Because we removed this item, our NOS contained seven questions.

Furthermore, the item about comparability of cohorts asked for two important factors which need to be equal in both cohorts to be able to compare the cohorts. We decided the most important factors to be: (1) mental health at baseline, because the outcome measure needs to be equal at baseline to draw conclusions about the follow up, and (2) gender, because being female is one of the best predictors of depression, anxiety (Seedat et al., 2009) and PTSD prevalence (Ehlers et al., 1998; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). The length of follow-up needed to be at least three months, as three months is the median time for recovery from depression (Spijker et al., 2002) and it is also the average time needed to recover from PTSD (Rothbaum & Foa, 1992). Finally, we decided that the loss to follow-up needed to be less than twenty percent (Taggart, D'Amico, & Altman, 2001).

The NOS uses a star system to allow a visual semi-quantitative assessment. High quality studies are awarded a maximum of one star for each item than can be answered affirmatively, except for item 4 to which a maximum of two stars can be allocated. The quality of the studies was assessed independently by two reviewers (NE and DB).

Data analysis

First, we analysed the baseline measurement to investigate whether victims who start a compensation procedure have a similar mental health score *at baseline* as victims who are not involved in a compensation process. We calculated the pooled standardized mean difference (SMD) and 95% confidence intervals (CI) of the *total* mental health by adding the various mental health outcomes together. When a study included multiple mental health measures, a combined effect size was calculated. If anxiety, depression, or PTSD was *higher* in the compensation group than in the non-compensation group, we indicated the effect direction to be negative. For studies measuring SF MCS, the effect direction was negative if the SF MCS was *lower* in the compensation group than in the non-compensation group. A negative effect size indicates that injury victims who are involved in compensation process have more mental health complaints at baseline compared to non-compensated victims. The one-study removed analysis was conducted to show the impact of each study on the combined effect. We performed subgroup analyses in which we removed studies with baseline measurements other than directly after the accident. Besides the *total* mental health, we also calculated the SMDs of the *separate* mental health outcomes (e.g. depression, anxiety, and PTSD).

Second, we examined the effect of compensation on mental health by calculating the difference between the baseline-post change score of the compensation group and the baseline-post change score of the non-compensation group. To be able to compute the SMD of this difference between the change scores of the compensation group and the non-compensation group, the correlation between the time points is necessary. As no study reported this correlation, an estimate of the correlation r = 90 was used (Hesser, Weise, Rief, & Andersson, 2011). A negative effect size indicates that the compensation group has a smaller increase of mental health compared to the non-compensation group. Similar to the analysis of the baseline measurement, we calculated the pooled SMD effect size of the *total* mental health and we performed a one-study removed analysis. Subgroup analyses were conducted on studies clusters with similar post measurement time points. Finally, we examined the SMDs of the *separate* mental health outcomes.

We chose a random effects model for all analyses because studies were methodologically diverse. An effect size of 0 to 0.32 is considered to be small, 0.33 to 0.55 is moderate, and 0.56 to 1.2 can assumed to be large (Lipsey & Wilson, 1993). Statistical heterogeneity was assessed by calculating the Q-statistic and the I^2-statistic. A significant Q statistic rejects the null-hypothesis of homogeneity. An I^2 value of 0% indicates no observed heterogeneity, 25% is low, 50% is moderate, and 75% is high heterogeneity (Higgins, Thompson, Deeks, & Altman, 2003). Publication bias was tested by inspecting the funnel plot. Publications bias is present when studies with a positive effect are published while small studies with no effect remain unpublished. A possible publication bias is indicated by an asymmetric funnel plot showing a relationship between the effect size and the standard error (Higgins & Green, 2011). Comprehensive Meta-Analysis software (version 2.2.057) was used for all analyses.

Furthermore, the clinical relevance of the study results was assessed. Because the included mental health outcomes have a different scale range, all means were re-calculated into a scale ranging from 0 to 10. We then calculated the difference at baseline and the difference between the pre-post change of the compensation group and the non-compensation group, which was expressed in a percentage. A difference of at least 10% indicates a clinically relevant difference (Higgins & Green, 2011).

The quality of evidence was examined by the GRADE approach as recommended by the Cochrane handbook (Higgins & Green, 2011). Establishment of the quality of evidence involved consideration of (1) study design and risk of bias, (2) directness of evidence, (3) homogeneity or consistency of results, (4) precision of results (small confidence intervals), and (5) publication bias. The GRADE approach specifies four levels of quality: high, moderate, low, very low. Quality of evidence is considered to be high if the included studies fulfil all five factors described above. The quality of evidence is downgraded one, two or three levels if respectively one, two or three of the following limitations apply: (1) limitations in study design, i.e. lack of allocation concealment, lack of blinding, large attrition, selective reporting of outcomes, (2) indirect evidence, e.g. studies address a

restricted version of the main review question in terms of population, intervention, control or outcome, (3) heterogeneity without robust explanation, (4) imprecise results, when studies include few participants and have wide confidence intervals i.e. CI's larger than 0.60, (5) high probability of publication bias.

Results

Study selection

A total of 2634 references were identified using the electronic databases: 700 in PubMed, 1231 in EMBASE, 366 in CINAHL, 294 in PsycINFO, and 43 in Cochrane library. After exclusion of 669 duplicates, the 1965 remaining titles and abstracts were inspected. Of the 1965 references, we excluded 1874 based on the information presented in the titles and abstracts. Of the remaining 91 references, full text articles were retrieved. Three references could not be examined because the full text versions could not be retrieved (Braimoh, 2007; Husband, 1989; Mendelson, 1988). Furthermore, 71 articles were excluded: 37 did not report a mental health outcome measure, sixteen did not include a non-compensation group, fifteen were no prospective cohort study, and two studies did not concern traffic, occupational or medical accidents. Seventeen studies were found to meet our inclusion criteria. Not all seventeen selected papers could be included in the meta-analysis: two studies were excluded (Blanchard & Hickling, 2004; Blanchard et al., 1996) because they were based on the same original sample as a third study (Blanchard et al., 1998). One study was excluded after contacting the authors because it turned out that the study measured mental health only once (Harris et al., 2008). Six studies were excluded because not all necessary data were provided in the article and the missing data were not retrieved after contacting the author (Brison, Hartling, & Pickett, 2000; Mayou & Bryant, 1996, 2002; Mayou, Tyndel, & Bryant, 1997; Mayou, Ehlers, & Bryant, 2002; Yang, Lowe, de la Harpe, & Richardson, 2010). No additional articles were found after reference search. However, we added two articles that were found in the reference lists of other articles that we read in preparation of this research (Mason, Turpin, Woods, Wardrope, & Rowlands, 2006; Suter, 2002). These two articles were not selected by our search strategy because the type of accident was not specified in title and

abstract. In total, ten studies were included in our meta-analysis. The flow chart of the study selection is displayed in Figure 1.

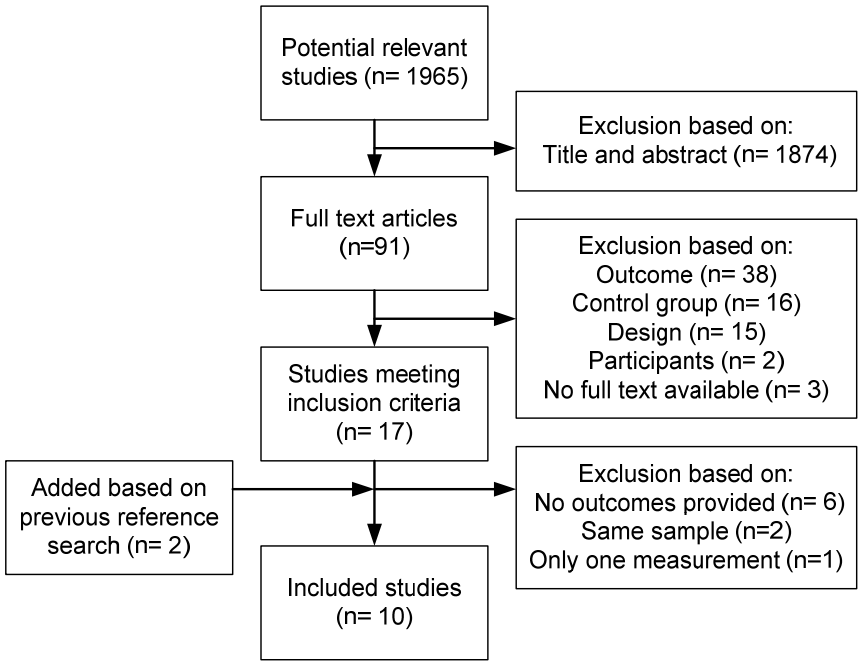

Figure 1.
Flow chart of the study selection

Study characteristics

The included studies were all (observational) prospective cohort studies. The total number of participants was 3936, varying from 95 to 1059. Percentage of male gender was 33% to 100%. Average age ranged from 31.1 to 46.8 years old. Six studies investigated victims of motor vehicle accidents, three studies included victims with injury following various kinds of accidents, and one study investigated back pain caused by work accidents. Six studies were conducted in Australia, two in the USA, and two in the UK. Three studies examined participants who were involved in no fault compensation processes (one of these no fault studies explicitly excluded workers' compensation claims), two studies reported that compensation claims were settled according to a third party compensation system (one of the studies included public liability and worker's compensation),

four studies included participants in litigation (one of the litigation studies dealt with common law litigation in combination with workers' compensation), and finally one study only mentioned to deal with 'compensation claims' without specification. The percentage of participants involved in compensation ranged from 12% to 69%. Two studies included participants whose compensation was settled (Blanchard et al., 1998; Bryant & Harvey, 2003). These settled claims were excluded in the calculation of percentage of participants involved in compensation procedures. One study considered a group of private health insurance claims to belong to the compensation group (O'Donnell et al., 2010), but we assigned the health insurance claimants to the non-compensation group, consistent with the current debate on this topic (Gabbe, Harris, Collie, & Cameron, 2010; Glozier & Large, 2010; Studdert, Luntz, & Grant, 2010).

Baseline measurement varied from pre-injury status (measured in retrospect) to 6 months after injury and post measurement varied from 3 months to 24 months after baseline. Attrition ranged from 14% to 57%. Five studies measured depression outcomes (BDI, HADS-D, or Zung), four studies had anxiety as outcome measure (HADS-A or STAI-state), seven studies reported PTSD outcomes (CAPS, CIDI, Foa, or IES(-R)), and two studies examined a mental component score (MCS) of the SF-36 or SF-12. Almost all studies included or provided continuous data except for one study which reported dichotomous data (Ehlers et al., 1998). The characteristics of the included studies are described in Table 1.

With respect to differences between cohorts, we found that seven studies analyzed gender differences between cohorts but none of them found significant differences between cohorts (Benight, Cieslak, Molton, & Johnson, 2008; Blanchard et al., 1998; Gabbe et al., 2007; Littleton et al., 2010; Mason et al., 2006; O'Donnell et al., 2010; Suter, 2002). Three studies found that the non-compensation group was significantly older than the compensation group (Gabbe et al., 2007; O'Donnell et al., 2010; Suter, 2002), whereas four studies did not find age differences (Benight et al., 2008; Blanchard et al., 1998; Bryant & Harvey, 2003; Littleton et al., 2010). Two studies showed that the non-compensation group enjoyed a higher education than the compensation group (Benight et al., 2008; O'Donnell et al., 2010), versus

Table 1.

Characteristics of included studies

Study	Participants, Accident, Injury, (n, mean age, % male)	Recruitment setting, Country	Intervention Compensation system (% in compensation)	Measurement points (% drop out)	Instrument
Benight et al 2008	Victims of MVA (163, 40.2, 37%)	Hospital emergency room. Colorado, USA.	Litigation (12%)	7 days a.i. 3 months (57%)	IES-R
Blanchard et al 1998	Victims of MVA (158, 35.4, 32%)	Seeking acute medical attention. New York, USA.	Lawyer (yes/no) No-fault system. (37%)	1-4 months a.i. 6 months 12 months (17%)	BDI STAI-state CAPS IES
Bryant & Harvey 2003	Victims of MVA (171, 31.1, 57%)	Hospital. Sydney, Australia.	Legal proceedings (69%)	1 month a.i. 6 months 24 months (38%)	BDI CIDI STAI-state
Ehlers et al 1998	Victims of MVA (1059, 33.4, 54%)	Hospital emergency department. Oxford, UK.	Compensation claim (46%)	3 months a.i. 12 months (26%)	Foa
Gabbe et al 2007	Victims of RTA (56%), fall or other cause (44%). Orthopaedic trauma. (1033, 37.8, 68%)	Two trauma centres. Victoria, Australia.	No-fault compensation claim (exclusive workers' compensation) (64%)	Pre-injury 12 months (31%)	SF12 MCS

Littleton et al 2010	Victims of RTA (95, 36.7, 39%)	Two hospital emergency dep. Australian Capital Territory.	Third party compensation claim (inclusive public liability and workers' compensation) (33%)	a.s.a.p. a.i. 6 months 12 months (14%)	SF36 MCS HADS A HADS D
Mason et al 2006	Victims of falls (28%), RTA (18%), assaults (13%), sporting injury (13%) or other (28%) (210, 33.4, 100%)	Hospital. Sheffield, UK.	Litigation (38%)	6 months a.i. 18 months (54%)	IES-R
O'Donnell et al 2010	Victims of MVA (63.5%), falls (17%), assaults (9%), work (0.5%) or other (10%). (601, 39.1, 72%)	Two trauma hospitals Victoria, Australia.	No fault compensation claim (exclusive private health insurance and victims of crime) (64%)	Pre-injury 24 months (35%)	HADS A HADS D CAPS
Sterling et al 2010	Victims of MVA Whiplash injury (155, 36.9, 37%)	Hospital emergency dep. and primary care practices. Queensland, Australia.	Third party compensation claim (55%)	<1 months a.i. 3 months 6 months 12 months (41%)	Foa
Suter 2002	Victims of work accidents vs. victims injured outside work. Chronic back pain. (291, 46.8, 41%)	Pain treatment and rehabilitation centre. Perth, Australia.	Workers' compensation Common law litigation. (50%)	at intake 24 months (31%)	Zung

Note: a.i.: after injury, a.s.a.p.: as soon as possible, BDI: Becks Depression Inventory, CAPS: Clinical Administered PTSD Scale, CIDI: Composite International Diagnostic Interview, HADS-A/HADS-D: Hospital Anxiety and Depression Scale, IES R: Impact of Event Scale (Revised), SF: Short Form Health Survey, MCS: Mental Component Score, STAI: State-Trait Anxiety Inventory, MVA: Motor Vehicle Accident, RTA : Road Traffic Accident.

three studies that reported no difference in education level (Gabbe et al., 2007; Littleton et al., 2010; Suter, 2002). Regarding occupational status, one study showed that the percentage of participants working before the injury was higher in the compensation group compared to the non-compensation group (O'Donnell et al., 2010), versus two studies that indicated non-significant differences in pre-injury working status (Blanchard et al., 1998; Gabbe et al., 2007). Injury severity was found to be similar between cohorts in four studies (Blanchard et al., 1998; Bryant & Harvey, 2003; Littleton et al., 2010; O'Donnell et al., 2010) and only one study reported that the compensation group contained more severe injuries than the non-compensation group (Gabbe et al., 2007). Finally, one study reported a *lower* percentage of past history of psychiatric disorder in the compensation group than in the non-compensation group (O'Donnell et al., 2010), versus two studies that found no difference in previous psychological well-being or psychopathology (Benight et al., 2008; Gabbe et al., 2007).

Study quality

The study quality was assessed by the NOS. A maximum of eight stars was allocated to the individual studies. All studies fulfilled the criterion of external validity (item 1): all studies recruited their participants from a valid setting (mostly trauma hospitals, one rehabilitation centre; Suter, 2002) and all eligible participants were equally approached to participate. All non-compensation groups were recruited from the same population as the compensation group (item 2), although in one study the compensation group consisted of work related back pain whereas the non-compensation group consisted of people who were injured outside the workplace (Suter, 2002).

None of the studies measured the exposure to compensation procedures in an accurate way (item 3). In general, studies just asked their participants whether they were involved in compensation or litigation or had contacted a lawyer. Consequently, the compensation group could also include e.g. participants with private health insurance claims and victims of crime (O'Donnell et al., 2010). Another problem with ascertainment of exposure was that involvement in compensation was often only asked at baseline, whereas it is plausible that some

participants switch cohorts during the study (e.g. they drop the claim because they are not eligible or they decide to start compensation later on because they suffer from their injury longer than expected). Thus we could not award stars regarding item 3.

Four studies did not find or corrected for differences regarding both mental health at baseline and gender and thus these studies earned two stars (Benight et al., 2008; Gabbe et al., 2007; Littleton et al., 2010; O'Donnell et al., 2010) and one study found no baseline mental health difference but did not measure gender thus was awarded one star (item 4) (Bryant & Harvey, 2003). No study was awarded a star for mental health outcome assessment (item 5), because questionnaires were often filled out by the participants themselves rather than by an independent blind physician or record linkage. Three studies did use a clinical structured interview to ascertain PTSD but the authors did not describe whether the clinician was blind (Blanchard et al., 1998; Bryant & Harvey, 2003; O'Donnell et al., 2010). All studies met the criterion of a follow-up of three months or longer (item 6). Finally, only two studies lost less than 20% of participants in the follow-up (item 7) (Blanchard et al., 1998; Littleton et al., 2010). The allocation of stars to the individual studies can be found in Table 2. Considering the unsecure assessment of exposure to the compensation process and the lack of independent blind assessment of mental health, it was found that the overall study quality was limited.

Mental health at baseline

The compensation group had higher mental health complaints at baseline compared to the non-compensation group (SMD= -0.38; 95% CI -0.66 to -0.10; p= .01). The SMD indicated a moderate effect size and the clinically relevant difference was 7.8%. However, heterogeneity was high (Q= 86.6; p< .01; I^2= 89.6%). The one-study removed analysis indicated that all studies had a significant impact on the total mental health at baseline, of which the study by Gabbe et al. (2007) had the largest impact. Without this study, the mental health difference between compensation and non-compensation increased a little bit compared to the overall difference (SMD= -0.47; 95% CI -0.64 to -0.30; p< .01). Removal of this

Table 2.

Quality assessment based on the adapted Newcastle Ottawa Scale.

	NOS item						
Study	1. External validity	2. NC = C group	3. Exposure secure	4. Control factors	5. Outcome blind	6. Follow up >3 months	7. Follow up >20%
Benight et al 2008	X	X	-	XX	-	X	-
Blanchard et al 1998	X	X	-	-	-	X	X
Bryant & Harvey 2003	X	X	-	X	-	X	-
Ehlers et al 1998	X	X	-	-	-	X	-
Gabbe et al 2007	X	X	-	XX	-	X	-
Littleton et al 2010	X	X	-	XX	-	X	X
Mason et al 2006	X	X	-	-	-	X	-
O'Donnell et al 2010	X	X	-	XX	-	X	-
Sterling et al 2010	X	X	-	-	-	X	-
Suter 2002	X	X	-	-	-	X	-

Note. NC= non-compensation; C= compensation

study somewhat reduced the heterogeneity, but heterogeneity was still significant and moderate (Q= 18.7; p= .02; I^2= 57.2%). Forest plot of the overall mental health at baseline measurement can be found in Figure 2.

We further investigated whether subgroup analyses of the different baseline measurements (i.e. pre-injury, directly after the accident, and six months after the accident) could reduce heterogeneity. First, we removed the two PTSD outcomes that were measured not until six months after the accident (Bryant & Harvey, 2003; Mason et al., 2006). This slightly decreased the difference in mental health between cohorts compared to the *overall* difference at baseline (SMD= -0.35; 95% CI -0.65 to -0.05; p= .02) but heterogeneity was still high (Q= 81.7; p< .01; I^2= 90.2%). In the second subgroup analysis, the two studies measuring pre-injury baseline scores were removed (Gabbe et al., 2007; O'Donnell et al., 2010), which increased the mental health difference (SMD= -0.54; 95% CI -0.65 to -0.43; p< .01) and resulted in a homogeneous pooled SMD (Q= 5.1; p= .65; I^2= 0.0%).

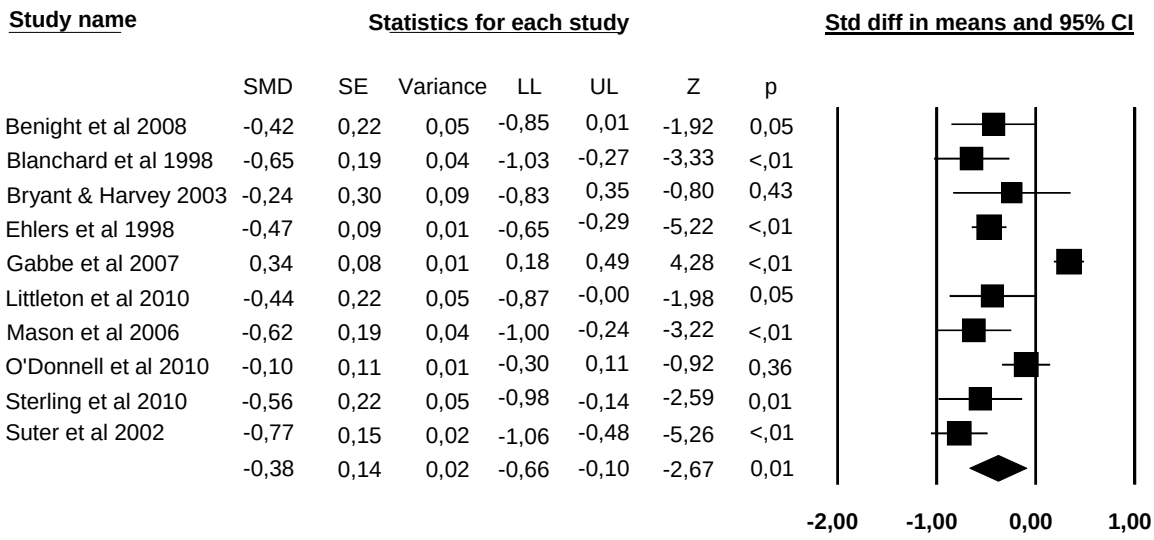

Figure 2.

Forest plot of standardized effect sizes of compensation compared to non-compensation at baseline measurement. SE= standard error; LL= lower limit; UL= upper limit.

Analyses of the separate mental health outcomes showed that at baseline the compensation group was more depressed (SMD= -0.42; 95% CI -0.69 to -0.15; p< .01) and suffered from more PTSD symptoms (SMD= -0.47; 95% CI -0.65 to -0.28; p< .01) compared to the non-compensation group. The compensation group was slightly more anxious (SMD= -0.22; 95%CI -0.50 – 0.07; p= .13) although this result was not significant. The pooled effect size of the two studies measuring SF MCS showed that the compensation and non-compensation group scored similar on the SF MCS scale (SMD= -0.05; 95% CI -0.84 – 0.75; p= .91). Heterogeneity tests for depression (Q= 12.4; p= .02; I^2= 67.7%), PTSD (Q= 14.0; p= .03; I^2= 57.1%) and SF MCS (Q= 12.0; p< .01; I^2= 91.7%) were significant and moderate to high. Heterogeneity test for anxiety (Q= 7.0; p= .07; I^2= 57.1%) was not significant, but the non-significance was marginal and the I^2 statistic indicated a moderate observed heterogeneity. We could not perform subgroup analyses on different types of compensation systems because there was too much variety in compensation systems.

Mental health between baseline and post measurement

Between baseline and post measurement, the mental health in the compensation group improved less compared to the non-compensation group (SMD= -0.35; 95% CI -0.70 to -0.01; p= .05). The SMD was classified to be a moderate difference, although the clinically relevant difference was only 2.3%. Heterogeneity was high (Q= 108.9; p< .01; I^2= 91.7%). The one-study removed analysis indicated that several studies had a significant impact on the total mental health change, of which the study by Bryant and Harvey (2003) had the largest impact. Removal of this study resulted in a small increase of the mental health difference between cohorts (SMD= -0.43; 95% CI -0.78 to -0.07; p= .02) but heterogeneity was still high (Q= 99.9; p< .01; I^2= 92.0%). The forest plot of the effect of compensation on mental health can be found in Figure 3.

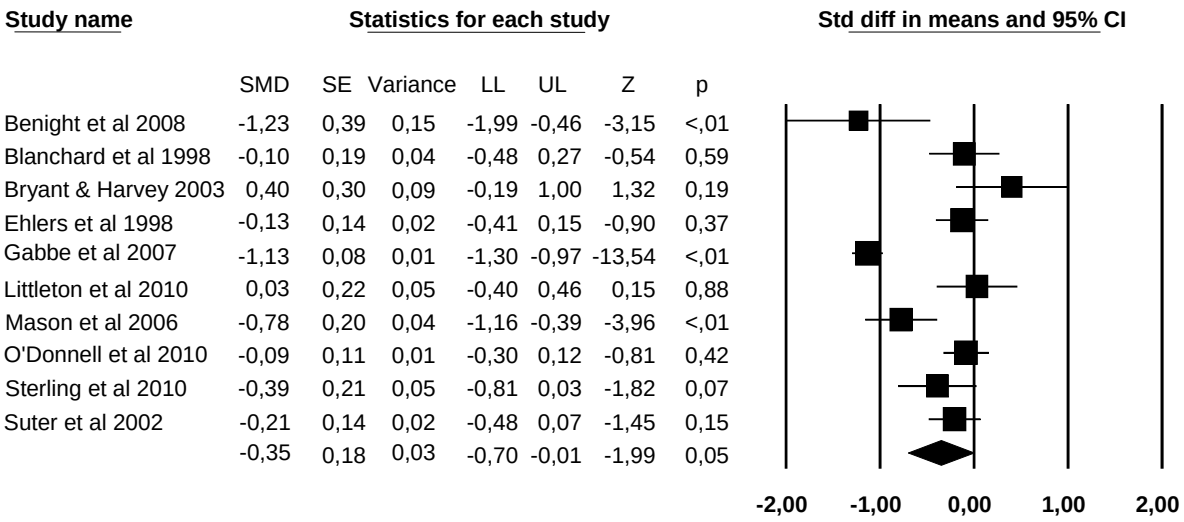

Figure 3.

Forest plot of standardized effect sizes of the difference between pre-post score of the compensation group compared to the non-compensation group. SE= standard error; LL= lower limit; UL= upper limit.

We further examined whether subgroup analyses of three different post measurements (i.e. 6, 12, and 24 months after the baseline measurement) could reduce heterogeneity. First, we analysed the four studies that conducted the post

measurement after six months (Blanchard et al., 1998; Bryant & Harvey, 2003; Littleton et al., 2010; Sterling, Hendrikz, & Kenardy, 2010). We did not find a significant mental health difference between the compensation group and the non-compensation group between baseline and six months, although there could be a trend of significance that the mental health in the compensation group improved more than the non-compensation group (SMD= 0.33; 95% CI -0.07 – 0.71; p= .10). Heterogeneity was moderate (Q= 9.2; p= .03; I^2= 67.2%).

The second subgroup analysis concerned the five studies with post measurements after twelve months (Blanchard et al., 1998; Ehlers et al., 1998; Gabbe et al., 2007; Littleton et al., 2010; Sterling et al., 2010). This analysis revealed that the mental health of the compensation group improved less compared to the non-compensation group, but this difference was not significant (SMD= -0.36; 95% CI -0.91 – 0.20; p= .21) and heterogeneity was high (Q= 65.9; p< .01; I^2= 93.9%). Finally, we examined the effect of compensation after 24 months (O'Donnell et al., 2010; Suter, 2002). A third study also measured PTSD after 24 months, but we did not include this study in the 24 months analyses because their PTSD baseline measurement was conducted after 6 months (Bryant & Harvey, 2003). We found that compensation did not have an effect on mental health after 24 months (SMD= -0.13; 95% CI -0.29 – 0.04; p= .13). The pooled SMD was homogeneous (Q= 0.5; p= .49; I^2= 0.0%). However, this finding needs to be interpreted with caution considering the fact that this analysis only included two studies. Removal of the pre-injury studies somewhat decreased the difference between pre-post change between compensation and non-compensation group (SMD= -0.26; 95% CI -0.51 – 0.02; p= .04) compared to the overall pooled effect size, but it did not reduce heterogeneity (Q= 21.6; p< .01; I^2= 67.6%).

The analysis of the separate mental health outcomes showed that groups had a similar small decrease in symptoms of depression (SMD= -0.08; 95% CI -0.32 – 0.17; p= .55), anxiety (SMD= -0.10; 95% CI -0.45 – 0.24; p= .56), PTSD (SMD= -0.23; 95% CI -0.50 – 0.03; p= .09), and small increase of well-being measured by SF MCS (SMD= -0.51; 95% CI -1.76 – 0.74; p= .42). Heterogeneity was significant and moderate to high for all: depression (Q= 10.0; p= .04; I^2= 60.1%),

anxiety (Q= 10.1; p= .02; I^2= 70.2%), PTSD (Q=28.6; p< .01; I^2= 75.5%) and SF MCS (Q=29.7; p< .01; I^2= 96.6%). The results of all analyses are summarized in Table 3.

