The relationship between perceived injustice and the working alliance: a cross-sectional study of patients with persistent pain attending multidisciplinary rehabilitation

Whitney Scott, Maria Milioto, Zina Trost & Michael J. L. Sullivan

To cite this article: Whitney Scott, Maria Milioto, Zina Trost & Michael J. L. Sullivan (2016): The relationship between perceived injustice and the working alliance: a cross-sectional study of patients with persistent pain attending multidisciplinary rehabilitation, Disability and Rehabilitation, DOI: 10.3109/09638288.2015.1129444

To link to this article: http://dx.doi.org/10.3109/09638288.2015.1129444

Published online: 23 Jan 2016.
RESEARCH PAPER

The relationship between perceived injustice and the working alliance: a cross-sectional study of patients with persistent pain attending multidisciplinary rehabilitation

Whitney Scott a, Maria Milioto b, Zina Trost c and Michael J. L. Sullivan d

aInstitute of Psychiatry, Psychology, and Neuroscience, King’s College London, London, UK; bCentre d’Evaluation et de Réadaptation de l’Est, Montréal, Canada; cDepartment of Psychology, University of Alabama, Birmingham, USA; dDepartment of Psychology, McGill University, Montréal, Canada

ABSTRACT

Purpose Accumulating research suggests that perceived injustice is a risk factor for adverse recovery following painful injury. Presently, however, little is known about the processes by which perceived injustice influences rehabilitation outcomes. It is plausible that perceived injustice and associated anger impact rehabilitation outcomes by compromising the quality of the therapeutic working alliance; however, research has not previously examined the relationship between perceived injustice and the working alliance. Therefore, the present study investigated the association between perceived injustice, anger, and the working alliance. Methods Sixty-six patients with persistent pain following musculoskeletal injury participated in this study. All participants were enrolled in a standardized multidisciplinary rehabilitation programme. Participants completed self-report measures of perceived injustice, pain intensity, disability, anger intensity and regulation style, depressive symptoms, and a measure of the working alliance with their principal rehabilitation clinician. Each participant’s principal clinician also completed the working alliance measure. Results Greater perceptions of injustice were associated with poorer client ratings of the working alliance. Results also showed that anger expression mediated the association between perceived injustice and the working alliance. Conclusion Strategies to enhance the working alliance between rehabilitation professionals and clients with elevated levels of perceived injustice are needed.

IMPLICATIONS FOR REHABILITATION

- Perceived injustice is associated with poor progress in rehabilitation programmes for people with musculoskeletal pain following injury.
- Perceived injustice is negatively associated with the quality of the therapeutic working alliance.
- Strategies to enhance the working alliance between rehabilitation professionals and clients with elevated levels of perceived injustice are needed.

Introduction

Accumulating research suggests that, for some individuals, life following painful injury might be experienced with a sense of injustice.[1] In the context of painful injury, perceived injustice has been operationalized as an appraisal of the severity and irreparability of pain-related losses, a sense of unfairness, and blame attributions.[2]

A growing body of cross-sectional, prospective, and experimental research links perceived injustice to adverse pain-related outcomes.[3] In patients with musculoskeletal injuries, perceptions of injustice have been associated with increased pain intensity, functional disability, and psychological distress.[4–7] Perceptions of injustice have also been associated with poor progress in rehabilitation interventions.[2,8] At present, little is known about the processes by which perceived injustice might impede progress in rehabilitation.

In addition to loss, blame, and unfairness, injustice appraisals may reflect a perceived failure of others to acknowledge the extent of one’s suffering.[2] Interpersonal accounts of injustice suggest that injustice
perceptions are likely when a person’s right to dignity, respect, and social inclusion are violated.[9] Previous research suggests that people with pain experience interpersonal injustice in their interactions with a number of people, including healthcare professionals.[10] In turn, perceptions of interpersonal injustice might limit a client’s willingness to maintain cooperative relationships with healthcare providers.[11]

It is possible that perceived injustice contributes to poor rehabilitation progress by compromising the development of a strong working alliance between the client and the clinician. The term working alliance is used to describe a client–clinician relationship characterized by warmth, trust, and a shared sense of the presenting problem and therapeutic goals.[12,13] A large body of evidence has identified the working alliance as one of the strongest predictors of outcomes in the rehabilitation of patients with persistent physical and mental health problems.[14–17]

Perceived injustice might trigger emotional responses that interfere with positive relationship development between client and clinician.[18,19] For example, research suggests that anger is the dominant emotional response to injustice appraisals.[11,20,21] High levels of anger expression associated with perceived injustice might prevent agreement on the goals and tasks of treatment and a sense of warmth and trust between the client and the clinician.[22,23] Depression is another emotional response that has been found to co-occur with perceptions of injustice. A growing number of studies report a strong association between injustice perceptions and depressive symptoms in people with chronic pain.[6,8,24] Furthermore, there is research to show that depressive symptoms interfere with social information processing and that people with depression tend to elicit negative interpersonal responses from others.[25–27] Thus, depressive symptoms associated with perceived injustice might also interfere with the development of a strong working alliance.