Table 3.

Meta-analyses of studies examining the effect of compensation on mental health.

Analysis	$N_{studies}$	SMD	95% CI	Q	I^2 %
Baseline measurement					
Total mental health	10	-0.38**	-0.66 to -0.10	86.6***	89.6
Gabbe et al (2007) excluded	9	-0.47***	-0.64 to -0.30	18.7*	57.2
Baseline 6 months excluded	9[a]	-0.35*	-0.65 to -0.05	81.7***	90.2
Baseline per-injury excluded	8	-0.54***	-0.65 to -0.43	5.1	0.0
Depression	5	-0.42***	-0.69 to -0.15	12.4*	67.7
Anxiety	4	-0.22	-0.50 to 0.07	7.0	57.1
PTSD	7	-0.47***	-0.65 to -0.28	14.0*	57.1
SF MCS	2	-0.05	-0.84 to 0.75	12.0***	91.7
Difference baseline-post					
Total mental health	10	-0.35*	-0.70 to -0.01	108.9***	91.7
Bryant & Harvey (2003) excl	9	-0.43*	-0.78 to -0.07	99.9***	92.0
Post 6 months	4	0.33	-0.07 to 0.71	9.2*	67.2
Post 12 months	5	-0.36	-0.91 to 0.20	65.9***	93.9
Post 24 months	2	-0.13	-0.29 to 0.04	0.5	0.0
Baseline pre-injury excluded	8	-0.26*	-0.51 to -0.02	21.6**	67.6
Depression	5	-0.08	-0.32 to 0.17	10.0*	60.1
Anxiety	4	-0.10	-0.45 to 0.24	10.1*	70.2
PTSD	7	-0.23	-0.50 to 0.03	28.6***	75.5
SF MCS	2	-0.51	-1.76 to 0.74	29.7***	96.6

Note. [a] In total two PTSD outcomes were excluded (Bryant & Harvey, 2003; Mason, 2010), but Bryant and Harvey (2003) also measured BDI and STAI, thus nine studies were included.

* p< .05, ** p< .01, *** p< .001

Publication bias

The possibility of publication bias was examined by inspecting the funnel plot. As several studies drew conclusions about the effect of compensation at post measurement without analysing or controlling for the baseline difference, we studied both the funnel plot of the post measurements (Figure 4A) and the funnel plot of the differences between pre-post change (Figure 4B). Visual inspection of the funnel plots indicated that studies with both large and small standard errors were scattered on both sides of the pooled SMD (centre line). However, the plots were not completely normal as some studies did not fit within the guidelines of the plot. Closer inspection showed that the deviant studies in the funnel plot of post measurements (Figure 4A) were different from the outlying studies in the funnel plot of the difference between pre-post change (Figure 4B), which was probably caused by high heterogeneity.

Clinical relevance

The clinical relevance was determined by expressing the standardized mean difference in terms of a percentage. At baseline, the mean mental health of the compensation group was 7.8% lower than the mean mental health of the non-compensation group. At follow-up, there was a 10.1% mental health difference at the expense of the compensation group. Consequently, between baseline and post measurement, the mental health was found to increase 2.3% less in the compensation group compared to the non-compensation group. Only the mental health at follow-up met the 10% criterion for clinical relevance, but both the difference at baseline and the change between baseline and follow-up were less than 10%, thus were not clinically important. (These percentages should be used with caution because the mental health scales which the percentages are based on are not ratio scales. These percentages were provided as a practical ‘translation’ of the study results.)

Quality of evidence

The quality of evidence was assessed by the GRADE approach. First, the quality of study designs (as assessed by the NOS) was limited, i.e. no blind assessment, unsecure exposure, and a majority of studies having a loss to follow up of more

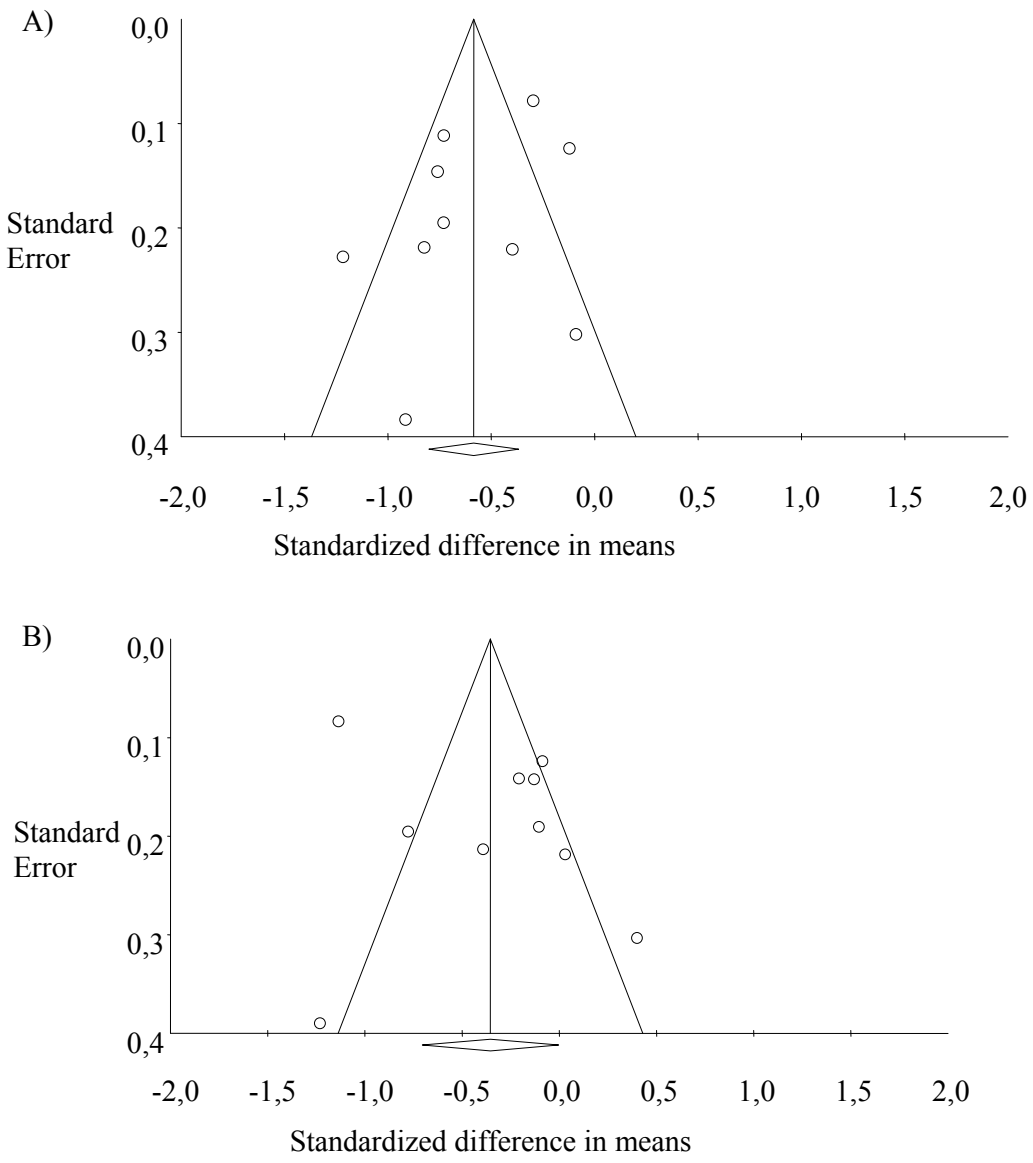

Figure 4.

Funnel plot of the studies investigating the association between compensation and mental health. A) Post measurement B) Difference between pre-post measurement.

than 80%, which implies bias. Additionally, all studies were observational studies, for which we already should downgrade the quality of evidence with two levels. Second, studies used direct outcome measures for mental health and populations were direct related to the research question. Third, the results of the main analyses

were heterogeneous because of the variety of measurement points, mental health outcomes, and compensation systems. Fourth, results were probably imprecise as most confidence intervals were larger than 0.60. Finally, there is a possibility of publication bias. In conclusion: based on the five GRADE aspects, the quality of evidence was downgraded to the lowest level.

Discussion

This study investigated the association between being involved in a compensation process and mental health. First, we found that the compensation group had already higher mental health complaints at baseline compared to victims who were not involved in compensation. However, heterogeneity was high. The subgroup analyses revealed that removal of the two studies that conducted a pre-injury baseline measurement removed heterogeneity and increased the mental health difference between compensation and non-compensation group at baseline. Conducting subgroup analyses on the individual mental health outcomes depression, anxiety and PTSD only removed heterogeneity for anxiety, but the results for depression, PTSD and SF MCS were still heterogeneous.

The second finding was that the mental health between baseline and post measurement increased less in the compensation group compared to the non-compensation group. This finding was consistent with our hypothesis and with previous meta-analyses about the effect of compensation on physical health (Binder & Rohling, 1996; Harris et al., 2005; Koljonen, Chong, & Yip, 2009). Heterogeneity was high. Subgroup analyses of three different post measurements (i.e. 6, 12 and 24 months) somewhat reduced heterogeneity, which may indicate that only similar time frames should be compared. Duration of the compensation process might have an effect on mental health as suggested by Littleton et al. (2010) who found that the mental health improved the first six months and deteriorated between 6 and 12 months. Cotti et al. (2004) also reported the suffering increased when the compensation process lasted for more than one year, whereas Harris et al. (2005) did not find a difference in length of follow-up. However, our subgroup analyses on different post measurements were not significant and the number of studies was small so we could not draw conclusions

about the effect of time. Subgroup analyses of the separate mental health outcomes did not reduce heterogeneity.

Although we found significant differences both at baseline and between baseline and post measurement, the findings should be interpreted with caution considering the fact that the quality of evidence was very low because of limited study quality (uncertain assessment of exposure and assessment of outcome), heterogeneity (different compensation systems, outcome measures, and measurement points), imprecision (large confidence intervals), and possible publication bias.

Importantly, upon taking a closer look at the mental health differences between cohorts expressed in percentages, i.e. at least 7.8% at baseline, 10.1% at follow-up, and 2.3% between baseline and follow-up, the mental health difference at baseline explained three-quarters of the effect of compensation at post measurement. Considering this large contribution of the difference at baseline, it is remarkable that the previous meta-analyses about the effect of compensation on physical health and also several of the included studies in the current meta-analysis analyzed post measurement only, rather than the change between baseline and post measurement. This could imply that the reported effect of compensation in previous meta-analyses and individual studies is overestimated. The health at baseline may be an additional element in the discussion about the quality of the existing evidence on the association between compensation and worse health outcomes (Cassidy et al., 2011; Grant & Studdert, 2009; Spearing & Connelly, 2010).

The mental health difference at baseline may be explained by a selection bias (Grimes & Schulz, 2002). One study suggested that the compensation group could have more severe injuries than the non-compensation group (Suter, 2002). However, only one of the five studies which analysed injury severity between cohorts reported more severe injuries in the compensation group (Gabbe et al., 2007). We also did not find a strong indication for cohort differences regarding gender, age, education, working status before injury, or mental health differences/psychopathology before injury, because for each variable we found

more studies indicating non-significant differences between cohorts than those indicating significant differences. One study provided another explanation for the mental health difference at baseline: the authors suggested that having decided to start compensation causes victims to portray themselves more distressed at the initial assessment (Blanchard et al., 1998); participants might have developed a 'compensation mindset' already at baseline. However, another study did not consider early symptom exaggeration to be a plausible explanation for differences at one month after accident; according to this study there is an increased likelihood that litigation has an effect on psychological adjustment rather than the converse being the case (Mason et al., 2006, p. 227). The final explanation for the difference at baseline is that the compensation group may experience more anger, frustration and blame about the accident (Littleton et al., 2011); two studies for example showed that the compensation group mainly consisted of car crashes, whereas the non-compensation group mainly consisted of falls (Gabbe et al., 2007; O'Donnell et al., 2010). More research is needed to investigate the cause of the difference at baseline.

The finding that the mental health between baseline and post measurement improved less in the compensation group compared to the non-compensation group may be explained twofold: most of the included studies suggested that victims in compensation could perpetuate or exacerbate their symptoms because of financial incentive (secondary gain), and all included studies indicated that victims in compensation could be stressed by the compensation process (secondary victimisation; Cotti et al., 2004). The latter is caused by the numerous assessments (Littleton et al., 2010) and thus repeated confrontation with the traumatic history (Blanchard et al., 1998; Mason et al., 2006), delayed funds and financial risks (Ehlers et al., 1998), and the often adversarial relationship between client and the insurance agency (Mason et al., 2006; O'Donnell et al., 2010). In some studies it was also argued that the compensation group could have suffered more severe injuries (Suter, 2002), severe crashes (Gabbe et al., 2007), previous psychopathology (Mason et al., 2006; O'Donnell et al., 2010), and psychological vulnerability (Littleton et al., 2010). However, as we argued with respect to the baseline difference, we did not find a strong indication for differences between

groups. Finally, the compensation effect could be explained by confounding variables (Grimes & Schulz, 2002) such as lawyer involvement (Harris et al., 2008), or blame, anger and injustice (Littleton et al., 2010), and being 'not at fault' (Littleton et al., 2011).

Strengths and limitations

The strength of this study is that this is the first meta-analysis about the association between compensation and health that investigates the difference in health at baseline and the difference between baseline and post measurement. An additional strength is that we assessed the quality of evidence and clinical relevance. The major limitation of the study is the poor quality of evidence because of limited study quality, heterogeneity, imprecision, and possible publication bias. Also we were unable to perform valid subgroup analyses because of the small number of included studies. The final limitation is that we could have missed eligible studies by defining the type of accident in the search strategy.

Implications

The results of this study imply that the legal professionals and psychologists should be alert at the occurrence of mental health problems in victims involved in the compensation process and should realise that these mental health problems may be caused or worsened by a stressful compensation process. Although it is not established whether, to what extent, and which elements of the claims settlement process contribute to mental health problems, this study adds some weight to the arguments made in legal literature for changes to the claims settlement process, e.g. making it less stressful by enhancing client centred claims settlement (Binder, Bergman, & Price, 1990), information supply, communication (Sternlight & Robbennolt, 2008; Winick, 2005), and by paying more attention to non-pecuniary needs (Akkermans, 2009). Victim support services and psychologists on their turn could broaden their services by being sensitive to the anti-therapeutic issues that victims could encounter during the compensation process, and by addressing these issues in addition to the 'regular' trauma assistance if necessary (Brom, Kleber, & Hofman, 1993).

Future research

More research is necessary to be able to draw a conclusion about the effect of compensation on mental health. First of all, more primary studies with high quality study designs are needed (Spearing & Connelly, 2010), especially with respect to the assessment of exposure to compensation: researchers should thoroughly describe the kind of legal compensation system, including procedures and processes (Grant & Studdert, 2009), and should accurately determine the involvement in compensation. It might also be interesting to assess whether the compensation for psychological injury is part of the claim, because such a claim element could correlate with mental health outcome. The outcome should preferably be measured at standardized time points: directly after the accident and then ideally at 6, 12 and 24 months after the accident, possibly complemented with an indication of pre-injury health status. Researchers may pay more attention to the comparability of cohorts: it is advisable to analyse differences at baseline and to control for baseline differences in order to allow more solid conclusions about the effect of compensation processes as such. Study designs such as randomised controlled trials are neither ethical nor possible (Gabbe et al., 2007), but a potential improvement regarding design would be to create matched controls for the compensation group (Harris et al., 2005). Large prospective cohort studies are essential.

Second, more research is needed to study which elements of the compensation process may hamper recovery (Cameron & Gabbe, 2009). Researchers could further investigate whether compensation process *duration* has an effect on health as was also suggested by Littleton et al. (2010) and Cotti et al. (2004). Also, it could be valuable to conduct more studies across different jurisdictions (Gabbe et al., 2007) and to compare the elements of the different *compensation scheme designs* considering the fact that no fault systems were found to be related to better health outcomes compared to third party systems (Cameron et al., 2008; Cassidy et al., 2000). Finally, a meta-analysis could be performed to draw a general conclusion about the effect of claim *settlement* on health as some studies reported that claim settlement improves health (Guest & Drummond, 1992; Miller, 1961), whereas others do not find a relation between claim settlement and health

(Blanchard et al., 1998; Bryant & Harvey, 2003; Mendelson, 1995). More knowledge about which elements of the compensation process impair the health of claimants would enable to improve health of victims involved in compensation processes.

Conclusion

The main research question of this article was 'Do compensation processes impair mental health?'. We *carefully* conclude that the compensation process *slightly* impairs mental health. The compensation process as such only *slightly* impaired mental health because three-quarters of the mental health complaints at post measurement was already present at baseline. We conclude *carefully* because the quality of evidence was very limited, mainly due to low quality study designs and heterogeneity caused by different compensation systems and various measurement points. We hope more large prospective cohort studies with standardised time points and thoroughly described compensation systems will be conducted in the future to be able to draw more solid conclusions about the effect of compensation on health.

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Chapter 3

Do claim factors predict health care utilization after transport accidents?

'Alles gaat in een negatieve spiraal.
Het is nooit één factor. Het zijn meerdere factoren.'

Elbers, N.A., Cuijpers, P., Akkermans, A.J., Collie, A., Ruseckaite, R., & Bruinvels, D.J. (2013). Do claim factors predict health care utilization after transport accidents? *Accident Analysis & Prevention*, doi:10.1016/j.aap.2013.01.007

Abstract

Background: Injured people who are involved in compensation processes have less recovery and less well-being compared to those not involved in claims settlement procedures. This study investigated whether claim factors, such as no-fault versus common law claims, the number of independent medical assessments, and legal disputes, predict health care utilization after transport accidents.

Method: The sample consisted of 68,911 claimants who lodged a compensation claim at the Transport Accident Commission (TAC) in Victoria, Australia, between 2000 and 2005. The main outcome measure was health care utilization, which was defined as the number of visits to health care providers (e.g. general practitioners, physiotherapists, psychologists) during the 5 year period post-accident.

Results: After correction for gender, age, role in accident, injury type, and severity of injury, it was found that independent medical assessments were associated with greater health care utilization ($\beta = .36$, $p < .001$). Involvement in common law claims and legal disputes were both significantly related to health care utilization (respectively $\beta = .05$, $p < .001$ and $\beta = -.02$, $p < .001$), however, the standardized betas were negligible, therefore the effect is not clinically relevant. A model including claim factors predicted the number of health care visits significantly better ($\Delta R^2 = .08$, $p < .001$) than a model including only gender, age, role in accident, injury type, and severity of injury.

Conclusion: The positive association between the number of independent medical assessments and health care utilization after transport accidents may imply that numerous medical assessments have a negative effect on claimants' health. However, further research is needed to determine a causal relationship.

Keywords: Transport accidents; Compensation processes; Health care utilization; Medical assessments.

Introduction

Injured people who are involved in compensation processes after transport accidents recover less well and have lower health status compared to those not involved in claims settlement procedures (Gabbe et al., 2007; Littleton et al., 2010). An explanation for this effect is that claimants unconsciously perpetuate illness behavior for as long as the compensation procedure lasts (*secondary gain*; Shuman, 1994). However, nowadays, a lot of compensation researchers believe that claimants suffer from renewed distress caused by the compensation process (*secondary victimization*; Cotti, Magalhães, Pinto da Costa, & Matos, 2004). This study investigates the latter theory, examining whether certain claim factors could be causing a negative effect on claimants' health.

Several claim factors have been suggested to have a negative impact on claimants' well-being. Firstly, lawyer engagement (Gun et al., 2005; Harris, Murgatroyd, Cameron, Young, & Solomon, 2009) and the often adversarial relationship between claimants and insurance agencies were found not to be beneficial for claimants (O'Donnell, Creamer, McFarlane, Silove, & Bryant, 2010). Medical examinations lead to emotional distress among injured people involved in compensation systems (Lippel, 2007; Murgatroyd, Cameron, & Harris, 2011). Fault-based compensation schemes imply more health complaints compared to no-fault schemes (Cameron et al., 2008; Cassidy et al., 2000) and litigation procedures were associated with more trauma compared to out-of-court settlements (Cotti et al., 2004). Claimants who received lump sum payments reported more psychological disturbance than those who were paid intermittently (Greenough & Fraser, 1989). Finally, settlement of the claim may improve health (Guest & Drummond, 1992; Miller, 1961). However, more research is needed because, for example, the effect of medical assessments has been investigated only qualitatively, the studies comparing fault-based and no-fault schemes suffer from several limitations (Grant & Studdert, 2009), the effect of lump sum versus intermittent payments was examined in only one study, and litigation procedures were contrastingly perceived as fairer than out-of-court settlements (Lind et al., 1990). It is important to examine the effect of claim factors on health, because clear evidence of claim factors having a negative effect on claimants' well-being

may yield important changes for compensation processes and the way in which claims are handled.

The aim of the current study is to examine (1) no-fault versus fault-based compensation schemes, (2) number of independent medical assessments, and (3) involvement in legal disputes on claimants' health. The study setting is Victoria, Australia. Victoria has a hybrid compensation design, in which claimants lodge a no-fault claim and can choose to additionally lodge a (fault-based) common law claim if they suffer from serious injury. The outcome measure is health care utilization, which was previously found to be a useful outcome to investigate the effect of compensation in a trauma cohort (Harris et al., 2009).

It is hypothesized that, after correction for severity of injury, common law claimants use more health care services than no-fault claimants, because having to negotiate about compensation benefits and having to prove liability and severity of injury is expected to cause more stress than receiving standardized and intermittently paid benefits regardless of fault. Secondly, claimants who have to undergo numerous medical assessments are hypothesized to use more health care services than claimants with fewer medical assessments, basically because many medical assessments can result in feelings of distrust and re-traumatization prolonging the illness. Finally, the involvement in legal disputes, i.e. engaging a lawyer engagement and/or having a decision reviewed by a civil trial, is hypothesized to result in more health care usage than not having any dispute, because disputes are assumed to be a burdening experience.

Method

Sample

The study sample was derived from the Compensation Research Database (CRD), held at the Institute of Safety Compensation and Recovery Research in the state of Victoria, Australia (Ruseckaite, Gabbe, Vogel, & Collie, 2011). The CRD is a de-identified database of people who lodge a compensation claim with the Transport Accident Commission (TAC) in Victoria. Claimants were included in the study if they were older than 18 and if they had lodged a claim between 2000 and 2005.

Claimants were excluded if they died within five years after the accident and if their no-fault claims were denied. Furthermore, claimants were excluded if they did not use any health care services, because this could mean either that they had private health insurance, or that they claimed under alternative funding mechanisms such as the Australian government universal healthcare program ('Medicare') or did not exceed the threshold, which varies annually (it was 450 Australian dollars in 2000 and 564 dollars in 2005). Ethics committees of VU University and Monash University approved use of the database.

Compensation scheme

The compensation scheme in Victoria is a hybrid scheme which allows both no-fault and common law arrangements. People lodge a *no-fault* claim at TAC if they suffer from injury caused in a transport accident in Victoria or in interstate accidents where a Victorian-registered motor vehicle was involved, regardless of fault. No-fault claims are lodged by calling the TAC or filling in a claim form within 12 months after the accident. No-fault benefits concern medical services, income replacement, travel and household support services, rehabilitation and disability services, and legal services. No-fault benefits are standardized and are paid periodically. Treatment benefits are generally reimbursements directly to the treating provider. Benefits may be provided for life for the most severe injuries and are paid in accordance with the Transport Accident Act (1986), which is administered by TAC.

Claimants can choose to additionally lodge a *common law* claim if they suffer from serious injury (i.e. permanent impairment of 30% or greater, serious long-term impairment or loss of body function) or if they meet a 'narrative test' demonstrating that they have serious long-term impairment and loss of function. Furthermore, the accident must be someone else's fault. Common law claims can be lodged by applying for a serious injury certificate in writing within six years of the date of injury. Common law benefits primarily consist of pecuniary loss of damages and pain and suffering, which range between legislatively defined minimum and maximum amounts. Common law benefits are established in negotiations between claimant and TAC and are paid as lump sum. The legislation

concerning no-fault and common law benefits was essentially unchanged during the period under study.

Data collection

Demographic variables were collected, i.e. gender, age at accident, role in accident (car occupants, (motor)cyclists, pedestrians, train or tram passengers), injury type, and severity of injury. Severity of injury was defined by length of hospital stay (Harris et al., 2009) and work disability. Work disability was defined as the number of days after an accident that claimants received their last loss of income payment. Work disability was included because, in our opinion, the severity of injury should also take into account the consequences of the injury on the claimant's life. Furthermore, we wanted to control for the fact that medical assessments are also undertaken to determine work disability. Length of hospital stay was the number of consecutive days spent in the hospital if admitted on the day of accident. Hospital admissions of less than 24 hours were scored as 0.5 days length of stay.

Common law claim involvement was indicated as the number of days between common law claim lodgment and common law claim settlement. If the claim was not settled within the study follow-up, we calculated the number of days between lodgment and five years after accident. If claimants only lodged a no-fault claim, the number of days in common law claim was set to 0. The number of assessments consisted of the number of both impairment assessments to determining the degree of impairment, and workability assessments to determining if a claimant is fit to return to work. The assessments are judgments performed for the purpose of assessing compensation benefits; there is no treatment element. The assessments are called independent because they are conducted by medical practitioners external from the TAC, and not the claimants' treatment provider. The number of legal disputes was calculated by scoring whether claimants made legal expenses related to lawyer involvement or dispute processes, which may start with an informal (internal) review within TAC, then may go on to a dispute under the dispute protocols and lastly may then go onto the Victorian Civil Administrative

Tribunal (VCAT). The VCAT is an independent body that deals with a range of disputes, providing Victorians with access to a civil justice system.

Finally, the outcome measure health care utilization was defined as the number of visits to general practitioners, surgeons, psychiatrists, physiotherapists, psychologists, speech therapists, chiropractors, osteopaths, optometrists, podiatrists, occupational therapists, vocational counselors, nurses, neurologists and acupuncturists. Data were collected until five years after the accident.

Data analysis

Firstly, univariate linear regression analyses were performed to investigate which factors predict health care utilization. The predictor variables were age, gender, role in accident, injury type, severity of injury, number of days involved in common law procedures, number of assessments, and the number of legal disputes. All injury types were included but we specifically analyzed brain injury, fractures and whiplash injury because of their importance in compensation literature (Cameron et al., 2008; Harris et al., 2009). The dependent variable was health care utilization. Secondly, all predictors were included in a multiple backward stepwise analysis. The stepwise method was used being the preferred method in case there is no theoretical basis to rely on. Categorical variables were dummy coded. Additionally, a hierarchical regression analysis was performed to investigate whether a model of both non-claim factors *and* claim factors explained more variance than a model of only non-claim factors. Thirdly, backward stepwise multiple regression analyses were performed to investigate whether claim factors in the first year after the accident predicted health service use in the second year. Because of the size of the sample, the significance level was set on $p < .001$. A $\beta = .10$ was considered to be a small effect, $\beta = .30$ was a medium effect, and $\beta = .50$ was a large effect (Cohen, 1988). Data analysis was performed using SPSS 18.0.3.

Results

Sample characteristics

A total of 95,389 claimants lodged a no-fault claim between 2000 and 2005, of which 3005 claimants were excluded because they died within five years after accident and 3868 were excluded because their no-fault claim was denied. Furthermore, 19,605 claimants were ruled out because they did not use any health care service. This study included 68,911 claimants. The sample characteristics are shown in Table 1. Table 2 displays the sample characteristics for no-fault versus common law claimants. The average number of health care visits and the number of claimants per claim factor per year were displayed in Figure 1.

Table 1.

Sample characteristics (n= 68,911 claimants)

Variable		N (%)	M (SD)
Gender	Female	34,046 (49.4%)	
Age			39.8 (17.8) years
Role in accident	Car occupants	52,434 (76.1%)	
Type of injury	Brain injury	4319 (6.3%)	
	Fractures	14,829 (21.5%)	
	Whiplash	23,820 (34.6%)	
Severity of injury	Hospital admission (> 0)	24,622 (35.7%)	4.6 (8.5) days
	Work disability (> 0)	16,024 (23.3%)	310.4 (397.7) days
Claim type	Common law	4832 (7.0%)	481.0 (381.2) days
Assessments (> 0)		16,703 (24.2%)	5.3 (5.0)
Legal disputes (> 0)		1890 (2.7%)	2.2 (1.0)
Health care use (> 0)			39.8 (109.1)

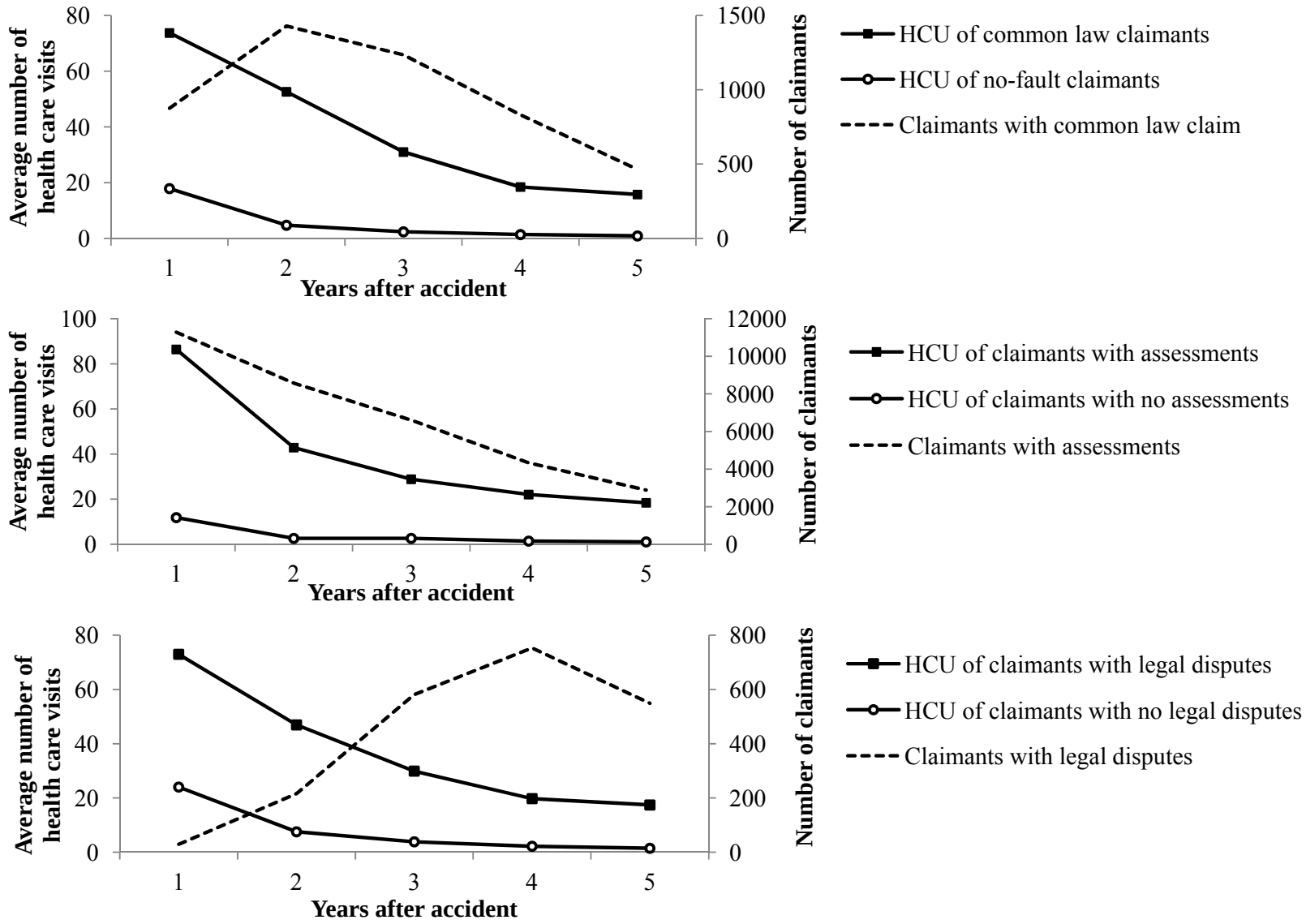

Figure 1. The average number of health care utilization (HCU) and the number of claimants per claim factor per year.

Table 2.

Sample characteristics by claim type

		No-fault (n = 64,079)		Common law (n = 4832)	
		N (%)	M (SD)	N (%)	M (SD)
Gender	Female	31,818 (49.7%)		2215 (45.8%)	
Age			39.63 (17.88) years		42.28 (16.55) years
Role in accident	Car occupants	49,288 (76.9%)		3132 (64.8%)	
Type of injury	Brain injury	3499 (5.5%)		819 (16.9%)	
	Fractures	13,222 (20.6%)		1596 (33.0%)	
	Whiplash	22,726 (35.5%)		1089 (22.5%)	
Severity of injury	Hospital admission (> 0)	21,722 (33.9%)	3.75 (6.71) days	2887 (59.7%)	10.91 (15.36) days
	Work disability (> 0)	13,499 (21.1%)	229.18 (333.80) days	2509 (51.9%)	746.35 (429.07) days
Assessments (> 0)		12,391 (19.3%)	3.99 (4.05)	4291 (88.8%)	9.05 (5.47)
Legal disputes (> 0)		793 (1.2%)	2.11 (0.26)	1096 (22.7%)	2.18 (1.02)
Health care services (> 0)			27.29 (77.05)		204.62 (248.77)

Factors predicting health care utilization

The univariate regression analyses showed that all factors were significantly correlated to health care utilization (see Table 3). Subsequently, all factors were included in the backwards stepwise multiple analysis. After adjustment for gender, age, role in accident, injury type, and severity of injury, common law claimants used more health care services compared to no-fault claimants (β= .05, p< .001), more assessments were associated with more health care utilization (β= .36, p< .001) but legal disputes were associated with less health care services used (β= -.02, p< .001). There was no multicollinearity between predictors. The multiple regression coefficients are shown in Table 3.

Table 3.

Univariate and multiple regression analysis of factors affecting health care utilization

		Univariate			Multiple		
Variable		B	SE	β	B	SE	β
Gender	Female	-6.68	0.83	-.03*	5.93	0.61	.03*
Age		0.16	0.02	.03*	0.12	0.02	.02*
Role in accident	Car occupants	-23.93	0.97	-.09*	-5.25	0.74	-.02*
Injury type	Brain injury	116.47	1.66	.26*	38.96	1.31	.09*
	Fractures	21.24	1.01	.08*	2.82	0.80	.01*
	Whiplash	-24.39	0.87	-.11*	5.54	0.71	.02*
Severity of injury	Days in hospital	8.68	0.07	.44*	4.22	0.06	.22*
	Work disability	0.27	0.01	.58*	0.13	0.00	.27*
Claim type	Common law	0.23	0.00	.34*	0.03	0.00	.05*
Assessments		20.69	0.10	.63*	11.80	0.13	.36*
Legal disputes		71.26	1.03	.26*	-5.74	0.83	-.02*
R^2					0.52		

* p< .001

The hierarchical regression analyses revealed that gender, age, role in accident, type of injury and severity of injury (i.e. days in hospital and work disability) together significantly predicted health care usage (R^2= .43, p< .001), but addition

of claim factors resulted in a significantly better prediction of health care usage (R^2= .52, p< .001; ΔR^2= .08, p< .001).

Finally, it was examined whether claim factors in the first year after the accident predicted health care use in the second year to examine whether medical assessments predict later health care use. Multiple regression analysis, adjusted for gender, age, role in accident, injury type and severity of injury, revealed that the number of medical assessments in the first year predicted health care utilization in the second year (β= .08, p< .001). When we additionally corrected for the assessments in the second year, the association between assessments in the first year and health care utilization in the second year decreased (β= .04, p< .001) (Table 4).

Table 4.

Two multiple regression analyses of medical assessments in the first year and health care use in the second year

Variable		HCU year 2 (β)	HCU year 2 (β)
Gender	Female	.03*	.03*
Age		.03*	.03*
Role in accident	Car occupants	-.01	-.00
Injury type	Brain injury	.08*	.06*
	Fractures	-.02*	-.01*
	Whiplash	.04*	.04*
Severity of injury	Days in hospital	.14*	.12*
	Days of work disability	.43*	.36*
Medical assessments	**First year**	**.08***	**.04***
	Second year	-	.18*

* p< .001

Discussion

This study investigated whether involvement in a (Victorian) common law process, medical assessments, and legal disputes were associated with health care utilization after transport accidents. Firstly, it was found that, after adjusting for severity of injury and other demographic and injury related factors, common law

claimants used slightly more health care services than no-fault claimants. This seems to support the hypothesis that a fault-based compensation schemes are more adversarial than no-fault schemes. It subsequently could provide empirical support for the hypothesis that proving liability induces stress and fatigue (Grant & Studdert, 2009). Moreover, it may confirm the previous finding that lump sum payments were associated with more psychological disturbance than intermittent payments (Greenough & Fraser, 1989), as common law claims involve lump sum payments and no-fault claims were associated with periodical payments. However, the standardized beta was less than .10, indicating a very small effect size and therefore the result is not clinically relevant. Therefore, we conclude that there is no strong support that fault-based schemes impede recovery. A limitation was that claimants in Victoria can lodge common law claims only in *addition* to no-fault claims; maybe a larger effect size would have been observed between compensation systems that force claimants to pursue either no-fault or common law claims.

Secondly, after correcting for severity of injury and other independent factors, claimants exposed to a greater number of medical assessments used more health care services than claimants with only few such assessments. This seems to support our hypothesis that numerous assessments impair claimants' health. However, as we conducted an observational study, no conclusion could be drawn about causality, so it could also be the other way around: claimants who use more health care services might have to undergo more assessments to prove that they need those health care services. An additional analysis showed that assessments which were performed in the first year after accident were associated with increased health care utilization in the second year after accident, suggesting a long term effect. This, in combination with the qualitative evidence that medico-legal assessments are burdening (Lippel, 2007; Murgatroyd et al., 2011), makes us conclude that many assessments and maybe the attitude of medical assessors impair claimants' health, possibly because the more they may experience anger and lack of trust and/or may unconsciously endure the illness. This may imply that legal professionals should be careful with assigning numerous medical

assessments. However, further research is needed to be certain about the causality of the association.

The final finding was that there was a significant negative relationship between legal disputes and health care utilization, which would imply that having a lawyer and/or being involved in a VCAT procedure was beneficial for the claimants' health. This was in contrast to what was hypothesized, and in contrast to what other researchers have found, as previous studies consistently demonstrated that lawyer involvement was associated with less health (Gun et al., 2005; Harris et al., 2009), and court procedures had been found to involve more trauma compared to out-of-court settlements (Cotti et al., 2004). However, another study demonstrated that litigation trials were perceived as more fair than bilateral out-of-court settlements, because trials gave a more respectful hearing (Akkermans, 2009; Lind et al., 1990). Accordingly, legal disputes may be associated with better health because claimants considered the VCAT treatment to be more respectful and fair. However, the effect size was very small and therefore the finding is not clinically relevant, so it is concluded that disputes do not affect claimants' health. A limitation is that the database did not allow to investigate lawyer involvement and appeals separately; maybe both factors had an opposite effect on health which may have neutralized the overall effect. Nevertheless, legal professionals could think about improving the perceived fairness of out-of-court settlements.

The strengths of this study are its large sample size and long follow-up, without non-response, attrition, or recall bias. A limitation, however, is that we could not use the standard measure for severity of injury: most studies use the Injury Severity Score (ISS) as an indication of severity of injury, but this measurement was not included in the database. Instead, we used the length of hospital stay, which was previously found to be a good indication for severity, and we included work disability to take into account the consequences of the injury on the claimant's life. However, this approach is not validated yet. Furthermore, although health care utilization has been used as an outcome measure before, it is not certain whether this equals health status. The second limitation is that our study might be subjected to confounding, because the database did not include data about for

example pre-injury health, work, socioeconomic status, psychosocial factors or the extent to which the offender was at fault, which could be related to both claimants' health and to whether claimants lodge a common law claim, whether they engage a lawyer or have a decision reviewed by TAC. Thirdly, the observational study design did not allow conclusions about causality. The final limitation is that the registration of health care service use might have been incomplete: some claimants might have had private insurance paying for the health care usage; these health care services were not registered in the database.

Although we aimed to study the compensation factors as accurately as possible, for example, by calculating the length of time in common law claim involvement, measurement of legal exposure was still problematic because common law claims were lodged in addition to no-fault claims, and private health insurance could not be taken into account (Carroll et al., 2011; Grant & Studdert, 2009). More research is needed to investigate the potential anti-therapeutic effect of, for instance, having to prove liability and causality, having to negotiate about benefits based on individual circumstances, or the effect of delayed payments causing financial problems. As it is difficult to quantitatively study the effect of these and other aspects of potential harmful legal exposure, such as lack of communication, disempowerment, or stigmatization (Grant & Studdert, 2009), qualitative methodologies, such as file investigations or claimant interviews, may be more insightful. It would also be interesting to develop a valid grading system to determine to what extent one has been 'exposed' to adversarial aspects of the compensation process.

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Chapter 4

Exploring lawyer-client interaction: A qualitative study of positive lawyer characteristics

'De belangenbehartiger moet duidelijk uiteenzetten:
dat doen we juridisch, dat doen we medisch. Dat is te weinig gebeurd.
Dan kost het heel veel moeite, inspanning en kracht.'

Elbers, N.A., Van Wees, K.A.P.C., Akkermans, A.J., Cuijpers, P., & Bruinvels, D.J. (2012). Exploring lawyer-client interaction: A qualitative study of positive lawyer characteristics. *Psychological Injury and Law, 5*, 89-94.

Abstract

Personal injury victims involved in compensation processes have a worse recovery than those not involved in compensation processes. One predictor for worse recovery is lawyer engagement. As some people argue that this negative relation between lawyer engagement and recovery may be explained by lawyers' attitude and communications to clients, it seems important to investigate lawyer-client interaction. Although procedural justice and therapeutic jurisprudence had previously discussed aspects relevant for lawyer-client interaction, the client's perspective has been rather ignored and only few empirical studies have been conducted. In this qualitative study, 21 traffic accident victims were interviewed about their experiences with their lawyer. Five desirable characteristics for lawyers were identified: communication, empathy, decisiveness, independence, and expertise. Communication and empathy corresponded with aspects already discussed in literature, whereas decisiveness, independence and expertise had been addressed only marginally. Further qualitative and quantitative research is necessary to establish preferable lawyer characteristics and to investigate what would improve the well-being of personal injury victims during claims settlement process.

Keywords: Personal injury victims; Lawyer characteristics; Client-centered lawyering; Procedural justice; Therapeutic jurisprudence

Introduction

Personal injury victims involved in claims settlement processes have a worse physical and psychological recovery than those who are not involved in a compensation process (Gabbe et al., 2007; O'Donnell, Creamer, McFarlane, Silove, & Bryant, 2010). This hampered recovery is often explained by secondary gain (Shuman, 1994) or by secondary victimization, referring to the distress caused by the compensation process and the attitude of law professionals (Cotti, Magalhães, Pinto da Costa, & Matos, 2004). One predictor for worse recovery is lawyer involvement (Dichraff, 1993; Gun et al., 2005; Harris, Murgatroyd, Cameron, Young, & Solomon, 2009). Several explanations for this negative association between lawyer involvement and well-being have been proposed. It could be that people who engage a lawyer have more severe injuries or that their claims are more problematic (Dichraff, 1993). However, studies that controlled for injury severity have found a similar effect (Bernacki & Tao, 2008). Other explanations were that lawyers may implicitly encourage their clients to maintain sickness behavior because 'going back to work will damage your case' (Aurbach, 2011), that lawyers may inflict emotional harm to clients by communicating poorly (Schatman, 2009), or that they may not sufficiently take into account the emotional dimension and non-material needs (Akkermans, 2009).

Given the fact that a negative influence of lawyers' attitude and communication with clients has been raised, we explored the literature on the interaction between lawyers and clients in the context of procedural justice and therapeutic jurisprudence. *Procedural justice* implies that litigant's perception of justice is determined more by procedural aspects and the way in which a decision is reached than by the outcome itself (Thibaut & Walker, 1975). Satisfaction with judicial processes depends on whether litigants get the opportunity to participate, whether they are treated with dignity and respect, and whether they trust the decision makers (Tyler, 1992). A process is perceived to be fair if (a) rules are applied consistently across persons and time, (b) decision makers are neutral, (c) the procedure is based on accurate information, (d) appeal procedures exist, (e) all subgroups are heard, and (f) the process adheres to ethical standards (Leventhal, 1980). *Interactional justice* embodies the impact of interaction and communication

on the perception of fairness (Bies & Moag, 1986). People want to be treated with dignity and respect. Bies and Moag identified four criteria for interactional justice: (a) explain the basis for the decisions, (b) be truthful and candid, (c) be respectful and polite, and (d) refrain from improper remarks or prejudicial statements. *Informational justice* requires explanations to be reasonable, timely, and specific if they are to be perceived as fair (Shapiro, Buttner, & Barry, 1994). Until now, however, these justice elements have been applied only to procedures involving a neutral decision maker (Tyler, 1992), and it is not known whether they also apply to lawyer-client interaction.

The second research area is *therapeutic jurisprudence*, a multidisciplinary approach to law (Winick, 2005). Therapeutic jurisprudence practitioners argued that lawyers should consider the 'psycho-legal soft spots' - legal interventions or procedures that may lead to anxiety, distress, depression, and hard or hurt feelings (Patry, Wexler, Stolle, & Tomkins, 1998). Therapeutic jurisprudence teaches lawyers the basic principles of psychology, interpersonal skills, listening, interviewing and counseling techniques, and ways of dealing with emotional issues (Sternlight & Robbennolt, 2008). Lawyers are also encouraged to involve the client in decision-making and to adhere to client-centered lawyering (Binder, Bergman, & Price, 1990; Kruse, 2006). However, therapeutic jurisprudence seems to theorize lawyer-client interaction from the lawyer's perspective rather than the client's point of view. Additionally, only a few empirical studies have been conducted on the topic.

Only a few studies investigating the claimant's perspective were found in relation to lawyer-client interaction. One study interviewed a sample of male claimants in New York (Rosenthal, 1974). One-third of the claimants were dissatisfied with the professional service they received. For example, their lawyers did not prepare them for the pretrial stress, they did not hear from their lawyers for a considerable time, or the lawyers conducted business over the telephone using a bored and patronizing tone of voice. A more recent study, in which Dutch accident victims were interviewed (Stichting De Ombudsman, 2003), mainly highlighted the lack of lawyer-client communication: a lot of the interviewees did not understand the

lawyers' letters, did not know what was going on, experienced distrust, or were afraid that their lawyers collaborated with insurance companies. Lawyers often forgot to inform their clients well, or did not explain the procedure, which made claimants lose track of their own file. Claimants were also frustrated about lawyers who lingered over their work, who did not call back, or who made mistakes in their letters.

Given the paucity of research that has been conducted, the purpose of the current study is to empirically investigate the lawyer-client relationship from the client's perspective, specifically clients' preferences and experiences regarding their lawyers. A qualitative research method was used, being an appropriate method for gaining knowledge on an unexplored topic and for creating a basis for further quantitative research (Strauss & Corbin, 1998). Personal injury victims were interviewed about their experiences with their lawyer. These experiences were clustered into a set of desirable characteristics for lawyers to adopt. Based on the justice and therapeutic jurisprudence literature, it was hypothesized that, in order to be satisfied, plaintiffs would want their lawyers to communicate well, to show dignity and respect, to provide information, to listen, and to involve them in decision-making. In addition, the qualitative approach allowed us to investigate whether other factors could be identified that had not yet been identified in literature.

Method

Participants and procedure

Participants were recruited by Victim Support Netherlands and a personal injury law firm based in Amsterdam. The inclusion criteria were: (1) being a victim of a traffic accident, (2) being involved in claims settlement or having settled the claim no more than 2 years ago, and (3) being or having been represented by a lawyer. Recruitment continued until data saturation was reached, which means that no extra information was being obtained from the qualitative interviews.

The participants were interviewed about five topics: (a) demographic characteristics, injuries, and claims details; (b) communications between the participant and

the lawyer; (c) communications between the lawyer and the insurance company; (d) the lawyer's expertise with regard to the compensation settlement; and (e) the lawyer's perceived strengths and weaknesses, and what qualities good lawyers should have. The interviews were semi-structured, meaning that the interviewer could deviate from the sequence of questions and could examine some themes more thoroughly than others. The interviews were conducted in Dutch, by the primary investigator (NE) and a colleague, both psychologists. Each interview took an average of 1 to 1.5 h to complete. The interviews were recorded by a voice recorder and typed out verbatim. The interviews were held between August 2008 and February 2009. The Medical Ethics Committee of the VU University Medical Center approved the study protocol.

Analysis

The analysis consisted of labeling statements in which participants expressed their experiences and preferences with respect to their lawyer. Analyzing was done by means of open, axial and selective coding (Strauss & Corbin, 1998). In the open coding phase, the transcripts were labeled with keywords that emerged from the hypotheses. The axial coding process consisted of examining whether the labels needed to be restructured, whether sub-labels could be applied, and whether new labels had emerged. During the selective coding, all the transcripts were re-analyzed based on the refinement that had occurred during axial coding. The interviews were analyzed in duplicate by two researchers (NE and KW). During the cyclic analysis process, the two analyzers discussed their findings and, through discussion, they agreed upon the final set of labels. Analyses were conducted using the computer software program *Atlas.ti* (version 5.2).

Results

Participants

Twenty-one participants were included in the study. No new themes emerged in the final interviews so additional data was not sought after this. The study sample consisted of twelve women and nine men, with a mean age of 43 years. Eleven participants had orthopedic injuries, seven had whiplash related injuries, one had pelvic instability, and two had suffered psychological injuries. Five participants

had already settled their claims, while the other sixteen were still involved in claims settlement processes. The length of their involvement in the compensation process ranged from a few months to thirteen years.

Preferable lawyer characteristics

Preferable lawyer characteristics were derived using a process of open, axial and selective coding. In the open coding phase, we labeled four positive lawyer characteristics derived from literature: communication, information, empathy, and involvement. In the axial coding phase, it was decided not to consider 'information' and 'involvement' as separate labels, but instead to merge them with the label 'communication'. During the interviews, it also gradually became apparent that 'decisiveness', 'independence', and 'expertise' were important topics. In the selective coding phase, all transcripts were re-analyzed based on five labels that had emerged in the prior phases: (a) communication, (b) empathy, (c) decisiveness, (d) independence, and (e) expertise.

Communication

The first aspect of communication that emerged in the qualitative analysis was involvement. Several participants appreciated being involved in the compensation process in the sense that their lawyer listened to their story and their opinions and responded to issues they had raised, either by taking action or explaining why no action was taken. Other participants, however, specifically did *not* want to be involved, either because they did not want to be bothered by the claims settlement process, or because it made them think the lawyer was not able to handle the case.

Secondly, participants wanted proper information on the compensation procedure. In other words, to be informed about what was going to happen and what they should expect during claims settlement. Some participants were displeased by being left in the dark and not being given a step-by-step overview, whereas participants who had been informed in advance about the possible scenarios and the consequences felt pleased and confident.

A third aspect of communication concerned the mode of communication, with several participants indicating that they would have preferred more face-to-face contact, at least at the start and subsequently at least once a year, rather than having only written correspondence or a conversation by telephone. Personal contact gave clients a feeling of being taken seriously and was seen as an efficient way of communicating. A few participants were indignant that their lawyer never came by and (or even) said 'if you want to see me, you can come to the office'. Participants appreciated lawyers forwarding all correspondence between the lawyer and the insurance company to them. Simply forwarding letters, however, was not enough, as explanatory information also needed to be included.

Lastly, the frequency of communication was a topic of discussion. Most participants regarded a telephone call once every 2 months as a good frequency and appreciated if they were still being contacted occasionally even when nothing had happened.

Empathy

Empathy refers to the various experiences of our participants as to whether they felt respected and treated with dignity. Participants used words such as compassionate, understanding, interested, involved, human, accessible, personal, friendly, and nice. They indicated that they appreciated the lawyer asking how they felt, showing genuine interest, always being there for them, being able to put their mind at rest, and realizing how the injury hampered them in doing the things they value in life. One disgruntled participant would have liked to have been asked whether she managed and whether she needed help. Another participant was angry that her lawyer spoke to her in a derogatory tone.

Empathy also involved being acknowledged by the lawyer and being understood and taken seriously. One participant indicated that he really appreciated the fact that his lawyer acknowledged his feelings but at the same time took care not to lose himself in feelings of injustice against the insurance company, whereas another participant who did not feel acknowledged in his feelings of injustice, lost confidence in his lawyer.

The final finding was that the need for empathy could change during claims settlement. Some participants indicated that they needed their lawyer to be empathic at the beginning of the claims settlement, whereas later on in the process they were ready for more business-like communications.

Decisiveness

The interviewees appreciated having an active, decisive lawyer, as they could then step away from their claim, confident that their interests were being represented. However, many participants were burdened by feeling that they had to keep their lawyer on his/her toes and that they had to call their lawyer to get things done. Some clients did not hear from their lawyer for 1 year. According to several participants, lack of decisiveness caused their case to stagnate for unacceptably long periods of time. Some clients were bothered by their lawyer being passive and even putting a lot of work into the clients' hands, like asking clients to put things on paper. Other participants complained that their lawyer was only active in sending bills. A couple of interviewees were convinced that their lawyer deliberately let their case come to a dead end, so that the lawyer could 'fill his own pockets'. On the other hand, some participants believed that their lawyer acted *too* decisively in the actual settlement of the claim. These lawyers started to discuss a settlement whereas the participants did not know whether future damage was covered, and whether they would get what they were entitled to.

Independence

The participants' desire for independence related to their lawyer's attitude toward the insurance company (i.e., the opposite party). Some participants were enraged by their belief that their lawyer did not want to 'rub the insurance company up the wrong way', did not 'play hard', or 'sacrificed their case to win a few others'. Some participants were disturbed by the fact that their lawyer obtained information via the insurance company, instead of gathering the data from its original source, as this caused their compensation process to be based on incomplete information and often also caused delay. Some clients gained confidence in their lawyers' independence because their lawyer was seen to be open and honest about his/her attitude to the insurance company, explaining positions in the light of reoccurring

professional contacts with the insurer. Independence was also required in the process of appointing medical or occupational experts to assess the plaintiff's impairment. Some participants believed that the expert appointed by their lawyer was not truly independent but instead had connections with the insurance company.

Expertise

Many participants had very clear opinions on the expertise of their lawyer. Participants regarded lawyers as having good expertise if lawyers informed them about the types of damages eligible for compensation and how such compensation was assessed. According to some participants, their case was harmed by their lawyer's lack of adequate legal experience and organizational skills needed to bring the claims settlement to a successful conclusion. Other participants were concerned by lawyers being experienced lawyers, but having little or no experience in personal injury cases. Lastly, some participants lost confidence in their lawyer because the lawyer was a 'terrible scatterbrain' who made an 'incredible mess' of the paperwork, or because the lawyer made careless mistakes in the correspondence.

Discussion

In this study, we examined personal injury victims' experiences with respect to their lawyers. Five preferable characteristics for lawyers were identified. The importance of good communication, of providing information, and of involving clients in decision-making had previously been discussed in the justice literature and in therapeutic jurisprudence (Binder et al., 1990; Sternlight & Robbennolt, 2008; Tyler, 1992). However, an interesting finding was that not all participants actually wanted to be involved; some indicated that they did not want to deal with the claim settlement process and preferred the 'lawyer in control'. The need for face-to-face contact once in a while has not been examined to any great extent in the past, with only one study reporting that 'in-person interviews offer a better opportunity than phone conversations or certainly written surveys to impress the client, build rapport, learn from the client, minimize reliance on the attorney's

prior conceptions' (Sternlight & Robbennolt, 2008, p. 538). Lastly, our participants preferred to be updated at least every 2 months, even if there had not been any developments. This finding is confirmed by two articles that stated a need for timely updates (Schatman, 2009; Shapiro et al., 1994).

'Empathy' has previously been addressed in the therapeutic jurisprudence and justice literature (Tyler, 1992; Winick, 1998), although the justice literature tends to use words such as dignity and respect. Although empathy could be considered an aspect of communication (Sternlight & Robbennolt, 2008), our participants indicated it to be very important, and it was consequently presented separately in our results. Another interesting finding was that two participants needed their lawyer to be empathic at the beginning of the claims settlement, whereas they were ready for more business-like communications later on. This could be explained by the fact that most victims are psychologically vulnerable after the accident; especially in the first few months, victims want practical help, information, and support, and they want to talk about their experience to regain a sense of control (Brom, Kleber, & Hofman, 1993).

'Decisiveness' had not previously been discussed as an important lawyer characteristic. This is remarkable, given that an important frustration is that the claims settlement process takes too long (Cotti et al., 2004). According to our participants, lawyers can contribute significantly to delaying or having move forward the compensation process. One article reported that lawyers should adopt a proactive approach in order to avoid or prevent litigation before it arises (Daicoff, 2006). However, the proactive approach needed to prevent legal disputes is different from the decisiveness needed to settle claims without delay, as our participants stated. Several participants in our sample were burdened by feelings that it was left up to them to ensure that their lawyer got on with his work.

'Independence' could be the counterpart of the problematic lawyer behavior 'collusion with the defense counsel', as addressed by Schatman (2009), although he discussed a rather extreme notion of misconduct and conspiracy. Another study reported that 'clients may sometimes suspect that lawyers recommend a particular

course of action because they are friends with the opposing attorney, afraid to take a case to court, afraid of hurting their own relationship with the opposing client, or seeking to aggrandize their own reputation' (Sternlight & Robbennolt, 2008, pp. 500-501). In general, however, the literature did not consider a lack of independence to be an important problem in the same way as did our participants.