The purpose of this study was to examine the association between perceived injustice and the therapeutic working alliance in people with persistent pain enrolled in a multidisciplinary rehabilitation programme. Participants completed self-report measures of perceived injustice, pain, disability, anger intensity and regulation style, and depressive symptoms. Clients and their primary clinicians also completed self-report measures of the working alliance. It was predicted that perceptions of injustice would be negatively correlated with client ratings of the working alliance. A secondary hypothesis was that anger expression and depressive symptoms would mediate this association.

Methods
Participants
Sixty-six (34 women and 32 men) individuals who had sustained musculoskeletal injuries following a motor vehicle or workplace accident participated in this study. Participants had a mean age of 40.03 years with a range of 24–60 years. The mean number of months since injury was 11.55 with a range of 3–139 months. The majority of participants (97%) had received at least a high-school education. Approximately 44% of the sample was married or living with a common law partner. At the time of assessment, all participants were work-disabled and receiving salary indemnity through a no-fault provincial insurance system. The majority of participants (77%) were at the beginning to middle of the rehabilitation programme when they completed the study questionnaires.

Procedure
Participants were recruited from two rehabilitation centers in the Montreal, Quebec region. Poster advertisements describing the study were placed in the clinics. The posters instructed interested individuals to contact a study researcher to determine eligibility. Clinicians also gave study brochures to potentially eligible participants in the course of their routine practice. The brochures likewise instructed individuals to contact a study researcher for more information. Individuals were considered eligible for the study if they were at least 18 years of age, had persistent (at least 3 months’ duration) musculoskeletal pain following a motor vehicle or occupational accident, and were capable of completing questionnaires in English or French. All participants were enrolled in a 7-week standardized multidisciplinary rehabilitation programme aimed at functional restoration. The intervention teams were composed of kinesiologists, occupational therapists, and psychologists. Intervention techniques included exercise, education, and instruction in self-management skills.

Participants completed self-report measures of perceived injustice, pain intensity, disability, anger intensity and regulation style, and depressive symptoms at one time point during their participation in the rehabilitation programme. Participants also completed a questionnaire assessing their perceptions of the working alliance with their principal rehabilitation clinician. Working alliance ratings were also made by participants’ principal clinician (primarily kinesiologists and occupational therapists). The principal rehabilitation clinician was the member of the treatment team who had the most frequent clinical contact with the participant. The length
of time participants had been in treatment at the time they completed study questionnaires varied across participants. All participants provided written informed consent as a condition of study participation. The study was approved by the Research Ethics Board of McGill University.

**Measures**

**Pain intensity**

The McGill Pain Questionnaire (MPQ) was used to assess participants’ present pain intensity.[28] The MPQ Pain Rating Index (PRI) is a weighted sum of all adjectives endorsed by patients that best describe their current pain experience. The MPQ-PRI is considered a reliable and valid index of individuals’ pain experience associated with musculoskeletal pain.[29,30] Participants also indicated the location of their pain on a body schematic.

**Self-reported disability**

The Pain Disability Index (PDI) [31,32] was used to assess the degree to which individuals perceive themselves to be disabled by pain in seven different areas of daily living: home, social, recreational, occupational, sexual, self-care, and life support. For each domain, participants were asked to provide perceived disability ratings on 11-point scales with the endpoints 0 (no disability) and 10 (total disability). The PDI has been shown to be internally reliable and is significantly correlated with objective indices of disability.[32]

**Perceived injustice**

The Injustice Experiences Questionnaire (IEQ) was used to measure injury-related perceptions of injustice.[2] Participants rated the frequency with which they experience each of 12 thoughts on a 5-point scale, ranging from 0 (never) to 4 (all the time). Previous findings suggest that the IEQ yields two correlated factors, labeled “severity/irreparability of loss” and “blame/unfairness”. Examples of items loading onto the first factor include, “Most people don’t understand how severe my condition is”, and “My life will never be the same”. Examples of items loading onto the second factor include, “I am suffering because of someone else’s negligence”, and “It all seems so unfair”. The IEQ has been shown to have high internal reliability, and to be valid for use among individuals with persistent musculoskeletal pain following injury.[2,7].

**Working alliance**

The Working Alliance Inventory (WAI) [13,33] was used to assess clients’ perception of the therapeutic working alliance with their principal treating clinician. Participants were instructed to identify their primary treating clinician, referring to the clinician from the team with whom the participant had the most contact, and to respond to the WAI with that person in mind. On the WAI-client version, participants responded to 12 items assessing their sense of a positive bond with their clinician, including feelings of mutual liking and trust, and their sense of agreement on the goals and tasks of therapy. Representative items reflecting these aspects of the working alliance include, “[Clinician name] and I trust one another”, “[Clinician name] and I are working towards mutually agreed upon goals”, and “I believe the way we are working with my problem is correct”. Participants were asked to rate how they felt in relation to these items on a 7-point Likert scale ranging from 1 (never) to 7 (always).