'Expertise' was a surprising finding because we did not expect clients to be able to assess lawyers' legal knowledge. The findings that some participants regarded their lawyer as not being sufficiently experienced as a (personal injury) lawyer and that other lawyers were seen as making careless mistakes have some resemblance to the procedural justice element that a legal procedure should be based on accurate information (Leventhal, 1980). The finding that some participants appreciated their lawyer making it sufficiently clear what types of damages were assessed could correspond to the interactional justice element that the basis for decisions needs to be explained (Bies & Moag, 1986). In contrast to the lack of support found in the literature for this factor, several participants in our study indicated that they were very concerned by their lawyer's lack of expertise (or possibly the lawyers' inability to communicate their expertise).

One of the strengths in our study is that we empirically confirmed factors found in the existing theories and literature about positive lawyer characteristics *and* identified new points of interest for client-centered lawyering. This qualitative study also provides an empirical basis for further quantitative research, which is needed because little empirical research has so far been performed on the topic. A limitation, however, is that we were not able to generalize the study results to plaintiffs, in general, to other types of lawyer-client interactions, or to countries with different compensation processes, such as no-fault compensation systems or litigation. Generalizability is always limited in qualitative research since qualitative researchers are looking for variation rather than representativeness (Strauss & Corbin, 1998).

Further empirical research can quantify the relevance of the five positive lawyer characteristics that emerged as important in the present qualitative study and can

reveal whether there is an association between preferable lawyer characteristics and clients' well-being. Future lawyer-client researchers could learn from health science, having a rich tradition of investigating in doctor-patient communications and the effect of verbal and nonverbal behavior on patient satisfaction, quality of life, and health (Beck, Daughtridge, & Sloane, 2002). Generally, we hope this study inspires more empirical research into the lawyer-client relationship, enhancing client satisfaction, and possibly improving the well-being of personal injury victims during the claims settlement process.

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Chapter 5

Procedural justice and quality of life in compensation processes

'Ik lees de brieven niet meer. Er wordt namelijk systematisch verteld dat je liegt, dat het aan jou ligt, en dat je je aanstelt.'

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Abstract

Background: There is considerable evidence that being involved in compensation processes has a negative impact on claimants' health. Previous studies suggested that this negative effect is caused by a stressful compensation process: claimants suffered from a lack of communication, a lack of information, and feelings of distrust. However, these rather qualitative findings have not been quantitatively investigated yet. This observational study aimed to fill this gap of knowledge, investigating the claimants' perceived fairness of the compensation process, the provided information, and the interaction with lawyers and insurance companies, in relation to the claimants' quality of life.

Method: Participants were individuals injured in traffic accidents, older than 18 years, who were involved in a compensation process in the Netherlands. They were recruited by three claims settlement offices. Outcome measures were procedural, interactional, and informational justice, and quality of life.

Results: Participants (n = 176) perceived the interaction with lawyers to be fairer than the interaction with insurance companies ($p < .001$). The length of hospital stay was positively associated with procedural justice ($\beta = .31$, $p < .001$). Having trunk/back injury was negatively related to procedural justice ($\beta = -.25$, $p = .001$). Whiplash injury and length of time involved in the claim process were not associated with any of the justice scales. Finally, procedural justice was found to be positively correlated with quality of life ($r_s = .22$, $p = .004$).

Discussion: The finding that the interaction with insurance companies was considered less fair than the interaction with lawyers may imply that insurers could improve their interaction with claimants, e.g. by communicating more directly. The result that claimants with mild injuries and with trunk/back injuries considered the compensation process to be less fair than those with respectively severe injuries and injuries to other body parts suggests that especially the former two require an attentive treatment. Finally, the fact that procedural justice was positively correlated with quality of life could implicate that it is possible to improve claimants' health in compensation processes by enhancing procedural justice, e.g. by increasing the ability for claimants to express their views and feelings and by involving claimants in the decision-making process.

Background

There is considerable evidence that being involved in a compensation claim process has a negative impact on the claimant's health (Elbers, Hulst, Cuijpers, Akkermans, & Bruinvels, 2012; The Royal Australasian College of Physicians, 2001). Some have argued that this negative compensation effect is caused by the fact that claimants (un)consciously perpetuate illness behaviour for as long as the compensation process lasts (*secondary gain;* Shuman, 1994) However, nowadays, a lot of compensation researchers believe that claimants experience renewed victimisation because of the stressful compensation process and the attitude of legal professionals involved in the compensation process (*secondary victimisation*; Cotti, Magalhães, Pinto da Costa, & Matos, 2004). For example, claimants were found to suffer from a lack of information, a lack of communication, and feelings of mistrust (Alexander, Badial, & Klein, 2006; Murgatroyd, Cameron, & Harris, 2011). Claimants who engaged a lawyer were found to have reduced well-being compared to those without lawyer (Harris, Young, Rae, Jalaludin, & Solomon, 2008), and the adversarial relationship with the insurance company was found to be a burdening factor in the compensation process (O'Donnell, Creamer, McFarlane, Silove, & Bryant, 2010). However, whether the communication and interaction with lawyers and insurance companies are indeed quantitatively associated with claimants' well-being has yet not been investigated. The aim of this study is to fill this gap of knowledge.

A validated way to measure how claimants perceive the communication and interaction with legal professionals in compensation processes is by assessing the level of *procedural justice*. Procedural justice implies that a process is perceived to be fair if an individual feels able to express views and feelings and one was able to have influence on the process (Thibaut & Walker, 1975). Procedural justice is often discussed in relation to *distributive justice*, referring to whether the outcome is perceived as fair (Leventhal, 1980). An important finding in procedural justice literature was that claimants consider procedural justice to be more important than distributive justice (Thibaut & Walker, 1975). In addition, Bies and Moag (1986) distinguished a third justice component called *interactional justice*, which embodies the impact of interaction and communication on the perception of

fairness; people want to be treated with dignity and respect. Finally, Colquitt (2001) distinguished a fourth justice category called *informational justice*, which holds that explanations need to be reasonable, timely, and specific to be perceived as fair (Shapiro, Buttner, & Barry, 1994).

Procedural justice has mostly been investigated in court settings or litigation procedures and not so much in out-of-court settlements. This is remarkable considering the fact that in most countries the majority of cases are settled out-of-court (Wayte, Samra, Robbennolt, Heuer, & Koch, 2002). To the best of our knowledge, only one study investigated procedural justice in bilateral settlements as compared to trial settings and found that the former were perceived as less fair than the latter (Lind et al., 1990). The extent to which claimants perceive the interaction with lawyers and insurance companies to be fair has also not yet been investigated. In order to establish whether the interaction with lawyers and insurers has a negative effect on claimants' well-being (Harris et al., 2008; Murgatroyd et al., 2011; O'Donnell et al., 2010), it is important to assess the interactional justice scale regarding these legal professionals in out-of-court claims settlements.

This study firstly examined the overall levels of procedural, informational, and interactional justice in injured claimants who are involved in compensation processes. Specifically, it was investigated whether claimants feel differently about their interaction with their lawyers versus the way in which they are treated by insurance companies. Secondly, it was studied whether there were associations between age, gender, employment, education, severity of injury, type of injury (e.g. whiplash), blame, length of the compensation process, and procedural, interactional, and informational justice. Given the fact that there is no golden diagnostic test to medically establish whiplash injury (Spearing, Connelly, Gargett, & Sterling, 2012), it was hypothesised that claimants with that type of injury would report lower levels of procedural and interactional justice compared to claimants with other (e.g. orthopaedic) injuries. Moreover, given that a lengthy compensation process was found to be aggravating (Cotti et al., 2004), it was expected that the length of the compensation process would be negatively correlated to procedural justice. Finally, we examined the relationship between the

justice scales and quality of life. It was hypothesised that quality of life would be positively related to the perceived justice scales, as this was also previously found in employees in work settings (Elovainio, Kivimaki, & Vahtera, 2002).

Method

Participants

Participants were individuals who had been injured in a traffic accident, and were claiming compensation for their financial losses. The accident should have occurred less than 2 years ago, and participants needed to be older than 18. During a 6 month period, participants were recruited by three Dutch claims settlement offices: Korevaar Van Dijk (Capelle aan de IJssel), Hofmans (Amsterdam), and Kloppenburg (Amersfoort). The claims settlement offices were asked to send their clients a recruitment flyer by email or, if no email address was registered, by post. Clients enrolled in the study by filling in their name, email address, phone number and an informed consent form on a website of the VU University. On the same form, clients confirmed whether they met the inclusion criteria. Participants who met the inclusion criteria were sent the questionnaire by email. Reminders were sent after 7 and after 14 days of non-response. This study concerned the baseline measurement of a randomised controlled trial, investigating the effect of an internet intervention in compensation processes (Elbers, Akkermans, Cuijpers, & Bruinvels, 2011). Approval was provided by the Medical Ethics Committee of the VU University Medical Centre.

Compensation scheme

In the Netherlands, the compensation scheme is based on classical tort law, i.e. a fault-based compensation scheme. Worldwide, compensation schemes for traffic accidents are mostly based on tort. Claimants are required to prove liability and causality between accident and injury and between injury and damages. After liability and causality are established, the insurance company pays for (additional) loss of income (to a certain level, employees receive social security benefits), travel and household support services, additional medical services (to a certain level, claimants' health insurance pays for health services), rehabilitation and disability services, lawyer services, and pain and suffering. Damages are paid lump

sum, but claimants normally receive advances. Less than 5% of claims end up in a litigation procedure, which is a minority, as is the case in the majority of countries (e.g. in the US, about 10% of compensation claims is settled out-of-court; Wayte et al., 2002).

Data collection

Data were collected using an online questionnaire. Participants indicated gender, age, education, employment status before the accident, role in accident (car driver/motorcyclist or cyclist/pedestrian), date of accident, and to what extent they blamed the offender (1 = not at all, 5 = very much). In addition, participants were asked to indicate which body part(s) was/were injured, whether they were admitted to hospital, and if yes, for how long. Length of hospital stay was used as an indication of severity of injury (Harris et al., 2008). It was also investigated whether participants suffered from whiplash injury. Finally, participants were asked on which date they first contacted their lawyer (this date was used to calculate the length of time involved in the compensation process), and which claim settlement office they engaged.

Perceived justice was measured by the organisational justice scale developed and validated by Colquitt (2001), which we applied to the compensation process. Although this questionnaire was developed for organisational settings rather than legal environments, this questionnaire was chosen because of its separate interactional and informational justice scale. The distributive justice scale was not taken into account because this study investigated only pending compensation claims. The questionnaire contained seven items regarding the compensation procedure (*procedural justice*), e.g. whether the participant had been able to express his/her views and feelings during the compensation process, whether the participant had influence over the compensation process, and whether the compensation process was free of bias. Four questions were asked about the communication with their lawyer (*interactional justice*), i.e. whether the lawyer had treated the participant politely, with dignity, respectfully, and without improper comments. Five questions concerned the information provided by their lawyer (*informational justice*), e.g. whether the lawyer had been candid in his

communications, whether he/she had explained the procedures thoroughly, and whether he/she had tailored his/her communications to the participant's specific needs. Additionally, the interactional justice scale was repeated but the second time the scale concerned the interaction with the insurance company. In total, the questionnaire contained 20 items using a five point scale (1 = not at all, 5 = always).

Quality of life was measured by the EQ-5D (The EuroQol Group, 1990), consisting of five scales (i.e. mobility, self-care, usual activities, pain/discomfort, and anxiety/depression) with a three point answer scale (no problems, some problems, or extreme problems) and a visual analogue scale (vas) in which respondents indicated their health state for that day on a scale ranging from 0 to 100.

Data analysis

Firstly, average scores of the justice scales and the EQ-5D were calculated. A paired t-test was used to analyse whether there was a difference between the interaction with lawyers and insurance companies. Furthermore, a one sample t-test examined whether quality of life was lower than the Dutch population norm (Essink-Bot, Stouthard, & Bonsel, 1993).

Secondly, correlation analyses were performed to determine the associations between the independent variables (age, gender, education, employment status, blame, length of hospital stay, injured body parts, whiplash, lawyer office, and time involved in the compensation process) and the four justice scales. Education and lawyer office were dummy coded. Also, the correlations between quality of life and perceived justice categories were calculated. Spearman's correlation coefficients were used, as the perceived justice outcomes were not normally distributed.

Thirdly, four stepwise multivariable regression analyses (i.e. one analysis for each justice scale) were performed, adjusting for all independent variables. To adjust for multiple testing, a Bonferroni correction was used. The desired alpha level for one

justice scale (i.e. α= .05) was divided by the number of tests (i.e. 16 independent variables), which resulted in a new alpha: α= .003. In addition, correlation analyses were performed to investigate whether the justice scales were related to quality of life. Again, a Bonferroni correction was used: the desired alpha .05 was divided by 6 (i.e. the number of EQ-5D scales), resulting in a new alpha of .008. Data were analysed using SPSS version 18.0.3.

Results

Participants

Of the 1100 clients who received the flyer, 248 clients filled in the registration form, of which 49 did not meet the inclusion criteria. Of the 199 clients who received the questionnaire, 176 filled it in. The overall response rate was 16%. The mean age was 48.7 years and 53% was male. Time since accident was on average 12 months; time involved in the compensation process was 10 months. Twenty-four percent of participants were hospitalised, with an average length of hospital stay of 9.3 days. Thirty-two percent of the participants had whiplash injury. The participant characteristics are displayed in Table 1.

Perceived justice and independent variables

The average procedure justice score was 3.6 (SD= 1.0), the interaction with lawyers was graded 4.7 (SD= 0.6), the providing of information was valued 4.3 (SD= 0.9), and the interaction with insurance companies (n= 107) was scored 3.4 (SD= 1.5). The interaction with lawyers was perceived fairer than the interaction with insurance companies, t (106)= 9.04, p< .001.

Secondly, the correlation analyses showed that having trunk/back injury was negatively correlated to procedural justice (r_s = -.23, p= .002). Other independent variables were not significantly (i.e. p> .003) correlated to procedural, interactional, or informational justice.

Thirdly, the stepwise multivariable regression analyses showed that having trunk/back injury was still negatively related to procedural justice (β= -.25, p= .001).

Table 1.

Participant characteristics (n= 176)

Variable	% or M (SD)	Variable	% or M (SD)
Age	48.7 (14.7) years	Injured body part	
Gender - male	53.4%	Shoulder, arm, hand	50.6%
Employed	78.6%	Head or neck	50.0%
Education		Hip, leg, or foot	49.4%
Lower	22.2%	Trunk or back	30.1%
Middle	55.1%	No. of injured body parts	
Higher	22.7%	1	43.8%
Role in accident - motorised	71.0%	2	36.9%
Hospitalisation	42.0%	3	14.8%
Length of stay	9.3 (11.0) days	4	4.5%
Whiplash injury	32.8%	Time in claim process	9.8 (7.2) months
Blaming offender		Lawyer office	
Not at all - a little	12.0%	Korevaar Van Dijk	44.9%
Neutral	7.4%	Hofmans	46.0%
Quite - very much	80.7%	Kloppenburg	9.1%

Moreover, length of hospital stay was positively related to procedural justice (β= .31, p< .001). Whiplash injuries and the length of time involved in the compensation process were not correlated to any of the justice scales. There was no multicollinearity between variables. The multivariable correlation coefficients between independent variables and justice scales are displayed in Table 2.

Perceived justice and quality of life

The quality of life was on average 6.3 (SD= 2.0), which was lower than the 8.34 average quality of life in the Dutch population (Essink-Bot et al., 1993), t (175)= -13.60, p< .001. Mobility problems were reported by 47% of participants, 16% indicated to have any problem with self-care such as washing or dressing, 75% experienced problems doing their usual activities (e.g. work, study, family or leisure), 90% suffered from pain or other discomfort, and 42% was anxious or depressed.

Table 2.

Stepwise multivariable regression coefficients of factors predicting justice scales

		Procedural justice		Interactional justice[a]		Informational justice		Interactional justice[b,c]	
Variables		β	p	β	p	β	p	β	p
Age		.00	.980	.00	.991	.04	.651	.00	.987
Gender	Female	.08	.292	-.05	.583	-.05	.580	.17	.146
Education	Lower vs. other	-.06	.464	-.13	.120	.02	.822	.05	.651
	Higher vs. other	-.03	.686	.15	.074	-.05	.550	-.14	.216
Employment	Employed	.03	.729	-.11	.168	-.03	.693	.16	.133
Role in accident	Motorised	-.14	.088	-.11	.232	-.14	.108	-.19	.129
Blame		.07	.362	-.01	.860	.06	.414	.01	.928
Injured body part	Shoulder, arm, or hand	.02	.824	-.04	.589	-.01	.915	-.01	.955
	Head or neck	-.09	.283	-.13	.138	-.04	.611	.03	.816
	Hip, leg, or foot	.02	.780	-.03	.704	.14	.103	.11	.327
	Trunk or back	-.25	.001*	-.08	.304	-.13	.089	-.07	.528
Hospitalisation	Number of days	.31	< .001*	.06	.462	.04	.595	.11	.326
Injury	Whiplash	.07	.392	.13	.157	-.01	.873	.06	.647
Lawyer office	Korevaar vs. other	-.07	.622	-.17	.240	-.26	.059	.12	.513
	Hofmans vs. other	-.17	.214	-.14	.315	-.37	.010	.09	.630
Claim process	Number of days involved	-.16	.041	-.10	.229	-.14	.085	-.17	.126
R^2		.20		.10		.13		.15	

Note. [a] with lawyer; [b] with insurance company; [c] n=107; * p< .003

Procedural justice was negatively correlated with the usual activity subscale (r_s = -.21, p= .005) and the pain/discomfort subscale (r_s = -.21, p= .005), and positively related to the overall quality of life (vas scale) (r_s = .22, p= .004). The interaction with lawyers or insurance companies, however, was not associated with quality of life (respectively r_s = .06, p= .399; r_s = .05, p= .608), nor was informational justice correlated to quality of life (r_s = .10, p= .173). The correlation coefficients between justice scales and EQ-5D subscales are displayed in Table 3.

Table 3.

Spearman's correlation coefficients of justice scales predicting quality of life

	Procedural justice		Interactional justice[a]		Informational justice		Interactional justice[b, c]	
EQ-5D subscales	r_s	p	r_s	p	r_s	p	r_s	p
Mobility	-.03	.712	.04	.573	.06	.418	.02	.830
Self-care	.03	.650	-.04	.612	.01	.893	-.14	.142
Usual activity	-.21	.005*	-.12	.101	-.09	.235	-.02	.812
Pain/Discomfort	-.21	.005*	-.08	.288	-.08	.303	-.05	.636
Anxiety/Depression	-.17	.025	-.12	.104	-.17	.029	-.02	.836
Vas scale	.22	.004*	.06	.399	.10	.173	.05	.608

Note. [a] with lawyer; [b] with insurance company; [c] n= 107; * p < .008

Discussion

This study examined procedural justice, informational, and interactional justice in claimants who were involved in compensation processes. It was found that the participants were very satisfied with the provided information and with the way they were treated by their lawyer, which does not seem to correspond with a previous study showing that claimants are bothered by a lack of communication and a lack of information (Alexander et al., 2006; Murgatroyd et al., 2011). Moreover, this study showed that participants appreciated the interaction with lawyers significantly more than the interaction with insurance companies. A plausible explanation for this is that lawyers are seen as allies, whereas insurance companies, asking critical questions, might give claimants the feeling of being mistrusted (Murgatroyd et al., 2011). Additionally, lawyers may not do their best to revise such negative image of the insurance company to improve the impression

of their own services (Lind et al., 1990). Moreover, insurance companies often do not communicate directly with claimants, i.e. they communicate through letters, which is not beneficial for the interaction either, as written correspondence was found to negatively influence the interactional fairness, compared to verbal communication (Shapiro et al., 1994). This may imply that insurance companies could try to improve the interaction with claimants by communicating more directly with them.

Furthermore, this study showed that length of hospital stay (which was used as an indication of severity of injury; Harris et al., 2008) was positively associated with procedural justice, which suggests that participants with mild injuries perceived the compensation process to be less fair than those with severe injuries. A possible explanation could be that claimants with severe injuries are more busy recovering, whereas claimants with mild injuries are more occupied with the compensation process. This finding that the compensation process may have a more negative impact on claimants with mild injuries rather than on those with severe injuries is supported by two previous studies, showing that claimants with mild injuries reported more disability during the compensation process than those with severe injuries (Binder & Rohling, 1996; Sterling, Hendrikz, & Kenardy, 2010). Our results may imply that particularly claimants with mild injuries require a more attentive treatment during the compensation process.

It was also found that having trunk/back injury was negatively associated with procedural justice. We did not find literature support that the compensation process has a different effect on claimants with trunk/back injuries than on claimants with injuries to other body parts, as a meta-analysis concluded that claimants with chronic low back pain reported similar pain levels as claimants with chronic pain in other body parts (Rohling, Binder, & Langhinrichsen-Rohling, 1995). However, as 70–85% of all people have back pain at some time in life (Andersson, 1999), it could be that claimants with back injuries have more trouble with proving that their injury was caused by the accident and that it was not already present before the accident (if the injury was already present before the accident, it would not be compensable in a third-party compensation scheme). That would explain why

claimants with back injuries perceived the compensation process to be less fair. However, more research is needed to investigate why back injury is associated with less procedural justice.

In contrast to what was hypothesised, whiplash injury was not related to procedural justice as compared to other injuries, which suggests that people with whiplash injury do not feel treated differently than for example orthopaedic injury. This finding may correspond to another study that found that claimants with whiplash injuries reported a similar mental health as those with orthopaedic injuries (although the former did report more pain than the latter; Mayou & Bryant, 2002). Length of time involved in the compensation process was also not significantly associated with procedural justice, which supports a previous finding that 'delay' did not had an effect on justice perception of tort litigants (Lind et al., 1990).

Finally, this study showed that procedural fairness was positively correlated with quality of life. This may imply that it could be possible to improve claimants' well-being by increasing the fairness of the compensation process, e.g. by increasing the ability for claimants to express their views and feelings and by involving claimants in the decision-making process. To the best of our knowledge, this relationship between procedural justice and well-being has not been previously investigated in legal procedures but confirms earlier findings in employees (Elovainio et al., 2002). Interactional and informational justice scales were not related to quality of life. Although it was previously found that kindness and dignity were important in order to perceive a process to be fair (Bies & Moag, 1986), this study suggests that respectful treatment and adequate information provision does not increase claimants' well-being.

Although this study showed some interesting results, there are also some limitations. One possible limitation of the study is that the sample might suffer from selection bias: for example, maybe only very satisfied clients decided to enrol in the study. Furthermore, our sample was older and seems to be more severely injured compared to the average Dutch traffic accident victim as reported in

national documentation (Rijksinstituut voor Volksgezondheid). Also, the response rate was quite low and there may be a bias towards those spending a long time in the compensation process as the sample was restricted to those with a pending claim. The study results may therefore not be generalisable to the average claimant population. The second limitation is that the study has an observational study design, which does not allow drawing conclusions about causality: for example, it can be argued that more procedural justice leads to better well-being but it can also be argued that better well-being leads to better fairness perceptions. Finally, although the organisational justice scale is a validated questionnaire, it has not been validated in this particular context, i.e. pending compensation processes. Plaintiffs who have just started a compensation procedure probably have not enough experience with the compensation procedure to validly answer all questions, for example, about whether they are able to appeal or whether the compensation process is free of bias.

More research is needed to learn more about the relationship between perceived justice and the health of claimants in compensation processes. Firstly, it may be interesting to investigate whether other professional players in the compensation process influence claimants' justice perception, such as health professionals, as numerous medical assessments were found to give claimants the feeling of being mistrusted (Murgatroyd et al., 2011). Secondly, in future research, it may be valuable to follow-up until the claim is settled, in order to investigate the association between well-being and distributive justice (i.e. the fairness of the received compensation amount), because some studies have shown that well-being increased after settlement (Guest & Drummond, 1992; Miller, 1961). Finally, it may be worthwhile to compare justice perceptions between tort and no-fault compensation schemes. Tort and no-fault schemes differ for example in whether claimants have to prove liability and causality or not, in whether payments are lump sum or periodical, or in whether benefits are based on standardised percentages or individual negotiations (Grant & Studdert, 2009). A study that investigated a legislative change from tort to no-fault showed that this change resulted in improved well-being (Cameron et al., 2008), so possibly there is a difference in perceived fairness in both schemes.

In conclusion, this is the first study that investigated procedural, interactional, and informational justice in out-of-court claims settlement processes, and the first study that examined the relationship between perceived justice and quality of life in a legal environment. It was found that participants appreciated the interaction with lawyers more than the interaction with insurance companies. Insurance companies could try to improve the interaction with claimants by communicating more directly. Furthermore, claimants with mild injuries and with trunk-back injuries perceived the compensation process to be less fair than those with respectively severe complaints and injuries to other body parts, which may imply that legal professionals should particularly be careful and attentive when encountering these types of injuries. Finally, it was found that procedural justice was positively associated with claimants' health, so it may be possible to improve the claimants' well-being by e.g. increasing the ability for claimants to express their views and feelings and involving claimants in the decision-making process. However, more research is needed to investigate causality. We would like to invite future 'compensation and health' researchers to also include procedural justice as an outcome measure. So far, compensation studies have mainly researched the effect of compensation on physical outcomes but if we want to truly investigate the (anti)therapeutic effect of being involved in compensation processes, claimants' perceptions of fairness during the compensation process could be a valuable addition.

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Chapter 6

Empowerment of personal injury victims through the internet: Design of a randomized controlled trial

'Hoe lang gaat dit duren? Waar moet dit heen?
Ik kijk de hele tijd achteruit in plaats van vooruit.'

Elbers, N.A., Akkermans, A.J., Cuijpers, P., & Bruinvels, D.J. (2011). Empowerment of personal injury victims through the internet: design of a randomized controlled trial. *Trials, 12*: 29.

Abstract

Background: Research has shown that current claims settlement process can have a negative impact on psychological and physical recovery of personal injury (PI) victims. One of the explanations for the negative impact on health is that the claims settlement process is a stressful experience and victims suffer from renewed victimization caused by the claims settlement process. PI victims can experience a lack of information, lack of involvement, lack of 'voice', and poor communication. We present the first study that aims to empower PI victims with respect to the negative impact of the claims settlement process by means of an internet intervention.

Methods/design: The study is a two armed, randomized controlled trial (RCT), in which 170 PI victims are randomized to either the intervention or control group. The intervention group will get access to a website providing (1) an information module, so participants learn what is happening and what to expect during the claims settlement process, and (2) an e-coach module, so participants learn to cope with problems they experience during the claims settlement process. The control group will get access to a website with hyperlinks to commonly available information only. Participants will be recruited via a PI claims settlement office. Participants are included if they have been involved in a traffic accident which happened less than two years ago, and are at least 18 years old. The main study parameter is the increase of empowerment within the intervention group compared to the control group. Empowerment will be measured by the mastery scale and a self-efficacy scale. The secondary outcomes are perceived justice, burden, well-being, work ability, knowledge, amount of damages, and lawyer-client communication. Data are collected at baseline (T0 measurement before randomization), at three months, six months, and twelve months after baseline. Analyses will be conducted according to the intention-to-treat principle.

Discussion: This study evaluates the effectiveness of an internet intervention aimed at empowerment of PI victims. The results will give more insight into the impact of compensation proceedings on health over time, and they can have important consequences for legal claims settlement. Strengths and limitations of this study are discussed.

Trial registration: Netherlands Trial Register NTR2360

Background

In the Netherlands, each year about 50.000 people file a PI liability claim. Research has shown that the current claims settlement process has a negative impact on personal injury (PI) victims' health and well-being (Spearing & Connelly, 2010). Most of the studies that investigated the influence of litigation or compensation on health show that PI victims who are involved in litigation are less likely to return to work (Miller, 1961), have more disability, worse health outcomes (Binder & Rohling, 1996; Harris, Mulford, Solomon, van Gelder, & Young, 2005), increased pain intensity and decreased physical functioning (Cassidy et al., 2000; Cote, Hogg-Johnson, Cassidy, Carroll, & Frank, 2001; Pobereskin, 2005; Rohling, Binder, & Langhinrichsen-Rohling, 1995), and more symptoms of depression, anxiety and distress (Bay & Donders, 2008; Bhandari et al., 2008; Blanchard et al., 1998; Bryant & Harvey, 1995; Mason, Turpin, Woods, Wardrope, & Rowlands, 2006; Mayou, Bryant, & Ehlers, 2001) than non-litigating PI victims.

The negative impact of compensation proceedings on health is often explained by the theory that being involved in claims settlement creates an unconscious incentive for victims not to get better as long as the settlement lasts, which is called *secondary gain* (Shuman, 1994). However, the negative impact of compensation proceedings on health can also be explained by the fact that the claims settlement process is a stressful experience and victims suffer from renewed victimization caused by the claims settlement process, which is called *secondary victimization* (Cotti, Magalhães, Pinto da Costa, & Matos, 2004). Claims settlement focuses solely on the assessment of monetary damage, whereas victims' immaterial needs are often neglected. Victims can experience a lack of information, lack of involvement, and lack of opportunity to tell their site of the story ('voice'), they can get the feeling they are being mistrusted and not taken seriously, and the communication can be poor (Huver, Van Wees, Akkermans, & Elbers, 2007; Stichting De Ombudsman, 2003).

The importance of providing information, an opportunity for 'voice' and a respectful treatment, is supported by the theory of *procedural justice* (Thibaut &

Walker, 1975), arguing that the perception of justice is more determined by procedural aspects and the way a decision is reached, rather than the outcome itself. A lack of procedural justice was found to be related to negative emotions such as anger, frustration, anxiety (Krehbiel & Cropanzano, 2000), stress and depression (Tepper, 2001), whereas procedural fairness in the sense of getting the opportunity to voice their opinion was found to be a stress reducing factor (Vermunt & Steensma, 2003).

Considering the fact that a compensation proceeding has a negative impact on health, we expect that there is a need for an intervention tackling the negative aspects of the claims settlement procedure. With respect to providing information, respectful treatment and participation of PI victims, the professionals involved in the settlement process (e.g. loss adjusters, legal representatives on both sides, medical experts, etc.) should of course play an important role. However, in order not to be totally dependent on the quality of the services of these professionals, a self-help intervention in which victims can learn to cope with the negative aspects of the claims settlement process could be a promising alternative approach. There is one study that applied relaxation sessions 'to cope with stressful events (e.g. RTC-related litigation hearings)' (Taylor et al., 2001, p.544). However, this was only a very small element within a cognitive behavioral treatment for post-traumatic stress. A self-help intervention which primarily focuses on the claims settlement process has not been developed yet.

In developing an intervention to tackle the negative impact of compensation proceedings, much can be learned from health research, in which many self-help interventions have already been developed for a wide range of health problems, e.g. asthma, eating disorders, weight control, HIV, physical activity, headache, insomnia, cancer, diabetes, post-traumatic stress, depression, anxiety, etc. The methodology of these self-help interventions is also widely differing, but generally, they are designed to improve disease management and provider-patient communication (Samoocha, Bruinvels, Elbers, Anema, & van der Beek, 2010; Wantland, Portillo, Holzemer, Slaughter, & McGhee, 2004). A lot of the self-help

interventions contain cognitive behavioral therapy elements, challenging dysfunctional cognitions and behavioral patterns related to the health problem.

Self-help interventions are increasingly offered through the Internet ('e-health'). Providing self-help interventions via the Internet has several advantages over usual care: it is anonymous, it has low costs, it can be accessed at any time, at any place, it takes no travel time and there is no waiting list. Internet interventions were found to increase patient empowerment, i.e. (disease specific) self-efficacy and mastery (Samoocha et al., 2010), improve knowledge and behavioral outcomes (Wantland et al., 2004), reduce health problems, e.g. pain and headache (Cuijpers, Van Straten, & Andersson, 2008), and reduce depression and anxiety (Spek et al., 2007). Considering the fact that self-help internet interventions are found to be effective in improving health in a wide range of health problems, we expect that self-help internet interventions can very well be applied to PI victims.

In this article, we present the first study that aims to empower PI victims with respect to the negative aspects of the claims settlement process by means of an internet intervention, providing (1) an information module, so PI victims learn what is happening and what to expect during the claims settlement process, and (2) an e-coach module, a course with cognitive-behavioral techniques, so PI victims can learn to cope with the negative aspects of the claims settlement process. In developing the intervention, we extrapolated the existing e-health knowledge to the legal domain. The results of this study will give more insight into the impact of compensation proceedings on health over time, and can have important consequences for legal claims settlement and the provision of legal services to individual citizens in general, as is further elaborated in the discussion.

Methods

Study design

The study is a two armed, randomized controlled trial (RCT). Participants are randomized to either the intervention group or control group. The study protocol has been reviewed by the Medical Ethics Committee of the VU University Medical Center (registration number 2010/123).

Study population

In the Netherlands, each year about 50.000 PI victims file a liability claim. Participants (n=170) will be recruited through claims settlement office Korevaar Van Dijk (www.korevaarvandijk.nl). Korevaar Van Dijk is situated in the Randstad (i.e. urban agglomeration of Western Holland). Korevaar Van Dijk represents about 800 new clients each year. About 95% of the clients are traffic accident victims. 40% have whiplash injuries.

Inclusion criteria

Inclusion criteria are: (a) being a road traffic victim, (b) accident happened less than two years ago, (c) having access to the internet and an email address, (d) being at least 18 years old, (5) being fluent in Dutch language.

Sample size

The primary outcome variable of this study is empowerment, which is measured by the Mastery Scale (Pearlin & Schooler, 1978). This scale has a range of 7 to 35. To be able to show a medium effect size (Cohen's d of 0.50) using a power of 80% and a two-sided alpha of 5%, we will need 63 participants per group. Taking into account a loss to follow-up of 25%, we will need to randomize 85 participants per group. Having two groups (intervention group and control group), a total of 170 participants is needed.

Randomization

After baseline measurement, participants are randomized by an independent researcher to either the intervention or the control group. Stratified randomization will insure that new cases (accident happened 0-1 year ago) and older cases (accident happened 1-2 years ago) will be equally divided over the intervention and control condition. The allocation schedule will be made by a computerized random number generator that will generate fixed blocks of 20. Participants and researcher will be blind for allocation.

Intervention

The intervention is an interactive website www.gripopmijnzaak.nl, providing (1) general claims settlement information, so participants learn what is happening and to expect during the claims settlement process, and (2) e-coach support, so that participants can learn to cope with worries and problems, and (3) frequently asked questions with answers. See additional file 1 for a print screen of the website.

Information. The information module consists of five subheadings: claims settlement process, representative, opposite party, social services, and conflict resolution. In the first subheading, we show participants that the claims settlement process can be divided in four phases: (1) assessment of liability, (2) medical assessment, (3) assessment of earning capacity & rehabilitation, and (4) assessment of damages. Within each phase, we discuss: (a) the important concepts, e.g. what is 'liability', what is 'contributory negligence', (b) the steps, e.g. first the accident information is collected, then liability is established, (c) the turnaround time, e.g. liability should be established within three months, and (d) the possible bottlenecks, e.g. the opposite party denies liability, or claims that the claimant is guilty of contributory negligence. Because the claims settlement process is divided in phases, participants are able to keep up what is happening during claims settlement, and what will happen in the future.

Second, we discuss the legal professionals representing PI victims. In the Netherlands, over 95% of PI claims are settled out of court. In the negotiations with the liable party, victims can be represented by three kinds of legal professionals: lawyers who are members of the bar, often also specialized in PI claims (working at a law firm), legal representatives who are not working at the bar (working at a specialized PI claims settlement office), and lawyers working for a legal expenses insurance company. These three different kinds of legal professionals are introduced and the differences are explained. Furthermore, the applicable guidelines and codes of conducts are introduced and discussed, so that participants learn what they can expect from their lawyer. We discuss the costs of legal aid and the different remuneration arrangements that are commonly made in

the Netherlands, and we discuss the options in case participants are unsatisfied with their lawyer.

Third, we provide information about the opposite party. In the Netherlands, compensation for traffic accident victims is ruled by general tort law. We show that there are three different kinds of opposite parties: normally, the opposite party is a private insurance company, sometimes a traffic accident guarantee fund, and even more rarely a road maintenance authority. We also describe the codes of conduct for insurance companies, so that participants learn what to expect from the opposite party.

The fourth information section deals with social services that are relevant for people with disability. Here, we discuss the statutory benefits that PI victims can be eligible for, such as help and support in housekeeping and care, and social security benefits. Fifth, we explain three different options for resolution of conflicts that may arise during the claims settlement process. Participants are informed that personal contact with the opposite party is a first step to prevent a rising conflict. If personal contact does not prevent or solve the conflict, some conflicts are suitable for mediation. The final option is to go to court. Here, we included information about the different court procedures, the costs involved, and the time a court procedure takes.

E-coach. The e-coach module consists of the Dutch internet-based problem solving intervention by Van Straten, Cuijpers, and Smits (2008), that is based on the self-examination therapy by Bowman (1995). This problem solving intervention is an online course of five weekly lessons, in which patients identify their problems and learn how to cope with them. Participants learn to (1) determine worries and problems, (2) tackle solvable problems in six steps, (3) think less negatively about unimportant problems, (4) accept unsolvable problems, and (5) make a future plan. Each lesson consists of reading, examples and assignments. The intervention was found to be effective in reducing depression, anxiety and work related stress (Van Straten et al., 2008; Warmerdam, Van Straten, Twisk, Riper, & Cuijpers, 2008).

We applied the problem solving intervention to the problems experienced by PI victims and hence focuses on the burdening aspects of the claims settlement process, and problems coping with the accident and/or the injury. The problems and examples in the course are rewritten into problems and examples that are recognizable for PI victims, and some relevant cognitive behavioral techniques are added. In lesson 2, we added communication techniques, i.e. to express thoughts in an objective en non-accusing way. In lesson 3, we added a paragraph about thinking errors (e.g. drawing wrong conclusions). In lesson 4, we turned the examples of unsolvable problems into dealing with (permanent) disability and into coping with certain unpleasant but unsolvable aspects of the claims settlement process, such as the plaintiff's obligation to prove the injury and the damage, and the defendants' right to contradict the evidence.

We developed three different examples of PI victims, all suffering different problems during claims settlement. Our first example is Mark, a 25 year-old construction worker who suffers back and hip injury. His problem with claim settlement concerns the disagreement about the compensation. Furthermore, he has difficulties coping with the injury. Our second example is Susan, a 41 year-old secretary, who has whiplash injury. The problem she experiences during the claims settlement process concerns the medical assessment of her whiplash injury. Her other problem is her financial insecurity. The third example is Philip, a 53 year-old IT worker, who has a broken leg. His problem with the claims settlement process concerns the fact that the insurance company claims that he is guilty of contributory negligence. The other problem is that he is hindered by accident trauma.

Participants are given feedback by email on homework assignments they make. In principle, the feedback is given by a psychologist (i.e. the primary investigator of this study). If the work load turns out to be too high, Victim Support Netherlands will be contacted for help.

Frequently asked questions. The website also contains a 'frequently asked questions' section, in which ten frequently asked questions are answered. For

example: ‘Why does the settlement of my claim take so long?’, ‘How much compensation will I get?’. Most answers can also be found in the information module.

Control group. The control group will get access to the sham website, containing hyperlinks to already existing websites with (1) claims settlement information, the Dutch Judiciary, and the Dutch social security organization, and (2) non-profit support organizations, and companion groups.

Focus group. After we developed the intervention, we held a focus group in which six PI lawyers (‘plaintiffs’) and five representatives of insurance companies (‘defendants’) were present. The participants of the focus group expected that the intervention will meet the needs of PI victims and will improve client lawyer relationship and hence involvement of the client. Furthermore, the used language was found to be comprehensible, simple, clear and neutral. With respect to the information module, some textual changes were made to make the information more accurate and neutral. We included their suggestions for frequently asked questions and we included their tips for PI victims in case the opposite party will visit them at home. We removed the hyperlinks to two television programs, in which PI victims were interviewed about their bad experiences with either their lawyers or with the opposite party, because these cases are exceptions and could feed ‘polarization’. Finally, based on the advice of the focus group, we decided not to add whiplash as a separate topic, but to discuss whiplash as a ‘bottleneck’, to explain why whiplash injury is more difficult than for example orthopedic injury, and to report whiplash recovery statistics.

Pilot. After we incorporated the input from the focus group in the website, we recruited eight PI victims to pilot test the intervention website. These pilot victims were recruited via PI claims settlement office called Hofmans Associates (www.hofmanshelpt.nl), situated in Amsterdam. We asked the pilot participants to grade the different components of the website, to make suggestions for improvement, to grade the lay-out and language, and to indicate whether they would use the different components of the website themselves. The website was

graded well. With respect to the information module, one participant noted that ‘there was almost too much information’, and one participant commented that the website should include ‘more information about bad lawyers’. We decided not to add information about bad lawyers, because we had just removed that kind of information on the advice of the focus group (to avoid ‘polarization’). Considering the e-coach module, one participant wrote that ‘problems are not always solvable or unsolvable. The question whether the injury will heal completely is not solvable: one can only wait for the outcome’. Although the e-coach already discusses ‘learn to live with injury’ as an unsolvable problem, we decided to add ‘waiting for the injury to heal’ to the list of unsolvable problems.

Language and lay-out were graded well. One participant made a final comment that the menu structure, menu readability, and hyperlink system were not very clear, whereas one participant said the contrary: that the website ‘is very clear, well organized and plain. Also the references to extra information are very clear’, so we decided not to change the lay-out, except from adding a symbol to differentiate between hyperlinks referring to external websites and hyperlinks within our website. All respondents indicated that they would use the information module and the frequently asked questions. Three out of eight respondents said they would use the e-coach module. All participants were sent a 10 euro gift voucher incentive.

Procedure

PI victims will be recruited via the PI claims settlement office Korevaar Van Dijk. All clients will be sent an information leaflet by email, or if no email address is registered, the leaflet will be sent by post. Clients that meet the inclusion criteria and are interested to participate in the study will be directed to the website www.gripopmijnzaak.nl. The website will provide a registration form, where participants will fill in name and email address, inclusion criteria are checked, and informed consent is obtained. After successful enrolment, clients will receive an email with a link to the baseline questionnaire (T0). After the baseline questionnaire is filled in, participants will be randomized by an independent researcher to either the intervention group or the control group. Randomization

will be stratified by new cases (accident happened 0-1 year ago) and older cases (accident happened 1-2 years ago).

The intervention group will receive an email with username and password to access the intervention website, the control group will receive an email with username and password to access the control (sham) website. Measurements will take place three months after baseline (T1), six months after baseline (T2) and twelve months after baseline (T3). All measurements are online questionnaires, provided by NetQuestionnaire (www.netq.nl). Participants will automatically receive an email with a personal link to the questionnaire. Participants who complete all four questionnaires will receive a 20 euro gift voucher. The study design is presented in Figure 1.

Primary outcome measure

Empowerment will be measured by (1) the Dutch version of the mastery scale (Pearlin & Schooler, 1978) and (2) a self-efficacy scale. We will conclude an enhancement in empowerment if both scales show a positive effect, or if one of the two scales (mastery or self-efficacy) shows a positive effect and the other scale does not show a negative effect.

Mastery. The mastery scale consists of seven items regarding to what extent one experiences control in life. Items are rated on a five point scale with higher scores indicating greater perceived control. The mastery scale has good psychometric properties (Pearlin & Schooler, 1978).

Self-efficacy. Samoocha and colleagues (2010) found that web-based interventions had a significant effect on self-efficacy measured by disease-specific self-efficacy scales, while no effect was found when self-efficacy was measured by general self-efficacy scales. Hence, we developed a specific self-efficacy scale that addresses the three main problem areas that PI victims can face: (1) the claims settlement process, (2) the injury, and (3) the accident. For each problem area, it is questioned whether one is capable (i) to tackle solvable problems, (ii) not to worry about irrelevant problems and iii) accept unsolvable problems (i, ii and iii are the main

skills that are addresses by the e-coach module). The questionnaire consists of nine items and the response scale runs from 0 (cannot do at all) to 10 (highly certain can do). The self-efficacy scale is developed according to the guidelines for the development and construction of self-efficacy scales (Bandura, 2006).

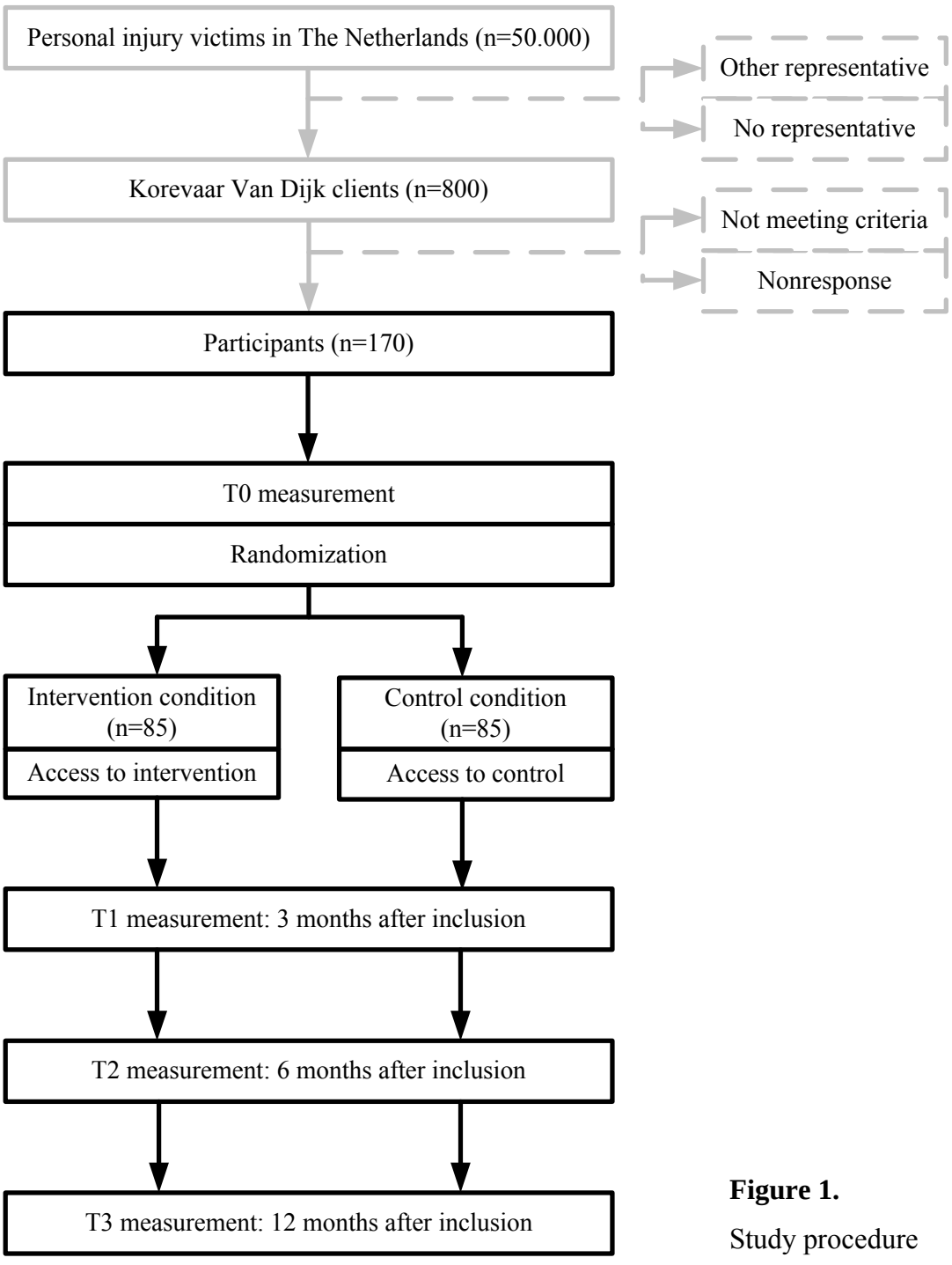

Figure 1.

Study procedure

Secondary outcome measure

Perceived justice. Perceived justice will be measured by the organizational justice questionnaire developed and validated by Colquitt (2001). This questionnaire consists of four subscales: procedural justice (seven items with respect to the 'procedures to come to your compensation'), distributive justice (four items with respect to 'your compensation'; this subscale is only questioned when the participant has indicated that the claim is settled), interactional justice (four items concerning 'your lawyer'), and informational justice (five items concerning 'your lawyer'). In total, twenty items will be questioned with five option answer categories (1= not at all, 5= always). We applied a Dutch translation by Van Prooijen (2009) of the procedural (α= 0.74), distributive, and interactional justice scale (not reported in the article) to our target population. We did not find a Dutch translation of the informational justice scale, so we translated the informational justice scale in line with the other scales. Additionally, the interactional justice subscale is applied to 'the opposite party'.

Burden. Participants will indicate to what extent they considered the claims settlement process to be a burden on a ten point scale (1= not at all, 10= very much).

Well-being. Well-being will be measured by (1) three subscales of the SCL-90 (Arrindell & Ettema, 2003), i.e. depression, anxiety, and somatization (38 items), with a five point answer scale (1 = not at all, 5 = very much), and (2) the EQ-5D (The EuroQol Group, 1990), which is a validated tool for measuring quality of life. It consists of (i) five items (mobility, self-care, usual activities, pain/discomfort, and anxiety/depression) with a three point answer scale (no problems, some problems, or extreme problems) and (ii) a visual analogue scale questioning the respondent's self-rated health (0 = worst imaginable health state, 100 = best imaginable health state).

Work ability. Work ability will be administered by the first three items of the Dutch version of the Work Ability Index (Tuomi, Ilmarinen, Jahkola, Katajarinne, & Tulkki, 1998), determining individual work capacity. Work is defined as a paid

job, but also studies, housekeeping, care for fellow human beings, and volunteer aid. The first question asks subjects to rate their current work ability compared to their lifetime best on an eleven point scale (0= completely unable to work, 10= work ability at its best). The second and third question ask participants to judge their current work ability considering respectively the physical - and the mental demands of their work (1= very bad, 5= very good).

Knowledge of claims settlement. Knowledge of claims settlement will be measured by a self-developed questionnaire with six items, covering the different components of the information module of the intervention. Participants are asked to what extent they know: (1) the state of affairs regarding the settlement of their claim, (2) what to expect of the claims settlement procedure, (3) what to expect from their lawyer, (4) what to expect from the opposite party, (5) which social services to count on, and (6) what to do in case of conflict. The questionnaire has a five point answer scale (1= not at all, 5= a lot).

Compensation. Participants will be asked to estimate the amount of compensation they expect to receive. In case the claim is settled, they are asked to fill in the amount of compensation they have received.

R-C Communication. The lawyer will be asked to rate the communication with the client (participant) on a scale from 1 to l0.

Other variables

Demographic variables. Demographic variables are: (1) gender, (2) birth date, (3) place of residence, (4) country of birth, (5) educational level (five answer options), and (6) whether the respondent had a paid job at the time of the accident (employer, self-employed, or unemployed).

Accident. Questions concerning the accident are: (1) participant's means of transport when the accident happened (motorized or not motorized), (2) date of accident, and (3) the extent in which the offender can be blamed for the accident (1= not at all, 5= very much).

Injury. Injury details will be measured by questioning: (1) what body part is injured (a) shoulder, arm or hand, (b) head or neck, (c) hip, leg or foot, (d) trunk or back (multiple answers possible), (2) whether one was admitted to the hospital (if yes, how many days), and (3) whether the injury can be objectified (e.g. by scan).

Claims settlement. Claims settlement details are: (1) date of first contact with lawyer, (2) name of lawyer, and (3) name of opposite party.

Website satisfaction. Website satisfaction will be measured by one question asking to rate the website on a scale from 1 to10.

Website usage. Website usage is the amount of webpage views, which is automatically registered in the *back office* of the website. An overview of measurements is displayed in Table 1.

Statistical analysis

Descriptive statistics (categorical and continuous variables) will be analyzed by respectively chi-square and t-test. All analyses will be conducted according to the intention-to-treat principle. Missing values will be imputed with regression imputation techniques. Differences between the intervention group and control group will be evaluated by two tailed tests at significance level of 5% ($p < .05$). Short term (T1, T2) and long term (T3) effects will be analyzed by a repeated measure analysis. Finally, the results of the intention-to-treat analyses will be compared to the results of the per-protocol analyses.

Discussion

This study is the first to empower PI victims with respect to the negative aspects of the claims settlement process by means of a internet intervention. Below, we will discuss the strengths and limitations of this study. From a scientific point of view, the results will give more insight into the impact of compensation proceedings on health over time and the phenomena of secondary gain and secondary victimization. Because this study is the first internet intervention applied to legal practice, the study will provide interesting data whether a self-help intervention is

Table 1.

Schedule of measurements

Measurement		T0 Baseline	T1 3 months	T2 6 months	T3 12 months
Empowerment	Mastery scale	7	7	7	7
Self-efficacy	Self-developed	9	9	9	9
Justice	Organizational justice	20	20	20	20
	Self-developed	4	4	4	4
Burden	Self-developed	1	1	1	1
Well being	SCL-90 (3 subscales)	38	38	38	38
	EQ-5D	6	6	6	6
Work ability	Work ability index	3	3	3	3
Knowledge	Self-developed	6	6	6	6
Compensation claim	Self-developed	-	-	-	1
R-C communication	Self-developed	-	-	-	1
Demographics	Self-developed	6	-	-	-
Accident	Self-developed	3	-	-	-
Injury	Self-developed	3	-	-	-
Claims settlement	Self-developed	3	-	-	-
Website satisfaction	Self-developed	-	-	-	1
Website usage		Number of webpage views			
Total number of questions		**109**	**94**	**94**	**97**

applicable to our target population. Furthermore, the website usage data will reveal what kind of PI victims will use which modules and how often.

If we succeed in improving health of PI victims, the results of this study can have important consequences for legal claims settlement. If this research shows that empowerment via an interactive website has a positive influence on the well-being and health of PI victims, than our website has a clear potential to become standard service in legal practice, and possibly even an obligatory service to PI victims, considering the fundamental rule in law that recovery has priority over monetary compensation (*restitutio in integrum*). A positive outcome would constitute the empirical basis for the development of legal rules that would make legal professionals to adhere a more victim-friendly and recovery oriented way of settling PI

claims. A further step could be the development of comparable websites, designed to empower individual citizens who are entangled in comparable burdensome legal procedures, e.g. in the field of labor law, housing law, consumer law, administrative law, and civil law in general. Furthermore, the intervention and the results of the study will also be interesting for victimology and criminology studies.

Offering a self-help intervention by which PI victims can keep up with what is going on during the claims settlement process and by which they can learn to cope with problems and worries, could be a promising alternative approach for a problem that until now is only being encountered by educating the legal professionals on more client friendly claims settlement processes.

Another strength of this study is that the intervention is offered through the internet. Hence, the intervention can be accessed easily, at home, and at any time, which is especially advantageous for our target population that is disabled and often immobile. Furthermore, because of the internet, we are able to reach a large audience at low costs, and anonymously, which is beneficial considering the fact that we are providing a service for a hardly acknowledged health problem.

The fact that we choose to recruit participants via only one claims settlement office has both advantages and disadvantages. The first advantage of recruitment via a claims settlement office (compared to indirect recruitment via the media) is that we assume to have a relative smooth inclusion of participants, because we can directly approach a large number of PI victims. Second, we assume that lawyers working in the same claims settlement office have a similar method of claims settlement, so that ‘method of claims settlement variability’ will not be a confounder. However, recruitment via only one office also implies two possible selection biases. First, it might be that the characteristics of clients of this particular claims settlement office may differ from clients of other offices. Second, this claims settlement office is one of the first offices in the Netherlands which offers their clients online access to their claims settlement dossier, a service which will be a standard service in the future, but at the moment is not usual care.

A limitation of the study is that the claims settlement process will be different for all participants: different length, different steps, different pace, and different problems. Because of this variability, we cannot investigate whether there are moderating factors influencing the study outcomes. Furthermore, some of the claims will be settled before the end of the study. Participants whose claim is already settled early in the study, will use the intervention for a short time only and their reports will be influenced by the perceived fairness of the compensation they received (distributive justice), so they need to be analyzed differently. However, it is unclear whether the number of settled claims will be large enough to draw conclusions about this subgroup.

A second limitation concerns the generalization of the study results. Because our participants are traffic accident victims, further research is needed to find out whether the results can be generalized to other kinds of PI victims, such as victims of medical malpractice, workplace accidents, and violent assaults. Furthermore, because of international variety in compensation proceedings and legal services delivery (Grant & Studdert, 2009), we should be careful to generalize the study results to countries with different ways of claims settlement processes. General tort law might give different needs and experiences than a no-fault system. The same goes for claims that are settled out of court versus claim proceedings in court, or PI victims who are represented by a lawyer compared to PI victims who are not represented by a lawyer.

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Additional file: Print screen www.gripopmijnzaak.nl

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Chapter 7

Effectiveness of a web-based intervention for injured claimants: A randomized controlled trial

'Ik heb jarenlang op de bank gelegen
tot het moment dat ik besefte dat ik mijn leven zelf in de hand had.'

Elbers, N.A., Akkermans, A.J., Cuijpers, P., & Bruinvels, D.J. (submitted). Effectiveness of a web-based intervention for injured claimants: A randomized controlled trial.

Abstract

Background: There is considerable evidence showing that injured people who are involved in compensation processes show less physical and mental well-being than people with similar injuries who are *not* involved in compensation processes. One explanation is that the legal process surrounding the award of compensation is very stressful. The aim of this study is to empower injured claimants suffering from re-traumatization by the compensation process.

Methods: Participants were recruited by three Dutch lawyer offices. Participants were all injured in a traffic accident and were all involved in a compensation process. The study design was a randomized controlled trial. An intervention website was developed with (1) information about the compensation process and (2) an evidence-based, therapist-assisted problem solving course. The control website contained a few links to already existing websites. Outcomes measures were empowerment, self-efficacy, well-being (including depression, anxiety, and somatic symptoms), work ability, claim knowledge, and extent of burden. The outcomes were self-reported through online questionnaires and were measured at four times: baseline, 3, 6, and 12 months.

Results: In total 176 participants completed the baseline questionnaire after which they were randomized into the intervention group (n= 88) or the control group (n= 88). During the study, 35 (20%) participants dropped out. The intervention website was used by 55 (63%) participants. The health outcomes of the intervention group were not different from the control group. However, the intervention group considered the received compensation to be fairer ($p < .01$). The subgroup analysis of intervention users versus non-users did not reveal significant results. The evaluation of the intervention website was good.

Conclusions: The internet intervention was probably not used enough to improve the health of injured claimants in compensation processes, but it increased the perceived fairness of the received compensation amount.

Keywords: Injury compensation; Web-based intervention; Randomized controlled trial; E-health; Empowerment

Background

There is considerable evidence showing that injured people who are involved in compensation processes show less physical and mental well-being than people with similar injuries who are *not* involved in compensation processes (Elbers, Hulst, Cuijpers, Akkermans, & Bruinvels, 2012; The Royal Australasian College of Physicians, 2001). One of the explanations for this reduced recovery is that the legal process surrounding the award of compensation is very stressful for the claimant. There are signs that claimants suffer from a lack of information and lack of communication (Alexander, Badial, & Klein, 2006) and that they are hampered by the fact that they have to prove their injury (Murgatroyd, Cameron, & Harris, 2011). Furthermore, they may be hampered by the attitude of lawyers and insurance companies (Cotti, Magalhães, Pinto da Costa, & Matos, 2004).

Some insurance companies have aimed at improving claimants' well-being or satisfaction by changing the way of handling claims. For example, an Australian motor vehicle insurance company implemented a new claims settlement procedure, i.e. effective communication, early intervention, screening for adverse factors, and a focus on early return to work. This approach was found to decrease depression and to improve return to usual activities compared to claim handling as usual (Schaafsma, De Wolf, Kayaian, & Cameron, 2012). In addition, a Dutch claim company tried a new approach concerning whiplash injury claims. For one year, all legal and medical discussions were postponed, claimants were supported by case managers, and costs were fully compensated by the participating insurance companies. This approach was found to increase client satisfaction as compared to care as usual (Van Driel, 2011). However, a golden, evidence-based solution about how to improve claimants' well-being is lacking.

Clinical psychologists and psychiatrists seem to acknowledge the problem that claimants in compensation processes have reduced mental well-being but this negative effect on health is mostly attributed to *secondary gain* (Van Egmond, 2005), i.e. that claimants consciously or unconsciously prolong the illness because of the monetary (and maybe social) incentive that is accompanied with that illness. The idea that reduced well-being could also be caused by stress induced by the

compensation process is also described by clinicians (Alexander et al., 2006; Fulcher, 2004) but this theory seems to gain minor attention. To our knowledge, there is only one study that described an intervention addressing compensation stress, providing relaxation sessions to cope with litigation hearings (Taylor et al., 2001), but this was only a marginal aspect of the therapy.

From a public health perspective, legal professionals, clinical practitioners and researchers should aim to prevent re-traumatization by the compensation process. In the current study, we therefore propose a multidisciplinary, innovative way to do that, i.e. via an e-health intervention. E-health interventions have been developed for a wide variety of both physical and mental health problems. They were found to be effective in increasing self-efficacy, mastery, knowledge and communication (Samoocha, Bruinvels, Elbers, Anema, & van der Beek, 2010) and in reducing pain, depression and anxiety (Cuijpers, Van Straten, & Andersson, 2008; Spek et al., 2007). E-health interventions are as effective as face-to-face treatments (Carlbring et al., 2005; Kaltenthaler et al., 2006). Although e-health interventions also have some problematic issues such as a high drop-out of participants, lack of regular website access, and a need for some interaction to be effective (Eysenbach, 2005), they also have several advantages over face-to-face interventions: they are anonymous, the costs are low, and they can be accessed at any time and any place (Griffiths, Lindenmeyer, Powell, Lowe, & Thorogood, 2006). Furthermore, they are very suitable for mild symptoms (Andersson & Cuijpers, 2008), which is probably the case in the current study population.

This study is the first to design and investigate an internet intervention for individuals injured in traffic accidents who are claiming compensation for financial losses. The intervention contains two primary elements: (1) independent, online information explaining the different steps and possible bottlenecks in the claims settlement process, and (2) an evidence-based, therapist-assisted problem solving course (Bowman, Scogin, & Lyrene, 1995; Van Straten, Cuijpers, & Smits, 2008) about how to recognize, solve, and cope with problems regarding accident, injury, and/or compensation process. The effect of the intervention is investigated through a randomized controlled trial. It is hypothesized that

claimants who were given access to the interactive website will show higher empowerment, self-efficacy, well-being, and work ability than a control group that was given access to a control website.

Methods

Participants

Participants were individuals older than 18 at the time of study enrolment, who had been injured in a traffic accident less than two years ago and were claiming compensation for financial losses. Furthermore, participants were required to speak Dutch and to have access to the internet. Participants were recruited via three Dutch claims settlement offices located in Alphen aan den Rijn, Amsterdam, and Amersfoort.

In the Netherlands, compensation claims are settled based on classical tort law. Claimants are required to prove liability and causality between accident and injury and between injury and damages. After liability and causality are established, the wrongdoer's insurance company pays for (additional) loss of income (to a certain level, employees receive social security benefits), travel and household support services, additional medical services (to a certain level, claimants' health insurance pays for health services), rehabilitation and disability services, lawyer services, and pain and suffering. Damages are paid lump sum, but claimants normally receive advances. As in most countries, the majority of claims (95%) are settled out-of-court.

A power calculation showed that 170 (2 x 85) participants would be sufficient to detect a medium effect size of empowerment between two groups, using a power of 80% and an alpha of 5%, and taking into account a loss to follow-up of 25%.

Procedure

The claim settlement offices were asked to send their clients an information leaflet by email or by post. Clients applied for the study by completing an online registration form and informed consent on the website www.gripopmijnzaak.nl ('claim under control'), hosted by the VU University. After they completed the

online registration form and acknowledged the informed consent, the inclusion criteria were checked. Eligible participants were sent the baseline questionnaire. Participants who completed this questionnaire, were randomized into either the intervention or the control condition.

The randomization scheme was created by a computerized random block generator, creating fixed blocks of 20. Two randomization schemes were created: one for participants whose injury occurred 0-1 year ago and one for those whose injury occurred 1-2 years ago. This stratified randomization insured that the length of time since injury was equally divided over the intervention and control condition. The randomization was done by the principle investigator.

Participants received the login codes for either the intervention or the control website. Neither participants nor their lawyers were told which group they were in, so they were considered to be blind for group assignment. In total, there were four online questionnaires: at baseline, after 3 months, after 6 months, and after 12 months. Twelve months is the average duration of compensation processes. Participants received a 20 euro voucher if they completed all four questionnaires. About halfway through the study, all participants received an online information leaflet in order to increase website usage. The study protocol of this study has been published previously (Elbers, Akkermans, Cuijpers, & Bruinvels, 2011). The trial was registered at the Netherlands Trial Register under NTR2360. The Medical Ethics Committee of the VU University Medical Centre approved the study protocol.

Intervention and control website

The intervention website consisted of three modules: (1) information about the compensation process (49 pages), (2) a 5 lesson problem solving therapy, and (3) ten frequently asked questions with answers (1 page). The information module contained an overview of the four phases of the compensation process, including the important definitions, steps, length of time, and bottlenecks. The other information topics concerned what to expect from lawyers, what to expect from

insurance companies, the different social security regulations, and what the options are in case of a conflict (Elbers et al., 2011).

The problem solving therapy consisted of five lessons in which participants were explained how to make a step-by-step plan to solve problems, how to communicate efficiently, how to recognize thinking errors, and how to cope with unsolvable problems (Bowman et al., 1995; Van Straten et al., 2008). Each lesson contained examples of other claimants' problems and their solutions. Examples of problems were: having to cope with (permanent) injury, being traumatized by the crash, or being subjected to frequent medical assessments. Other examples were being burdened by financial problems because the insurance company has not paid yet, or being accused of contributory negligence. Each lesson also included some assignments in which participants could tackle their own problems. Participants who completed these assignments were given feedback via email by the principle investigator (Elbers et al., 2011).

The website was evaluated in a focus group with lawyers and insurance companies, who expected that the website would meet the claimants needs. The intervention was also pilot tested by eight claimants, who graded the website well. They all indicated that they would use the information module, and 3 out of 8 would use the e-coach (Elbers et al., 2011).

The control website was a website, containing links to already existing information and support websites only (8 pages in total). Both the intervention and the control website were accessed on www.gripopmijnzaak.nl. After the login page the intervention group was assigned to the intervention content and the control group to the control website. The content of both websites was frozen.

Outcome

The primary outcome measures were empowerment, measured by the mastery scale (α= .68) (Pearlin & Schooler, 1978), and self-efficacy, which was assessed by a self-developed (Bandura, 2006) questionnaire regarding the accident, the injury and the compensation process (α= .92). Well-being was assessed by the

EuroQol (α= .64) (The EuroQol Group, 1990), and by the depression, anxiety and somatic symptoms subscale of the symptom checklist SCL-90 (Arrindell & Ettema, 2003). Procedural, interactional, informational and (if the claim was settled) distributive justice was determined by the organizational justice scale (Colquitt, 2001). These scales investigating respectively the perceived fairness of the compensation procedure (α= .88), the interaction with lawyers (α= .83) and insurance companies (α= .92), the provided information (α= .96), and (if the claim was settled) the received compensation (α= .94).

Work ability was measured by the first 3 items of the Work Ability Index, assessing the current work ability (including e.g. studies, volunteer work and housekeeping) compared to highest workability ever, and workability in relation to physical and mental demands (Tuomi, Ilmarinen, Jahkola, Katajarinne, & Tulkki, 1998). Also examined was whether claimants knew about what was going on during the claims settlement process ('claim knowledge') (α= .89) and whether they perceived the compensation process to be a burden. When they indicated that their claim was settled or when the received the final questionnaire, the participants were asked to grade the website and to indicate the amount of compensation they received or expected. Furthermore, the participants' lawyers were asked to rate the communication with that client (Elbers et al., 2011).

Ten questions were added to the final questionnaire to be able to evaluate the intervention website. The first five questions were about the website as a whole, discussing the appearance, the language, the usefulness of the information, and the structure. The last five questions concerned the e-coach module: whether it was user-friendly, whether the method was appealing, whether it cost too much time, whether they needed the e-coach, and whether the computer is a good way to deal with worries and problems. The answer scale ranged from 1 to 10 (1= *totally disagree,* 10= *totally agree*). These questions were asked to the intervention group whose claim was still pending.

Statistical analysis

Attrition was defined as not completing the follow-up questionnaires. Website usage was defined as having logged in to the website. Short term (i.e. 3 months after baseline) and long term (i.e. 12 months after baseline) differences between the intervention and control group were analyzed using linear multivariate regression analyses. Baseline corrections were applied. The analyses were conducted according to the intention-to-treat principle. Missing data were imputed using the last value carried forward method. Additionally, Generalized Estimation Equation (GEE) analyses were performed on the not-imputed dataset (Twisk & de Vente, 2002) to investigate the overall effect of the intervention on all outcome measures.

To examine the effect of the intervention on the distributive justice scale, which was only completed if the participants indicated that their claim was settled, an independent t-test was performed on the settled claims. An independent t-test was also used to compare the evaluation grade of the intervention and the control website, and to investigate whether there was a difference regarding the communication grade that was given by the participants' lawyers. Finally, a subgroup analysis was conducted, comparing the outcomes of the intervention users versus intervention non-users by means of linear regression and GEE analysis. Data was analyzed using SPSS version 18.0.3. To correct for the multiple analyses, $p < .01$ was used.

Results

Participants

Recruitment took place from October 2010 until March 2011. About 1,100 clients were sent the recruitment flyer. In total, 248 people indicated interest for enrolment in the study by completing the online registration form. Of these, 49 were excluded because they did not meet the inclusion criteria. The remaining 199 people were sent the baseline questionnaire. Of these, 23 were excluded because they did not complete the baseline questionnaire. The remaining 176 participants were included in the study and subsequently randomized to the intervention (n= 88) or the control group (n= 88). The participant flow is displayed in Figure 1.

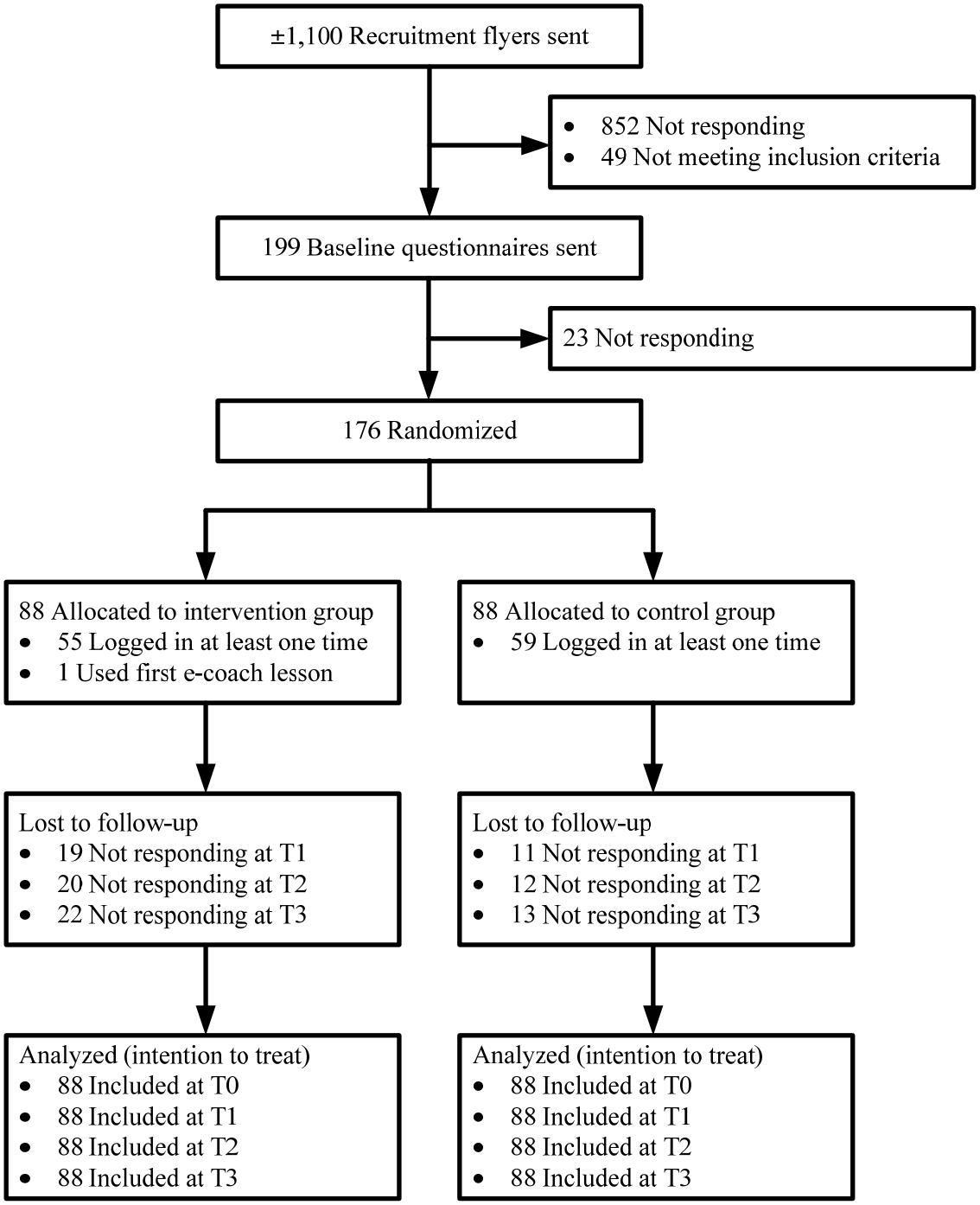

Figure 1.

Participant flow chart

The mean age of the participants was 48.7 years and 53% was male. Time since injury was 12 months on average. Time involved in the compensation process was

10 months. Forty-two percent of participants were hospitalized, with an average length of hospital stay of 9.3 days. Thirty-two percent of the participants had whiplash injury. An overview of the measured participant characteristics is provided in Table 1. There were no significant differences between the intervention and control group characteristics, so randomization succeeded.

Attrition

Attrition rates were 17% (n= 30) at 3 months after baseline, 18% (n= 32) at 6 months after baseline, and 20% (n= 35) at 12 months after baseline. The attrition was not significantly different in the intervention group compared to the control group (after 3 months: χ^2= 2.57, p= .11; after 6 months: χ^2= 2.44, p= .12; after 12 months: χ^2= 2.89, p= .09). Participants who dropped-out of the study were not different from those who did not regarding baseline outcome measurements, nor communication grade, nor website evaluation.

In total, 72 participants (41% of the sample) indicated that their claim was settled during the study. Whether drop-out was associated with settlement of the claim could not be investigated, because participants who drop-out were scored as such because they did not fill in the follow-up questionnaires. However, 69 of the 72 participants who indicated that their claim was settled also completed the questionnaires, so there does not seem to be an association between settlement and drop-out.

Effect of the intervention

The linear regression analyses examining short term (3 months) and long term (12 months) effects of the intervention showed that the intervention group did not score better than the control group on most of the outcome measures, i.e. self-efficacy, procedural justice, well-being, workability, or extent of perceived burden (see Table 2). There was a trend (p> .01) that the intervention may have a short term negative effect on empowerment (β= -.12, p= .03) and on claim knowledge (β= -.14, p= .02) but the effect sizes were small and the trend was no longer present after 12 months. The GEE analyses did not reveal significant differences.

Table 1.

Participant characteristics

		All (n= 176) M (SD) or %	C (n= 88) M (SD) or %	I (n= 88) M (SD) or %	p
Age		48.6 (14.7)	48.3 (14.5)	48.9 (15.0)	.77
Gender	Male	53.4	56.8	50.0	.37
Country of birth	The Netherlands	96.0	95.5	96.6	.70
Work	Employer	65.3	72.7	58.0	
	Self-employed	13.1	9.1	17.0	.10
	Unemployed	21.6	18.2	25.0	
Education	Lower	22.2	22.3	23.0	
	Middle	55.1	56.5	41.4	.81
	Higher	22.7	21.2	35.6	
Time since injury		11.9 (7.2)	12.0 (7.4)	11.8 (7.2)	.89
Traffic participant	Motorized	71.0	70.5	71.6	.87
Blaming offender	Not at all – a little	12.0	15.3	9.2	
	Neutral	7.4	5.9	8.0	.67
	Quite – Very much	80.7	78.8	82.7	
Injured body part	Shoulder, arm, hand	50.6	53.4	47.7	.45
	Head or neck	50.0	48.9	51.1	.76
	Hip, leg, foot	49.4	53.4	45.5	.29
	Trunk or back	30.1	25.0	35.2	.14
Hospitalization		42.0	45.5	38.6	.36
Number of days		9.3 (11.0)	8.0 (9.3)	10.9 (12.6)	.26
Whiplash and others		31.8	28.4	35.2	.33
Lawyer office	Korevaar Van Dijk	44.9	46.6	43.2	
	Hofmans	46.0	45.5	46.6	.83
	Kloppenburg	9.1	8.0	10.2	

Note. C=control group; I=intervention group. The p-value indicates differences between groups.

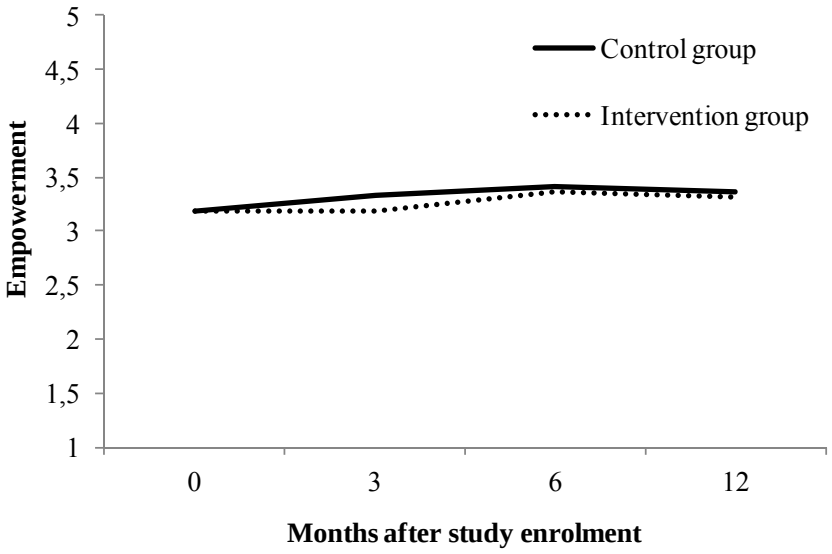

Figure 2.
Empowerment outcomes during time for the intervention and control group

To illustrate the course of one of the outcome measures, Figure 2 shows the (non-imputed) empowerment score during time.

The independent t-tests analyzing the distributive justice scale showed that the intervention group experienced more distributive justice than the control group, t (58)= -2.82, p< .01. The t-test represented a medium effect size (r= .35). The intervention group did not receive (p= .40) or expect (p= .79) a significantly different compensation amount than the control group. Finally, the lawyers did not grade the communication with the intervention group better than the communication with the control group (p= .27). Means, standard deviations, and t-tests are displayed in Table 3. Short term and long term linear regression subgroup analyses in which the intervention users (n= 55) were compared to the intervention non-users (n= 33) showed that the intervention users were not different from intervention non-users. The GEE subgroup analyses did not show any differences either.

Table 2.

Linear regression analyses investigating short and long term effects of the intervention

Outcome measure [range]	C/I	Baseline	3 months	6 months	12 months	Short term (3 months)		Long term (12 months)	
		M (SD)	M (SD)	M (SD)	M (SD)	β	p	β	p
Empowerment [1-5]	C	3.19 (0.63)	3.31 (0.67)	3.40 (0.57)	3.37 (0.56)	-.12	.03	-.10	.10
	I	3.19 (0.71)	3.15 (0.71)	3.27 (0.71)	3.24 (0.74)				
Self-efficacy [0-10]	C	7.48 (2.21)	7.68 (1.86)	7.82 (1.92)	7.80 (1.89)	-.02	.64	-.06	.27
	I	7.49 (2.10)	7. 59 (2.40)	7.57 (2.37)	7.54 (2.32)				
Procedural justice [1-5]	C	3.60 (0.93)	3.45 (0.95)	3.47 (1.01)	3.49 (0.88)	.01	.99	-.02	.70
	I	3.54 (1.05)	3.41 (1.12)	3.38 (1.07)	3.41 (1.01)				
Interactional justice[a] [1-5]	C	4.70 (0.60)	4.62 (0.72)	4.70 (0.55)	4.68 (0.55)	-.05	.43	-.05	.43
	I	4.75 (0.57)	4.57 (0.77)	4.67 (0.62)	4.64 (0.68)				
Informational justice [1-5]	C	4.27 (0.86)	4.14 (0.93)	4.13 (0.92)	4.10 (0.85)	-.06	.27	-.05	.41
	I	4.42 (0.87)	4.14 (1.03)	4.14 (0.99)	4.13 (1.03)				
Interactional justice[b] [1-5]	C	3.34 (1.20)	3.38 (1.33)	3.42 (1.28)	3.34 (1.29)	.02	.72	.08	.16
	I	3.19 (1.12)	3.30 (1.33)	3.33 (1.36)	3.40 (1.30)				
Burden [1-10]	C	5.89 (2.79)	5.88 (2.60)	5.57 (2.64)	5.82 (2.61)	-.05	.40	-.01	.87
	I	5.52 (2.56)	5.39 (2.75)	6.65 (2.83)	5.57 (2.92)				
Depression [1-5]	C	1.65 (0.80)	1.67 (0.77)	1.56 (0.68)	1.61 (0.75)	-.01	.81	.02	.68
	I	1.72 (0.86)	1.73 (0.88)	1.69 (0.82)	1.69 (0.82)				
Anxiety [1-5]	C	1.52 (0.70)	1.51 (0.63)	1.18 (0.66)	1.47 (0.68)	.03	.37	.02	.56
	I	1.60 (0.81)	1.64 (0.87)	1.58 (0.79)	1.58 (0.76)				

Somatic complaints [1-5]	C	1.79 (0.65)	1.75 (0.66)	1.67 (0.64)	1.66 (0.67)	.03	.40	.06	.21
	I	1.84 (0.75)	1.84 (0.76)	1.80 (0.75)	1.78 (0.73)				
EuroQol vas [0-10]	C	6.44 (1.93)	6.66 (1.89)	6.84 (2.07)	6.92 (1.91)	-.05	.35	-.06	.31
	I	6.11 (2.10)	6.22 (2.14)	6.36 (2.17)	6.45 (2.28)				
Work ability vas [1-10]	C	6.17 (2.36)	6.39 (2.13)	6.67 (2.16)	6.61 (2.17)	-.08	.10	-.02	.71
	I	5.68 (2.41)	5.64 (2.57)	5.90 (2.63)	6.17 (2.46)				
Claim knowledge [1-5]	C	3.01 (0.93)	3.27 (0.96)	3.26 (1.05)	3.30 (1.01)	-.14	.02	-.10	.11
	I	3.08 (0.95)	3.05 (0.95)	3.03 (1.04)	3.13 (1.06)				

Note. C= Control group; I= Intervention group; vas= visual analogue scale. M (SD) are raw scores, but for the analyses, data are imputed and corrected for baseline differences. [a] regarding lawyer, [b] regarding insurance company. Significance level was set on $p < .01$.

Table 3.

Independent t-tests investigating distributive justice, the received/expected compensation amount, and communication graded by the lawyer

Outcome measure [range]	C/I	M (SD)	t-test
Distributive justice [1-5]	C	3.26 (1.25)	t (58)= -2.82, p< .01*
	I	4.00 (0.79)	
Compensation amount received	C	9,448 (18,042) Euro	t (51)= 0.85, p= .40
	I	5,893 (9,302) Euro	
Compensation amount expected	C	36,652 (85,502) Euro	t (47)= -0.27, p= .79
	I	45,557 (134,713) Euro	
Communication grade [1-10]	C	7.4 (1.1)	t (159)= -1.11, p= .27
	I	7.6 (1.1)	

Note. These outcomes are measured either at 12 months after baseline or after the participants indicated that their claim is settled. C= control group; I= intervention group. * p< .01

Website usage

Of all 176 participants, 114 people logged in to the website (65%). Those who logged in, tended more often to be female (χ^2= 4.75, p= .03). No other differences were found between users and non-users. The majority (55%) of people who logged in, entered the website only once, and did that within two weeks after receiving the login code. Website usage was associated with whether the claim was pending or settled, because claimants whose compensation claim was pending were inclined to spend more time on the website (M= 5.70 minutes, SD= 13.52) than those whose claim was settled (M= 2.51, SD= 4.23), t (108)= 2.05, p= .04.

Intervention website users spent on average 8.7 minutes on the website, the control group 4.1 minutes. Both groups viewed 10 web pages on average. The information about the compensation process phases was read by 55 people in the intervention group. What to expect from their lawyer or from the insurance company was viewed by 19 people, social security information was read by 12, and 16 participants were interested in the information about conflict solutions. In total, 39 participants in the intervention group clicked on the e-coach tab, but only one actually started the e-coach course, completing only the first lesson of the e-coach

module *after* completing the final questionnaire. The frequently-asked-question tab was accessed by 41 people of the intervention group.

Website evaluation

The intervention group graded the website better (M= 7.5) than the control group (M= 6.9), t (104)= -2.76, p< .01. The appearance, language, usefulness, and structure of the intervention website were valued fair to good, i.e. the averages ranged between 7.3 and 8.1 on a 1 to 10 scale. The amount of information was graded fair, i.e. 6.1 on a scale in which 1 was lowest and 10 was highest. The e-coach was considered to be fairly user-friendly (M= 7.6), the method was quite appealing (M= 7.2), and the computer was a reasonable instrument to deal with worries and problems (M= 6.7). However, the e-coach course also costs quite some time (M= 6.2) and some participants indicated not to need the e-coach (M= 7.3).

Discussion

This study investigated whether a web-based intervention could empower injured claimants suffering from distress by the compensation procedure. It was found that the intervention group experienced the received compensation amount to be fairer than the control group. This does not seem to be caused by the height of the compensation amount, because the intervention group received a statistically similar compensation amount as the control group. Therefore, it seems reasonable to conclude that the intervention website provided a better picture about what compensation amount is fair. However, the positive effect of the intervention on the perceived fairness of the compensation amount should be interpreted with caution because the number of participants in the distributive justice analysis was relatively small (n= 60). Remarkably, participants whose claims were pending expected a much higher compensation amount than what was actually received in the settled claims, which may imply that the overall *expectation* regarding the height of the compensation amounts may not be realistic but that does not alter the fact that the intervention website apparently increased the perceived fairness of the received amount.

In contrast to what was hypothesized, the intervention did not have a significant positive effect on any of the other outcomes. There was even a non-significant trend ($p > .01$) that the intervention had a negative effect on empowerment and claim knowledge at 3 months after baseline. However, the effect sizes were small and there was no negative effect on the long term (i.e. at 12 months). A plausible explanation for a lack of effect of the intervention is low website usage. About 35% of the intervention group did not log in on the website. Those who did log in, did so only once or twice. Only one participant completed one e-coach lesson. Some participants may not have logged in because the content of the website was not propagated, which could not be done because we wanted to conduct a blind randomized controlled trial. Low website usage did not seem to be caused by any dislike of the appeal, content, or structure of website, because the questions evaluating these aspects were answered quite positively. Possibly, participants did not understand the value of the e-coach course, as the statement 'I don't need an e-coach' was graded 7.3 on a scale from 1 to 10, while their well-being was significantly lower than the average Dutch population of this age (Elbers, Akkermans, Cuijpers, & Bruinvels, 2012). Probably the fact that the sample was somewhat older than average has contributed to low website usage. Maybe the website did not meet the claimants' needs. More research is needed to investigate what would meet the claimants' needs and whether the website may be effective in, for example, claimants who indicate to require mental support for problems regarding crash, injury or compensation stress.

It is possible that the effect of the intervention was undone because the involved (legal) professionals did not respond well to the empowered claimants, as was found in another study (Samoocha et al., 2011). However, we have not asked participants this so we do not know whether this was the case. At least, we did not receive any signs via email correspondence. Another explanation may be that participants did not improve because they unconsciously did not want to get better as long as the claims settlement lasted (*secondary gain*; Shuman, 1994). However, previous studies have shown that claimants in compensation have similar treatment participation and treatment outcomes as their non-compensation-seeking counterparts (Laffaye, Rosen, Schnurr, & Friedman, 2007; Taylor et al., 2001).

An important strength of this study is that the trial setup was double blind, which is quite unique in e-health studies (Eysenbach, 2002). Another strength is the randomized controlled trial design, because RCTs were so far non-existing in compensation studies (Carroll et al., 2011). Other good aspects of this study are the considerable number of participants, an acceptable (20%) loss to follow-up, and a good registration of website usage. An important limitation, however, was that the website usage was low, which may have been a reason why the intervention was not able to improve the well-being of the participants. Secondly, the study may have suffered from a selection bias: it could be that only very satisfied claimants responded. Finally, the sample was somewhat older than average and the response rate was quite low (16%), which may limit the generalizability of study results to the general claimant population. Overall, the compensation scheme in the current study is quite comparable to the compensation circumstances worldwide, because most compensation schemes for traffic accidents are based on tort, and mostly the majority of claims are settled out-of-court (Wayte, Samra, Robbennolt, Heuer, & Koch, 2002). However, some countries have a no-fault compensation scheme design and the adversarial character between schemes can be different (Lippel, 2007).

Although our e-health intervention did not succeed, we would still like to encourage clinical psychologists to ask those clients who are involved in compensation processes whether they are burdened by any aspect of the compensation claim, because we think that 'compensation stress' does not get enough attention in current therapies and some claimants could use some coping and problem solving strategies. Legal professionals may learn from this study that providing adequate information about the compensation process and the possible damages that claimants are entitled to, may increase the claimants' perceived fairness about the compensation amount that they receive. Finally, a lesson from this study for (e-health) researchers is that this study again shows that e-health research has not yet overcome one of its major problems, i.e. lack of usage. Maybe the time for e-health is not ripe yet. Maybe this particular population is not ready for online coaching. However, it is a fact that improving the claimants' well-being is needed, so it is important to investigate whether e-health interventions can

achieve that in another study design, for example, by conducting an effectiveness study involving people who actually ask for help.

Conclusions

In contrast to what was hypothesized, the intervention did not have any effect on claimants' health. Probably the low (e-coach) website usage has caused the lack of effect. On the other hand, the intervention group perceived their compensation amount to be fairer, so it seems that the information module was somewhat beneficial. As the costs of the website are low, and maintenance is not labour-intensive, the information on the website could still be made generally accessible to injured people who are involved in compensation procedures. The value of the e-coach module should be investigated in a different study design and/or a sample that actually requires help.

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Chapter 8

General discussion

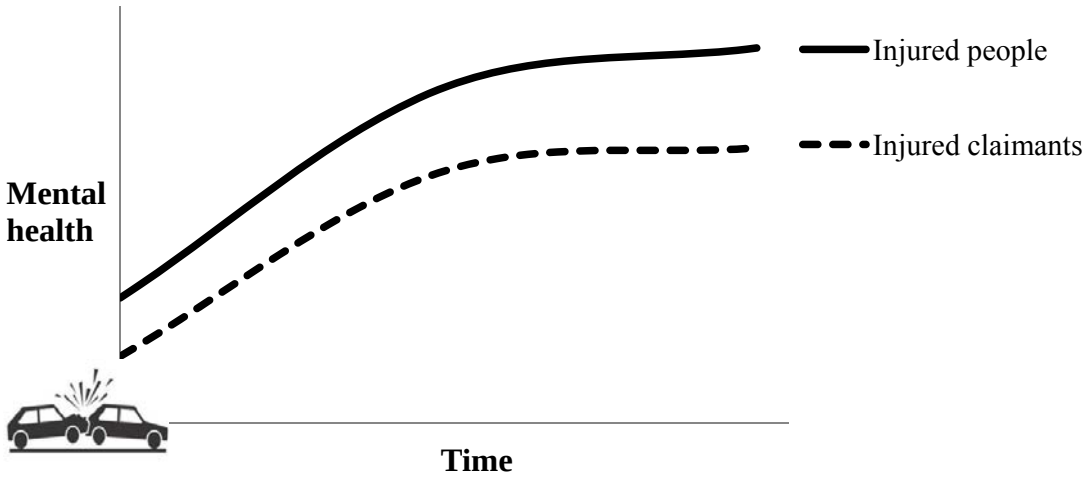
'Ik laat me geen slachtoffer meer houden. Ik kies ervoor dat niet te doen.
Door heel hard aan mezelf te werken, dingen aan te gaan
en door me te ontwikkelen.'

The research topic addressed in this thesis is the negative impact of being involved in a compensation process on the claimants' health (The Royal Australasian College of Physicians, 2001). The aims of this thesis were to assess (1) the scope and (2) the causes of the negative compensation effect, and (3) to establish whether the well-being of claimants in compensation processes could be improved. This final chapter of this thesis discusses the main findings, the limitations, the implications of the thesis, and gives some suggestions for future research.

Main findings

Scope: Do compensation processes impair mental health?

Various meta-analyses already showed that being involved in compensation had a negative effect on physical recovery (Binder & Rohling, 1996; Harris, Mulford, Solomon, Van Gelder, & Young, 2005). In chapter 2, a meta-analysis was conducted to assess whether being involved in a compensation process also had a negative effect on *mental* health. After correction for baseline, it was demonstrated that this was indeed the case: injured claimants reported significantly poorer mental health than injured non-claimants. Correction for baseline was important, as claimants already had significantly poorer mental health directly before or after the accident. Considering the baseline difference, the origin of the graph displayed in the introduction of this thesis (about the well-being of claimants during time) is slightly modified:



Regarding the mental health difference at follow-up, the included studies provided two main explanations: it was suggested that participants who were involved in a compensation process perpetuated or exacerbated their symptoms because of the financial incentive (*secondary gain*), and/or it was expected that claimants were stressed by the compensation process (*secondary victimisation*). Compensation stress was hypothesised to be caused by numerous assessments (Littleton et al., 2010), repeated confrontation with the traumatic accident or injury (Blanchard et al., 1998; Mason, Turpin, Woods, Wardrope, & Rowlands, 2006), threatened delay of funds (Ehlers, Mayou, & Bryant, 1998), and the often adversarial relationship between claimant and insurance company (Mason et al., 2006; O'Donnell, Creamer, McFarlane, Silove, & Bryant, 2010). It was not possible to draw a conclusion about what was causing the negative impact of the compensation procedure on health.

Causes: What factors cause the compensation effect?

Another aim of the thesis was to further examine what factors cause the compensation process to have a negative effect on claimants' health. First, it was investigated whether certain claim factors could explain the negative effect. The claim factors and outcome measures were derived from a database registering compensation claimants after traffic accidents in Victoria, Australia. It was demonstrated that, after correction for severity of injury and other variables, claimants who lodged a common law claim (in addition to a no-fault claim) made significantly greater use of health care services than those lodging a no-fault claim only (chapter 3). This could support a previous finding that a fault-based compensation scheme was associated with poorer health than a no-fault compensation scheme (Cameron et al., 2008). It may also provide empirical support for the hypothesis that proving liability can induce stress and fatigue (Grant & Studdert, 2009). Moreover, it may validate a previous finding that lump sum payments were associated with greater psychological disturbance than intermittent payments (Greenough & Fraser, 1989), as common law claims involved lump sum payments and no-fault claims were associated with periodical payments. However, the effect size was very small and is therefore not clinically relevant. It is possible that the effect size was small because injured claimants in

Victoria, Australia, can lodge common law claims only in *addition* to no-fault claims.

It was also found that the number of medical assessments was positively associated with the number of health care visits (chapter 3), which may confirm the qualitative evidence that numerous medical assessments harm the claimants' health (Murgatroyd, Cameron, & Harris, 2011). However, as the observational study design does not permit conclusions about causality, it is also possible that claimants who made greater use of health care services had to undergo more assessments to prove that they needed those health care services.

Furthermore, being involved in legal disputes, i.e. having engaged a lawyer and/or being involved in a Victorian Civil Administrative Tribunal (VCAT) procedure, was found to be negatively associated with health care service utilization (chapter 3). This negative association seems to imply that having a lawyer and/or being involved in a VCAT procedure was beneficial for the claimants' health. This was in contrast to what other researchers have found, namely that lawyer involvement was positively associated with health care utilization (Gun et al., 2005; Harris, Murgatroyd, Cameron, Young, & Solomon, 2009), and reporting that court procedures (which may be comparable to VCAT procedures) worsened the trauma compared to out-of-court settlements (Cotti, Magalhães, Pinto da Costa, & Matos, 2004). However, another study had demonstrated that litigation trials were perceived as more fair than bilateral out-of-court settlements, presumably because trials gave a more respectful hearing (Akkermans, 2009; Lind et al., 1990). Accordingly, legal disputes may have been associated with less health care utilization because claimants considered the VCAT treatment to be more respectful, which had a positive effect on their health. However, the effect size was negligible, so the finding was not clinically relevant.

Previous studies suggested that a long compensation process could be unbeneficial for claimants' health (Cotti et al., 2004; Shuman, 2000). We did not measure the association between process duration and health, however, we examined the association between duration and perceived fairness of the compensation process

(chapter 5). It was found that there was no relationship between process duration and perceived fairness, which supported a previous study showing that 'delay' did not have an effect on the justice perception of tort litigants (Lind et al., 1990).

Previous studies have also shown that lawyer involvement was negatively associated with claimants' well-being (Gun et al., 2005; Harris et al., 2009). We did not investigate the reasons for this negative association; however, we did qualitatively assess claimants' positive and negative experiences with their lawyer (chapter 4). Five lawyer qualities were found that claimants considered being important for good lawyer-client interaction. These were communication, empathy, decisiveness, independence, and expertise. The first two lawyer characteristics, i.e. communication and empathy, have already been discussed in the literature on lawyer-client interaction and procedural justice. For example, it is known that claimants wish to be frequently informed about the state of affairs in the compensation process, to be involved in the decision-making process, to be treated with dignity and respect, to be acknowledged, and to be taken seriously (Binder, Bergman, & Price, 1990; Shapiro, Buttner, & Barry, 1994; Sternlight & Robbennolt, 2008; Tyler, 1992; Winick, 1998). The literature also acknowledged the finding that some claimants needed more empathic treatment at the beginning of the compensation process than later on, as traffic accident victims are psychologically vulnerable especially in the first few months after the accident, needing practical help, information, and support (Brom, Kleber, & Hofman, 1993). However, the fact that some participants did not want to be involved and preferred the lawyer to be in control, seems to conflict with the literature, as lawyers are generally encouraged to involve clients in decision-making (Binder et al., 1990; Kruse, 2006).

The other three lawyer characteristics that were found in chapter 4, i.e. decisiveness, independence, and expertise, are aspects that the literature had not paid much attention to. Although previous studies discussed the fact that a long claims settlement process could be frustrating (Cotti et al., 2004; Shuman, 2000) and researchers did (marginally) address the issue that lawyers should be careful not to collude with the defence counsel (Schatman, 2009; Sternlight &

Robbennolt, 2008), our study suggests that decisiveness and independence ought to receive more attention as these characteristics may improve lawyer-client interaction. The finding that injured claimants wanted an explanation of what particular heads of damage were compensable and how these were assessed, may be supported by procedural justice literature, indicating the importance of accurate information and explanation (Leventhal, 1980; Bies & Moag, 1986). However, more attention for 'expertise' could be necessary for improving the lawyer-client relationship.

In contrast to the empirical attention for the association between lawyer involvement and claimants' health, the effect of insurance companies on claimants' well-being has not yet been quantitatively examined, nor has it been established how lawyers and insurance companies relate to each other. Therefore, in chapter 5, we examined how claimants perceived the attitude of lawyers and insurance companies. It was found that claimants considered the interaction with the insurance company to be less fair than the interaction with their lawyer. This may be because insurance companies regularly ask (critical) questions. Additionally, the fact that insurance companies often communicate by letter seems not to be beneficial for the interaction, as verbal communication was previously found to increase a sense of interactional justice (Shapiro et al., 1994).

Previous studies had shown conflicting results as to whether non-claim factors could explain the fact that claimants had poorer health than injured non-claimants (chapter 1). In chapter 2, it was found that injured claimants already had lower mental health shortly before or after the accident compared to non-claimants, which suggests that claimants had different individual, injury-related, or accident-related characteristics than non-claimants. However, no strong indication was found for group differences regarding age, gender, education, or employment status, because most of the studies that analysed demographic differences did not find significant differences between groups. Furthermore, evidence was found against the hypothesis that claimants possibly had more pre-injury psychopathology, as one of the two included studies showed that claimants suffered from *fewer* psychological disorders in the past (O'Donnell et al., 2010).

This thesis yielded somewhat mixed results regarding the effect of injury severity. The meta-analysis (chapter 2) did not provide strong evidence that claimants had more severe injuries than non-claimants, as only one of the five studies that analysed injury severity reported that claimants had more severe injuries (Gabbe et al., 2007); the other four studies did not find significant severity differences. Remarkably, severity of injury appeared to be positively associated with procedural justice (chapter 5). This association had not yet been investigated, although, two previous studies had shown that claimants with mild injuries reported greater disability during the compensation process than those with severe injuries (Binder & Rohling, 1996; Sterling, Hendrikz, & Kenardy, 2010). Therefore, it could be possible that claimants with more severe injuries are busier recovering and less occupied with (the fairness of) the compensation procedure compared to claimants with mild injuries. Additionally, claimants with severe injury could have less trouble having their claims accepted by the insurance company than those with minor injuries, as the situation is more clear-cut.

Whiplash injury was not associated with procedural justice (chapter 5), which suggests that claimants with whiplash injury did not consider the compensation process to be less fair or did not feel treated differently by legal professionals than claimants with another type of injury, such as orthopaedic injury. This has not been previously investigated but may correspond to another study in which claimants with whiplash injuries reported a similar mental health status to, for example, those with orthopaedic injuries (although the former did report more pain than the latter; Mayou & Bryant, 2002). In contrast, having trunk/back injury was found to be negatively associated with procedural justice (chapter 5), meaning that claimants with trunk/back injuries considered the compensation process to be less fair than claimants suffering from injuries to other body parts. Although this association has not been previously investigated, a possible explanation could be that claimants with back injuries have more trouble with proving that their injury was caused by the accident, as 70%–85% of people have back pain at some time in their lives (Andersson, 1999).

Improve claimants' well-being

Finally, this thesis aimed to find ways to improve claimants' well-being. One step was to investigate whether procedural justice was associated with well-being, because a positive association could imply that better procedural justice, e.g. the ability for claimants to express their views and feelings and the involvement of claimants in the decision-making process, could enhance claimants' well-being. In organizational settings, it had already been found that procedural justice was associated with workers' well-being (Elovainio, Kivimaki, & Vahtera, 2002). In chapter 5, it was demonstrated that procedural justice was indeed positively associated with the quality of life of claimants in compensation settings. Although the cause and effect of this association were not clear, it was suggested that improving the ability for claimants to express their views and feelings and involving of claimants in the decision-making process, may increase claimants' well-being. On the other hand, as was found in chapter 4, some participants did not want to be involved in the compensation process, so involving claimants in the compensation process may not be good in all cases. Client-centred lawyering requires tailoring, so lawyers should ask clients what they want, also with respect to client involvement.

Furthermore, it was examined whether the well-being of injured claimants in compensation processes could be improved by an interactive e-health website, consisting of (1) information about the different steps in the compensation process, (2) a therapist-assisted, evidence-based problem solving course (e-coach), and (3) frequently asked questions. Chapter 6 reported that the intervention website was positively evaluated in a focus group that included lawyers representing claimants and lawyers representing insurance companies. Also eight 'pilot test' claimants rated the website highly. All indicated that they would use the information and the frequently asked questions module, and three indicated that they would use the e-coach. The effect of the intervention was tested in a randomised controlled trial (RCT) in chapter 7. Although the intervention did have a positive effect on the perceived fairness of the received compensation amount, it did not have an effect on the empowerment and well-being of claimants in compensation processes.

The fact that the website did not increase empowerment nor well-being was in contrast to a previous study showing that the same problem-solving course was effective in reducing anxiety and depression in individuals who were recruited in the general population (Van Straten, Cuijpers, & Smits, 2008). Nor did it support the conclusions of two reviews, showing that e-health interventions in general were effective in increasing self-efficacy, mastery, knowledge, behaviour, and communication in a variety of populations (Aujoulat, d'Hoore, & Deccache, 2007; Samoocha, Bruinvels, Elbers, Anema, & van der Beek, 2010). It seems likely that the intervention did not increase well-being because people did not use the e-coach module enough: only one participant used the e-coach and completed only one lesson. The information module was also not accessed a lot: about 35% did not log in, those who did log in, did so only once or twice, but apparently this was enough to achieve that the intervention group considered the received compensation amount to be more fair. Low website usage did not seem to be caused by dislike of the content or structure of the website, or a lack of its appeal. A possible explanation why the intervention did not increase empowerment is that because empowerment is an interactive process between claimants and legal professionals, maybe the professionals needed to be empowered as well in order to be able to empower their clients (Samoocha, Snels, Bruinvels, Anema, & van der Beek, 2011). In this study, we did not receive signs from claimants that lawyers needed empowerment but this does not mean that participants did not experience any problems. Finally, it could be theorized that participants did not benefit from the intervention because they unconsciously did not want to get better as long as the claims settlement lasted (*secondary gain*; Shuman, 1994). This could explain why participants did not use the e-coach module. Previous studies, however, have shown that claimants in compensation processes have similar treatment participation and outcomes to their non-compensation counterparts (Laffaye, Rosen, Schnurr, & Friedman, 2007; Taylor et al., 2001).

Methodological considerations

The main findings of this thesis should be regarded in the light of some methodological strengths and weaknesses. For instance, countries have different compensation schemes, so the results of the studies may not be suited to other

schemes. For example, the results of the studies based on Dutch tort law (chapter 4, 5, and 7) could not be unqualifiedly generalized to countries that have another (e.g. no-fault) compensation scheme. Similarly, the results of the study about the Victorian no-fault (and common law) compensation scheme (chapter 3) could also not be unqualifiedly generalized to the Dutch tort law setting. In the meta-analysis (chapter 2), all different compensation schemes were lumped together, so this result could be a general finding covering different compensation processes worldwide. However, the meta-analysis suffered from considerable heterogeneity, meaning that the evidence was diverse, which may be due to that same variety in compensation schemes.

A similar problem is that most participants in this thesis were claimants injured in traffic accidents (chapter 3-7), who may experience the compensation process differently from those injured in occupational, medical or sport accidents. For instance, claimants injured in occupational accidents may additionally be burdened by a disrupted relationship with their employer. The meta-analysis (chapter 2) included a majority of traffic accident victims, but also concerned claimants injured in work-related accidents, sport accidents, and even assaults. As argued above, this study may have provided a general finding on different kinds of accidents but, on the other hand, the variety may also have caused the heterogeneity. The final limitation regarding generalizability is that the participants recruited in chapter 5 and 7 (examining the same sample) were older than the average traffic accident victim.

Another methodological issue concerns the study design. The strength of the design of the meta-analysis (chapter 2) was that the follow-up outcome was corrected for the baseline measurement, which has not been done in other meta-analyses of compensation effects (e.g. Binder & Rohling, 1996; Harris et al., 2005). However, the studies that were included in the meta-analysis were found to be of limited quality, for example, because of uncertainty about the exposure to the compensation process and self-reported outcome measures. The study designs of chapters 3 and 5 were observational, which implied that no clear conclusions could be drawn about the causality of the associations (Grimes & Schulz, 2002). The

qualitative study design in chapter 4 entailed limited generalizability, as we searched for variation rather than representativeness (Strauss & Corbin, 1998). The design of the e-health study in chapter 7 was strong, being a randomised controlled trial (RCT), which reduced the likelihood of confounding and selection bias (Concato, Shah, & Horwitz, 2000). The RCT design was especially a strength in this type of study, because previous compensation and health studies did not use an RCT design (Carroll et al., 2011). Furthermore, the use of a control website and blinding of participants to group allocation was also unique particularly for this type of study, as e-health studies normally use waiting list control groups (Eysenbach, 2002).

Some of the studies may possibly have suffered from bias in the recruitment of participants. For example, the studies in the meta-analysis (chapter 2) often did not measure or control for important factors that may have been different between claimants and non-claimants, such as severity of injury, pre-injury health, pre-injury work status, or the extent of blame, which were previously found to be related to well-being (Harris et al., 2009; Littleton et al., 2011). The recruitment in the studies in chapters 5 and 7 were based on self-selection, and possibly only very satisfied clients decided to enrol. Only the study in chapter 3 did not suffer from selection bias or selective drop-out, as all individuals that lodged a compensation claim had been registered in a database. However, the limitation of chapter 3 was that the effect of the claim factors could not be accurately investigated, because common law claims were lodged in addition to no-fault claims and legal disputes concerned a combination of both lawyer involvement and VCAT appeals.

A final methodological remark concerns the outcome measures that were used in the studies. The outcomes of chapters 2, 5 and 7 were self-reported by participants, which is generally considered to be less objective than outcomes that were clinically administered (Wells et al., 2012). The study in chapter 3 used the number of health care services as an outcome measure, which were objectively registered in the database, based on paid services. The limitation, however, was that the registration may be incomplete because, for example, some claimants may have been compensated by private health insurance. The limitation of the

qualitative study (chapter 4) was that there was no health outcome measure, as this study interviewed claimants about preferred lawyer characteristics. The problem with the procedural justice scale, which was used in chapter 5 and 7, was that this scale may not yet be applicable for claimants who just started the compensation procedure, as this questionnaire also asked whether they were able to appeal and whether the compensation process is without prejudices. The strength of the outcome measures of the intervention study (chapters 6 & 7) was the extensiveness, i.e. assessing both physical and mental outcomes, and also knowledge, work ability and perceived fairness. An important limitation of that study, however, was the low website usage.

Implications

This thesis may yield some implications for legal professionals, psychologists and victim support services. Legal professionals are encouraged to be alert to mental vulnerability of their clients (chapter 2), and possibly may have to act more empathically (chapter 4) and be responsive to whether clients have any immaterial needs. So far, legal professionals focus almost exclusively on financial compensation (Akkermans, 2009). Furthermore, the results of chapter 3 may imply that legal professionals should be careful about subjecting their clients to multiple medical assessments, as this may hamper claimants' well-being and foster a sick role.

Legal professionals could also play an important role in improving claimants' well-being. For example, the association found between procedural justice and claimants' well-being may suggest that legal professionals should increase the opportunity for claimants to express their views and feelings and involve them more in the compensation process (chapter 5). This is particularly true for people with mild injuries and trunk/back injuries, as these claimants seem to perceive the compensation process to be less fair (chapter 5). However, as was shown in chapter 4, some claimants did not want to be involved in the compensation process, so involvement should be discretional. Lawyers, specifically, could pay attention to their communication, empathy, decisiveness, independence, and expertise in order to enhance lawyer-client interaction and claimant satisfaction

(chapter 4). However, chapter 5 of this thesis showed that the interaction with lawyers was already valued relatively high, and that it was the insurance company that needed to improve their attitude towards injured claimants, e.g. by communicating directly rather than only in writing (chapter 5). Finally, legal professionals could encourage injured claimants to read the information on www.gripopmijnzaak.nl, as the website increased claimants' perceived fairness about the received compensation amount (chapter 7).

Psychologists and victim support services may learn from this thesis that injured claimants have more mental health problems than injured non-claimants, which may be caused by the stressful compensation process (chapter 2). Clinical psychologists seem to recognize the negative effect of compensation processes on health, however, they tend to attribute this effect mostly to the possibility that claimants prolong the illness for financial gain (Van Egmond, 2005), rather than to the stress that could be caused by the compensation process. Psychologists may become more sensitive to the likelihood that their clients' mental health is influenced by the anti-therapeutic aspects of the compensation process, such as having to prove causality between accident and injury, to assert their impairment, or to argue about the extent of the compensation amount. The impact of burdening aspects like these could be addressed by problem solving techniques, e.g. by tackling thinking errors, or by teaching communication techniques (chapter 6). However, psychologists may also learn from this study that some claimants probably may not comply with the therapy and therefore may not benefit from cognitive behavioural techniques (chapter 7).

Future research

More research is needed on many aspects of this thesis. Firstly, a greater understanding of the subject is necessary in order to draw firm conclusions about the effect of compensation on health. Although a meta-analysis was conducted (chapter 2), more research is required in order to reduce heterogeneity and possible selection biases. To solve the problem of heterogeneity, more high quality compensation studies are needed, based on different compensation schemes and different kinds of claimants, measuring the outcomes at standardized time points.

Additionally, noise can be reduced by delivering high quality study designs, e.g. by thoroughly describing the type of compensation scheme, and by accurately determining the involvement in compensation processes. To minimize selection bias, researchers should precisely investigate and control for baseline differences between the injured participants who are involved in a compensation process and those who are not. Additionally, it is important to learn more about the injured individuals who are not claiming: do they specifically choose not to lodge a claim, are they not eligible to lodge a claim (e.g. in the tort system, somebody else needs to be liable), or are they unaware that they are eligible to lodge a claim.

Secondly, further research is needed to establish what is causing the compensation process to hamper recovery. Although this thesis investigated the relationship between some claim factors and health (chapter 3), examined the attitude of lawyers (chapter 4), compared claimants' interaction with lawyers to their contact with insurers (chapter 5), and determined what non-claim factors were associated with perceived fairness (chapter 5), more studies are needed to be able to draw conclusions, as there is much conflicting evidence (chapter 1).

One of the claim factors cited in chapter 1 as needing further examination is the effect of claim settlement. As previous studies found contrasting results regarding the association between claim settlement and health, a meta-analysis could provide a more definite answer to the matter. The effect of claim settlement on health could also be investigated by examining the association between distributive justice (i.e. the perceived fairness of the received compensation amount) and well-being. Furthermore, this thesis found five preferred lawyer characteristics that were assumed to be associated with claimant satisfaction (chapter 4), but the question whether there is indeed an association between preferred lawyer characteristics and claimants' well-being needs further investigation. Future researchers who plan to investigate the association between lawyer-client interaction and well-being can learn from health science research, which has a rich tradition of investigating doctor-patient communication (see e.g. Beck, Daughtridge, & Sloane, 2002).

It is possible that *quantitative* designs are unsuited to measuring the effect of certain burdening aspects of the compensation process, such as having to prove liability and causality, assert impairment, negotiate benefits based on individual circumstances, or endure financial problems because insurance companies delay their payments. Instead, more *qualitative* studies might need to be conducted. It would also be interesting to develop a valid grading system to classify the extent to which claimants have been 'exposed' to adversarial aspects of the compensation process.

Several studies in this thesis have referred to the possibility that the compensation effect could be explained by secondary gain or secondary victimisation. Which of these explanatory theories holds the most truth and/or embodies the greatest effect can probably not be quantitatively investigated, unless it could be assumed that secondary gain reveals itself in hampered physical recovery and that secondary victimisation reduces mental well-being. No literature support was found for such a hypothesis, although one study suggested that an effect of litigation status on employment status would imply secondary gain, whereas an effect of litigation status on pain would suggest a potential mediation role of litigation stress (Swartzman, Teasell, Shapiro, & McDermid, 1996). In order to investigate this hypothesis, a meta-analysis could be conducted comparing the compensation effect on mental and physical outcome measures.

Thirdly, more research is definitely needed on improving claimants' well-being. This thesis found that numerous assessments were negatively associated with health. Accordingly, it could be investigated whether restrictions or alternatives in regard to medical assessments might improve well-being. However, such an investigation appears complicated. A more realistic research option may be to set up an RCT study, comparing a more client-friendly claims settlement procedure to claims settlement as usual (see e.g. Schaafsma, De Wolf, Kayaian, & Cameron, 2012). Client-friendly claims settlement could for instance entail more verbal communication instead of only written correspondence, or other improvements in claim procedure protocols.

The e-health intervention improved claimants' satisfaction with the monetary outcome of the compensation procedure but not their well-being. Nevertheless, we would encourage researchers to conduct a new study, but this time among a subgroup of claimants who actually require mental support for problems regarding accident, injury, or compensation stress. In such an efficacy study, more attention could be paid to the e-coach module in order to improve adherence. Additionally, it could be recommended to examine the effects of the information and e-coach module separately, as they may have different effects.

Conclusion

The results of this thesis allow us to conclude that being involved in a compensation process has a negative effect on mental health. This seemed to be caused by the adversarial character and proving liability in fault-based compensation schemes and by numerous medical assessments, but not by being involved in legal disputes or by the duration of the compensation process. It could not be concluded whether lawyers had an effect on claimants' health, although some lawyer characteristics are likely to have an effect on client satisfaction. The impact of insurance companies on claimants' health could also not be established based on this thesis, but it was concluded that the interaction with insurance companies is perceived to be less fair than the interaction with their lawyers. Injury severity did not seem to explain the lower mental health of claimants at baseline, but it appeared to affect the perceived fairness of the compensation process. Type of injury, i.e. trunk/back injury, had an effect on the perceived fairness of the compensation process, but whiplash injury did not. Finally, it can be concluded that we did not succeed in improving claimants' well-being: although the internet intervention increased the perceived fairness of the compensation amount, it was not used enough to improve empowerment or well-being. It was suggested that improving procedural justice, i.e. the ability to express views and feelings and involvement in the decision-making process, could improve claimants' well-being.

This thesis showed some interesting new results. However, there are still a lot of other factors that need to be investigated in relation to the claimants' health. It is important to conduct much more well-designed research in order to be able to

improve the health of injured claimants. Every year, in the Netherlands alone, about 50.000 people lodge a compensation claim, which is only a fraction of the number of claimants worldwide, so considerable societal interests are at stake. People should not be hampered by a process that is actually designed to promote recovery. Researchers and legal practitioners should make an effort to solve this problem.

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Summary

Each year in the Netherlands, 50.000 people lodge a compensation claim arising from an accident. Previous research showed that claimants involved in a compensation process recover less well than those who do not lodge a claim. This means that the well-being of thousands of people is at stake. However, not much is known about this problem. The aim of this thesis is to (1) learn more about the effect of the compensation process on health, (2) investigate the causes of the negative effect on claimants' health and (3) examine whether claimants' well-being can be improved.

In the first chapter, an overview is presented of the empirical literature investigating the effect of compensation processes on claimants' health. The majority of studies report that injured claimants have poorer health than injured non-claimants. However, the design of these studies is subject to criticism. The overview also demonstrates which claim and non-claim factors are investigated in relation to this poorer health. These factors include e.g. fault versus no-fault based compensation schemes, the duration of the process, pending versus settled claims, and the impact of lawyers, insurance companies and medical experts. Other researchers suggest that the bigger health problems could be explained by, for example, greater severity of the injuries or more traumatic accidents. However, the research generally reports conflicting or insufficient evidence, making it difficult to draw a conclusion about the causes. Finally, it seems possible to improve the health of claimants by making the handling of compensation claims more efficient and client-friendly, as was shown by an Australian insurance company and a Dutch loss adjuster.

Chapter 2 describes a meta-analysis investigating whether the compensation process has a negative effect on mental health. Ten prospective cohort studies were

included. The first finding is that the compensation group already had more mental health complaints at baseline compared to the non-compensation group. A possible explanation could be that claimants have more severe injuries, experienced more traumatic accidents, or have a greater sense of blame towards the wrongdoer than injured people who do *not* claim compensation. However, the demographic variables described in the included studies did not provide strong support for any differences in demographic, accident or injury characteristics. Accordingly, the reason for the mental health difference between groups remains unclear. The second finding is that mental health between baseline and post measurement showed less improvement in the compensation group compared to the non-compensation group. Two possible explanations for this are that: 1) the claimants unconsciously do not recover from their injury as long as the compensation claim has not been settled, as the compensation amount is dependent on the severity of injury (secondary gain), or 2) recovery is hampered by the stress of the compensation process and the attitude of legal professionals (secondary victimisation). Based on this meta-analysis, no conclusion can be drawn about which explanation is right. The findings from the meta-analysis should be interpreted with caution because the overall quality of the ten included studies is limited.

In chapter 3, it was investigated whether claim factors can explain the negative effect of being involved in a compensation process on claimants' health. The sample consisted of 68,911 claimants who lodged a compensation claim at the Transport Accident Commission (TAC) in Victoria, Australia, between 2000 and 2005. The claim factors that were examined were (1) no-fault versus fault-based compensation schemes, (2) the number of independent medical assessments, and (3) legal disputes. Claimants involved in fault-based claims made greater use of health care services than those involved in no-fault claims, which could mean that fault-based schemes are more burdensome because the onus is on claimants to prove liability and negotiate (lump sum) damages. However, the association was too small to be clinically relevant. Claimants who were medically assessed numerous times used more health care services in the five years post-accident than those who were assessed less often. Therefore, it can be cautiously concluded that

undergoing medical assessments has a negative effect on claimants' health. Finally, claimants involved in legal disputes used less health care than those not involved in legal disputes, which could suggest that being involved in a court procedure is somewhat beneficial for health, but again the standardised beta was too small to be clinically relevant. Further research is needed to determine the causal relationship between claim factors and health.

Chapter 4 concerns the association between lawyer engagement and poorer claimant well-being. In order to learn more about lawyer-client interaction, 21 traffic accident victims were interviewed about their lawyer. Most claimants wanted to be involved in the decision-making process (although some explicitly did *not* want to be involved). They expressed a preference for information about what was happening in the compensation process and what would happen in the future, face-to-face communication once in a while (at least at the start and subsequently once a year), and frequent updates (preferably once every two months). Claimants wanted to be treated with dignity and respect, to be acknowledged, understood and taken seriously. Clients indicated that lawyers should be pro-active and decisive: some people were burdened by having to keep their lawyer on his toes or call him to get things done. Lawyers should behave independently toward the insurance company, i.e. they should not give the impression that they do not want to rub the insurance company up the wrong way. Interviewees appreciated being informed about the types of damages eligible for compensation and how such compensation was assessed. Good lawyers also had a lot of professional experience, specialist knowledge about personal injury and good organizational skills. To summarize: lawyers ideally should communicate directly and frequently, be empathic and decisive, act independently from the insurer and demonstrate expertise. Communication skills and empathy correspond with aspects already discussed in the literature, whereas decisiveness, independence and expertise have previously been addressed only marginally. Quantitative research is necessary to establish whether these preferred lawyer characteristics also emerge in a generalizable population and to investigate whether the attitude of lawyers indeed has an effect on the well-being of personal injury victims.

Chapter 5 investigates the claimants' perceived fairness of the compensation process, the information provided, and the interaction with lawyers and insurance companies, in relation to the claimants' quality of life. The sample consisted of 176 participants who were injured in traffic accidents and who were involved in a Dutch compensation process. The participants were recruited via three claims settlement offices. They perceived the interaction with insurance companies to be less fair than the interaction with lawyers. A likely explanation for this is that lawyers are seen as allies, whereas insurance companies, with their critical questioning, can make the claimants feel being mistrusted. Furthermore, insurers generally communicate in writing only, which also creates interactional distance. Claimants with mild injuries considered the compensation process to be less fair than those with severe injuries. Claimants with mild injuries are probably more focused on the compensation process, whereas seriously injured claimants are predominantly focused on recovering. Moreover, the damages arising from severe injuries are often more clear-cut. Claimants with trunk/back injuries considered the compensation process to be less fair than those with other injuries, which could be explained by the fact that 80% of the general population suffers from back injury at some point in life, so it may be difficult for some claimants to prove that their back injury was caused by the accident. Whiplash injuries and duration of the compensation process were *not* associated with procedural justice. Finally, procedural justice was found to be positively correlated with quality of life, which could imply that it is possible to improve claimants' health in compensation processes by enhancing procedural justice, for example, by enabling claimants to express their views and feelings or involving them in the decision-making process.

Chapter 6 presents the protocol design of the study that aims to empower claimants in a compensation process by means of an internet intervention. The study is a randomized controlled trial (RCT), in which participants 0 to 2 years post-accident are randomized to either the intervention or a control group. The intervention group received access to the intervention website, which consisted of (1) an information module with information about definitions, steps, duration and bottle-necks in the different phases in the compensation procedure, and also information about lawyers, insurance companies, social security and dispute resolution, and (2)

an e-coach module, which was an evidence-based, therapist-assisted problem solving therapy of five lessons to cope with problems that can be experienced with the accident, the injury or the claims settlement process. The control group received access to the control website with hyperlinks to commonly available information only. The website was evaluated by a focus group involving lawyers and insurers and by a pilot test with claimants. The focus group expected that the intervention would meet the needs of claimants and would improve lawyer-client interaction. The claimants in the pilot test graded the website well. All 8 indicated they would use the information module, and 3 said they would use the e-coach module. The outcome measures were empowerment, self-efficacy, perceived justice, extent of burden, well-being, capacity to work, knowledge, amount of damages. Upon completion of the study, the lawyer was asked to grade the communication with the participant. Outcomes were measured through self-reported, online questionnaires at the start of the research, and subsequently after 3, 6 and 12 months.

The aim of chapter 7 was to examine whether the web-based intervention described in chapter 6 could improve the well-being of injured claimants in compensation processes. A total of 176 participants completed the baseline questionnaire and were randomized into the intervention or the control group. After a follow-up of one year, the data analysis revealed that those who had access to the intervention website and whose claim was settled during the study considered their compensation amount to be fairer than those who had access to the control website (and whose claim was settled). However, the internet intervention did not improve the health of injured claimants in compensation processes. The most logical explanation for the fact that there was no effect on health seems to be the low (e-coach) website usage: only 63% of participants logged in, and most of them did so only once or twice. Only one participant attempted the e-coach course and completed only one lesson. Low usage could not be explained by any dissatisfaction with the website, but participants indicated on average that they did not need an e-coach. Lower than expected e-coach usage may have been caused by the fact that participants in the study were somewhat older than average. Making the information generally accessible could be worth

considering. It is worthwhile investigating whether the intervention may yield an effect on health in a another sample, for example in people who are seeking mental health support.

Chapter 8 discusses the results of this thesis. The first aim of the thesis was to learn investigate whether being involved in a compensation process has a negative effect on health. This was confirmed in a meta-analysis. The second objective was to gain knowledge about the likely causes for the negative effect. This thesis demonstrated that medical assessments were associated with health care utilization. Furthermore, insurance companies can improve their interaction with claimants, and claimants with mild or trunk/back injuries seemed to perceive the compensation process to be less fair than those with severe injuries or injuries to other body parts. The third goal was to improve claimants' well-being and empowerment via an interactive website. However, we did not succeed in this, probably because not enough use was made of the intervention (particularly the e-coach module). The overall limitation of this thesis is that most studies do not permit conclusions to be drawn about the causality of an association. An important strength is that the effect of compensation processes on health was investigated both qualitatively and quantitatively, that both a meta-analysis and a randomized controlled trial were conducted, and that a variety of physical, mental, knowledge and justice outcome measures were applied. Legal professionals could learn from this thesis that certain methods of claims settlement can cause distress, and that their services and communication should be as client-centred as possible. Psychologists could pay more attention to the anti-therapeutic aspects of the compensation process and, for example, offer problem solving techniques to address this. In general, research and practice should pay more attention to the negative effect of compensation processes on health, because people should not be hampered by a process that is actually designed to promote recovery.

Samenvatting

Ieder jaar worden in Nederland 50.000 letselschadeclaims ingediend na een ongeval. Uit eerder onderzoek is gebleken dat mensen die in een letselschade-afwikkeling betrokken zijn minder goed van hun letsel herstellen dan mensen met hetzelfde letsel die niet zo'n juridische procedure starten. Dit betekent dat het welzijn van duizenden mensen op het spel staat. Er is echter weinig bekend over dit probleem. Het doel van dit proefschrift is om (1) meer duidelijkheid te krijgen over het effect van de letselschadeafwikkeling op gezondheid, (2) meer onderzoek te doen naar wat de oorzaak kan zijn voor dit gezondheidsprobleem, en (3) na te gaan hoe de gezondheid van letselschadeslachtoffers kan worden verbeterd.

In het eerste hoofdstuk wordt een overzicht gegeven van alle empirische literatuur over het onderwerp. De meerderheid van de studies laat zien dat mensen die betrokken zijn in een letselschadeafwikkeling slechter herstellen dan mensen met dezelfde letsels die *niet* claimen. Er is echter wel wat kritiek op het ontwerp van de studies. Ook wordt een overzicht gegeven welke claim en niet-claim gerelateerde factoren zijn onderzocht in relatie tot de verminderde gezondheid bij claimanten, zoals fault versus no-fault letselschadeprocedures, de lengte van de procedure, lopende versus afgewikkelde zaken, of de invloed van belangenbehartigers, verzekeraars en medisch deskundigen. Andere onderzoekers suggereren dat de verminderde gezondheid kan worden verklaard door ernstigere letsels of traumatischere ongevallen. Studies rapporteren echter voornamelijk tegenstrijdig of te weinig bewijs, dus er kan geen conclusie worden getrokken over de oorzaak. Tot slot blijkt het mogelijk te zijn om de gezondheid van claimanten te verbeteren door de letselschadeafwikkeling efficiënter en klantvriendelijk te maken, zoals een Australische verzekeraar en een Nederlands expertisebureau lieten zien.

Hoofdstuk 2 is een meta-analyse, waarin wordt onderzocht of de letselschade-afwikkeling een negatief effect heeft op mentale gezondheid. Tien prospectieve studies werden geïncludeerd. De eerste bevinding is dat mensen die een letsel-schadeprocedure starten al bij de nulmeting meer mentale klachten hebben dan de mensen die geen claim indienen. Een mogelijke verklaring zou kunnen zijn dat claimanten ernstigere letsels hebben, een traumatischer ongeval hebben meegemaakt, of meer verwijt voelen jegens de dader dan slachtoffers die geen letselschade claimen. De geïncludeerde studies lieten echter geen duidelijke verschillen zien qua demografie, ongeval of letsel, dus de reden voor het verschil in mentale gezondheid tussen de twee groepen blijft onduidelijk. De tweede bevinding is dat, na correctie van het verschil op baseline, claimanten er in de nameting nog steeds mentaal minder goed aan toe waren dan mensen die geen letselschade claimen. Twee mogelijke verklaringen hiervoor zijn dat: 1) claimanten onbewust niet herstellen zolang de letselschadeafwikkeling loopt, omdat de schadevergoeding afhankelijk is van de ernst van het letsel (secundaire ziektewinst), of 2) het herstel wordt belemmerd door stress als gevolg van de letselschadeprocedure en de houding van juristen (secundair slachtofferschap). Op basis van deze meta-analyse kan geen conclusie worden getrokken welke verklaring de juiste is. De bevindingen van de meta-analyse moeten voorzichtig worden geïnterpreteerd omdat de kwaliteit van de tien geïncludeerde studies over het algemeen beperkt is.

In hoofdstuk 3 is onderzocht of claim factoren het negatieve effect van de letselschadeafwikkeling op de gezondheid van claimanten kunnen verklaren. De onderzoekspopulatie bestond uit 68,911 claimanten die tussen jaar 2000 en 2005 een letselschadeclaim hebben ingediend bij de Transport Accident Commission (TAC) in Victoria, Australië. De claim factoren die werden onderzocht waren (1) no-fault versus fault-based letselschadeprocedures, (2) het aantal onafhankelijke medische beoordelingen, en (3) juridische geschillen. Claimanten in fault-based procedures gebruikten iets meer gezondheidszorg dan in no-fault procedures, wat zou kunnen betekenen dat fault-based procedures belastender zijn omdat claimanten aansprakelijkheid moeten bewijzen en moeten onderhandelen over de lumpsum schadevergoeding. De relatie was echter te klein om klinisch relevant te

zijn. Claimanten die verschillende malen medisch werden beoordeeld, gebruikten in de vijf jaar na ongeval meer gezondheidzorg dan degenen die minder vaak werden beoordeeld, dus er wordt voorzichtig geconcludeerd dat medische beoordelingen een negatief effect hebben op de gezondheid van claimanten. Claimanten met juridische geschillen gebruikten iets minder zorg dan degenen die niet in een geschil verwikkeld waren, wat suggereert dat het betrokken zijn in een rechtszaak voordelig zou zijn voor gezondheid, maar wederom was de relatie te zwak om klinisch relevant te zijn. Verder onderzoek is nodig om de causale relatie tussen claim factoren en gezondheid vast te stellen.

Hoofdstuk 4 gaat over het feit dat het in de arm nemen van een belangenbehartiger gerelateerd is aan verminderd welzijn van claimanten. Om meer te weten te komen over deze correlatie, zijn 21 verkeersslachtoffers geïnterviewd over hun belangenbehartiger. De meeste cliënten wilden betrokken worden in de letselschadeafwikkeling (al wilden sommigen dat uitdrukkelijk niet). Ze hadden de voorkeur voor informatie over wat de stand van zaken was en wat hen in de toekomst te wachten stond, af en toe face-to-face communicatie (op zijn minst in het begin en daarna eens per jaar), en frequente updates (bij voorkeur eens per twee maanden). Claimanten wilden met waardigheid en respect worden behandeld, erkenning krijgen, begrepen worden en serieus genomen worden. Cliënten gaven aan dat belangenbehartigers proactief en daadkrachtig moeten zijn: sommige geïnterviewden hadden last van het feit dat ze hun belangenbehartiger achter de broek aan moesten zitten of dat ze moesten bellen om hem aan het werk te zetten. Belangenbehartigers moesten zich onafhankelijk opstellen ten opzichte van de verzekeringsmaatschappijen, dat wil zeggen dat ze niet de indruk moesten wekken dat ze de verzekeraar niet tegen de haren in wilden strijken. De deelnemers vonden het erg prettig als hen was verteld welke de schadeposten ze recht op hadden en hoe de schadevergoeding was opgebouwd. Ook beschikten goede belangenbehartigers over veel professionele ervaring, specialistische kennis over letselschade en goede organisatorische vaardigheden. Samengevat: een goede belangenbehartiger communiceert direct en frequent, is empathisch en daadkrachtig, heeft een onafhankelijke houding ten opzichte van de verzekeringsmaatschappij en is deskundig. Communicatievaardigheden en empathie komen overeen met de aspecten die al

eerder in de literatuur zijn besproken, terwijl daadkracht, onafhankelijkheid en expertise voorheen alleen marginaal werden genoemd. Kwantitatief onderzoek is nodig om vast te stellen of deze wenselijke eigenschappen van belangenbehartigers ook naar boven komen in een generaliseerbare populatie en om te onderzoeken of de houding van belangenbehartigers ook daadwerkelijk effect heeft op het welzijn van letselschadeslachtoffers.

In hoofdstuk 5 wordt de rechtvaardigheid van de letselschadeprocedure, de informatievoorziening, en de interactie met belangenbehartigers en verzekeringsmaatschappijen onderzocht in relatie tot de kwaliteit van leven van claimanten. De steekproef bevatte 176 deelnemers die letsel hadden opgelopen na een verkeersongeval en die betrokken waren in een Nederlandse letselschadeafwikkeling. Deelnemers werden gerekruteerd via drie letselschadekantoren. Deelnemers ervoeren de interactie met verzekeraars als minder rechtvaardig dan de interactie met belangenbehartigers. Een mogelijke verklaring hiervoor is dat belangenbehartigers worden gezien als bondgenoten, terwijl verzekeraars met hun kritische vragen de claimanten een gevoel van wantrouwen kunnen geven. Ook communiceren verzekeraars vaak niet direct maar via brieven, wat ook niet ten goede komt aan een rechtvaardige interactie. Claimanten met milde letsels vinden de letselschadeprocedure minder rechtvaardig dan degenen met ernstige letsels. Waarschijnlijk zijn claimanten met mildere letsels meer gefocust op de letselschadeprocedure, terwijl mensen met ernstigere letsels voornamelijk bezig zijn met herstellen. Ook zijn de schadeposten bij ernstigere letsels vaak duidelijker. Claimanten met romp/rug klachten vonden de procedure minder rechtvaardig dan mensen met letsels aan andere lichaamsdelen. Dit zou verklaard kunnen worden door het feit dat 80% van de algemene bevolking gedurende het leven rugklachten ervaart, dus sommige claimanten kunnen moeite hebben met aantonen dat de rugklachten zijn veroorzaakt door het ongeval. Whiplash letsel en looptijd van de letselschadeafwikkeling hadden geen effect op procedurele rechtvaardigheid. Tot slot was procedurele rechtvaardigheid gecorreleerd met kwaliteit van leven, wat zou kunnen betekenen dat de gezondheid van claimanten kan worden verbeterd door procedurele rechtvaardigheid te bevorderen,

bijvoorbeeld door claimanten de mogelijkheid te bieden om hun verhaal te doen of claimanten te betrekken in het beslissingsproces.

Hoofdstuk 6 beschrijft de opzet van de studie die als doel heeft letselschadeslachtoffers met een internet interventie te empoweren. De studie is een gerandomiseerde trial, waarin deelnemers 0-2 jaar na het ongeval random worden toegewezen aan ofwel de interventie ofwel de controle groep. De interventie groep kreeg toegang tot de interventie website bestaande uit (1) een informatie module met informatie over definities, stappen, doorlooptijd en knelpunten van de verschillende fasen in de letselschadeafwikkeling, informatie over belangenbehartigers, verzekeringsmaatschappijen, sociale zekerheid en manieren voor conflict oplossing, en (2) een e-coach module: een evidence-based, oplossingsgerichte therapie van vijf lessen om met begeleiding te leren omgaan met problemen die worden ervaren met het ongeval, het letsel of de letselschadeafwikkeling. De controle groep kreeg toegang tot de placebo website met alleen hyperlinks naar algemeen beschikbare informatie. De website werd geëvalueerd door een focusgroep met belangenbehartigers en verzekeraars en een pilot test met claimanten. De focusgroep deelnemers verwachtten dat de interventie tegemoet zou komen aan de behoeften van claimanten en de interactie tussen belangenbehartiger en cliënt zou verbeteren. De claimanten die de website testten, beoordeelden hem goed. Alle acht gaven aan dat ze de informatie module zouden gebruiken, en drie zeiden dat ze de e-coach module zouden gebruiken. De gekozen uitkomstmaten zijn empowerment, zelfvertrouwen, gevoel van rechtvaardigheid, mate van belasting, welzijn, werkvermogen, kennis, hoogte van de schadevergoeding. Na afloop van het onderzoek werd de belangenbehartiger gevraagd de communicatie met de deelnemer te beoordelen. De uitkomsten werden gemeten met zelfgerapporteerde online vragenlijsten bij aanvang van het onderzoek, en vervolgens na 3, 6 en 12 maanden.

Het doel van hoofdstuk 7 was te onderzoeken of de internet interventie beschreven in hoofdstuk 6 het welzijn van letselschadeslachtoffers zou kunnen verbeteren. In totaal vulden 176 deelnemers de nulmeting in en zij werden gerandomiseerd in de interventie of de controle groep. De deelnemers konden gedurende een jaar

gebruik maken van de website. Na een jaar bleek dat de deelnemers in de interventie groep wiens claim was afgewikkeld de ontvangen schadevergoeding rechtvaardiger vonden dan degene in de controle groep (van wie de letselschade was afgerond). De interventie had echter geen effect op het welzijn. De meest logische verklaring voor het feit dat er geen effect op welzijn werd gevonden, is dat de (e-coach) website te weinig werd gebruikt: slechts 63% van de deelnemers logde in, en de meesten deden dat slechts een of twee keer. Slechts een deelnemer probeerde de e-coach cursus en volgde maar een les. Het lage website gebruik werd niet veroorzaakt door het uiterlijk of de structuur van de website, maar deelnemers gaven over het algemeen wel aan de e-coach niet nodig te hebben. Misschien is het gebruik ook lager uitgevallen omdat de deelnemers iets ouder waren dan gemiddeld. Het is de moeite waard om te onderzoeken of de website het welzijn kan verbeteren in een andere steekproef, bijvoorbeeld bij mensen die psychische ondersteuning zoeken.

Hoofdstuk 8 bediscussieert de resultaten van dit proefschrift. Het eerste doel van het proefschrift was om te weten te komen of het betrokken zijn in een letselschadeafwikkeling een negatief effect heeft op het geestelijk welzijn van letselschadeslachtoffers. Dit werd bevestigd. Het tweede doel was om inzicht te krijgen wat de oorzaken konden zijn voor het negatieve effect. Dit proefschrift toonde aan dat meerdere medische beoordelingen een negatief effect lijken te hebben op gezondheid. Verder bleek dat verzekeringsmaatschappijen hun interactie met claimanten kunnen verbeteren en dat claimanten met milde of romp/rug klachten de letselschadeprocedure minder rechtvaardig vinden dan mensen met ernstige klachten of letsel aan andere lichaamsdelen. Het derde doel was om het welzijn van letselschadeslachtoffers te verbeteren door middel van een interactieve website, maar dat is niet gelukt, waarschijnlijk omdat de interventie (met name de e-coach module) niet vaak genoeg werd gebruikt. De algemene beperking van dit proefschrift is dat door het design van de meeste studies geen uitsluitsel kan worden geven over causaliteit van een bepaald verband. Een belangrijk pluspunt is dat het effect van de letselschadeafwikkeling op gezondheid zowel kwalitatief als kwantitatief is onderzocht, er zowel een meta-analyse als een randomized controlled trial is uitgevoerd, en dat er zowel fysieke, mentale, kennis

en rechtvaardigheid uitkomstmaten zijn gebruikt. Juristen zouden van dit proefschrift kunnen leren dat hun manier van letselschade afwikkelen stressvol kan zijn en dat ze dus hun handelen en communicatie cliënt vriendelijker kunnen maken. Psychologen zouden meer aandacht kunnen besteden aan de antitherapeutische aspecten van de letselschadeafwikkeling en ze zouden daar oplossingsgerichte technieken voor kunnen gaan aanreiken. In zijn algemeenheid moet er vanuit het onderzoek en de praktijk meer aandacht komen voor het negatieve effect van de letselschadeafwikkeling op gezondheid, want mensen mogen geen slachtoffer worden van een procedure die bedoeld is om herstel te bevorderen.

About the author

Nieke Elbers was born on 22 July 1983 in ‘s-Hertogenbosch. After completing secondary school ‘Stedelijk Gymnasium’ in 2001, she studied (neuro)psychology at Maastricht University. During her studies, she conducted research at Sussex University in the UK. Because of her interest in psychology and law, she joined the law faculty of the VU University in 2006, where she investigated the procedural problems with assigning medical experts in the judiciary. From 2008 to 2012, Nieke has been working as a PhD researcher at the law faculty of the VU University, examining the effect of compensation processes on injured claimants’ health. In addition, she was a visiting scholar at the Institute for Safety, Compensation and Recovery Research in Melbourne for three months, analysing the impact of “fault” on health service use outcomes. Currently, she is a post doctoral researcher at the VU University.

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Presentations

- Transport Accident Commission, Geelong, Australia (30 November 2012)
- Motor Accidents Authority's Medical and Claims Assessors Conference, Sydney, Australia (16 November 2012).
- Motor Accidents Authority, Sydney, Australia (15 November 2012)
- Motor Accident Insurance Commission, Brisbane, Australia (12 November 2012)
- Australasian Compensation Health Research Forum, Auckland, New Zealand (9 November 2012).
- Law & Society Association conference, Honolulu, Hawaii (5 June 2012).
- International Society for Research on Internet Interventions conference, Sydney, Australia (7 April 2011).
- Non-Adversarial Justice conference, Melbourne, Australia (7 May 2010).
- International E-mental Health Summit, Amsterdam (16 October 2009).

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