The WAI-clinician version was completed by the principal clinician identified by each participant. The WAI-clinician version instructs clinicians to assess their thoughts and feelings toward their client, and uses the same 12 items and rating scale from the WAI-patient version. Clients and clinicians were informed that their responses on this measure would not be revealed to one another. The WAI has been shown to be a reliable measure of the working alliance and valid for use in the context of chronic pain rehabilitation.[13,22]

**Anger intensity and regulation style**

The State-Trait Anger Expression Inventory – II (STAXI–II) [34,35] was used to assess anger intensity and regulation. The following subscales of the STAXI – II were examined in the present study: state anger (15 items); trait anger (10 items); anger inhibition (eight items); and anger expression (eight items). Anger inhibition items assess the frequency with which participants attempt to suppress feelings of anger. Anger expression items assess the frequency with which anger is outwardly expressed. Participants were asked to rate items on a 4-point Likert scale. The STAXI – II subscales have been shown to be valid and reliable for use with chronic pain patients.[36,37]

**Depressive symptoms**

The Patient Health Questionnaire – 9 (PHQ-9) [38] was used to measure depressive symptom severity. The PHQ-9 asks respondents to indicate the frequency with which
they experience each of the nine symptoms considered in the DSM-IV-TR criteria for Major Depression. The PHQ-9 has been shown to be a valid and reliable measure of depressive symptoms in patients with a variety of medical conditions.\[38,39\]

**Demographic variables**

Participants responded to questions concerning their age, sex, education, marital status, pain onset and duration, and use of pain medications. A researcher recorded the length of time participants had been in the treatment programme at the time of completing study questionnaires.

**Approach to data analysis**

Total and subscale scores were computed for the Injustice Experiences Questionnaire. The following subscale scores were computed for the anger measure: state anger, trait anger, anger inhibition, and anger expression.\[34,36\] Total scores were computed for all other measures. Means and standard deviations were computed for total and subscale scores. T-tests for independent samples were used to compare men and women on study variables and to compare participants on study variables according to type of injury.

Pearson product–moment correlations were computed to examine zero-order associations among demographic variables, perceived injustice, client and clinician working alliance ratings, pain severity, self-reported disability, anger variables, and depressive symptoms. Mediation analyses were conducted to test whether anger and depressive symptoms explained the association between perceived injustice and the working alliance. According to Baron and Kenny,\[40\] the following conditions are necessary for mediation: the independent variable (IV; i.e., perceived injustice) must be significantly correlated with the dependent variable (DV; i.e., working alliance); the IV must be significantly correlated with the mediator (i.e., anger/depression); the mediator must be significantly correlated with the DV; and, the presence of the mediator reduces the effect of the IV on the DV. Sobel’s test was conducted to examine the significance of the mediation effect.

**Results**

**Sample characteristics**

Demographic information of the sample appears in Table 1. Mean scores on study variables are comparable with those reported in previous samples of patients with chronic musculoskeletal pain.\[21,22\] Independent samples t-tests revealed no significant differences between men and women on any study variable. Likewise, no significant differences were observed on study variables according to type of injury.

**Zero-order correlations among study variables**

Table 2 displays the zero-order correlations among study variables. As the “severity/irreparability of loss” and “blame/unfairness” subscales of the IEQ were highly correlated, it was decided to focus on IEQ total scores in reporting the correlation analyses. In line with previous studies, higher scores on the IEQ were associated with greater self-reported disability.\[4,21\] IEQ scores were also significantly correlated with anger intensity and regulation variables, and with depressive symptoms.\[21\] There was a significant negative correlation between perceived injustice and client ratings of the working alliance. Client and clinician ratings of the working alliance were significantly correlated.

Anger expression was significantly negatively correlated with client ratings of the working alliance. Clinician ratings of the working alliance were significantly negatively associated with clients’ age and self-reported disability. With the exception of anger expression and inhibition, all the anger variables were significantly

Table 1. Demographic characteristics of the sample and scores on study variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M (SD) or N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>40.03 (8.93)</td>
</tr>
<tr>
<td>Pain duration (months)</td>
<td>11.55 (16.63)</td>
</tr>
<tr>
<td>Time in treatment (weeks)</td>
<td>3.38 (1.67)</td>
</tr>
<tr>
<td>Injury type</td>
<td></td>
</tr>
<tr>
<td>Automobile accident</td>
<td>32 (48.48%)</td>
</tr>
<tr>
<td>Work accident</td>
<td>34 (51.52%)</td>
</tr>
<tr>
<td>Pain site (categories are not mutually exclusive)</td>
<td></td>
</tr>
<tr>
<td>Neck</td>
<td>41 (61.12%)</td>
</tr>
<tr>
<td>Back</td>
<td>57 (86.36%)</td>
</tr>
<tr>
<td>Upper extremity</td>
<td>36 (54.55%)</td>
</tr>
<tr>
<td>Lower extremity</td>
<td>34 (51.52%)</td>
</tr>
<tr>
<td>Taking pain medications</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>57 (86.36%)</td>
</tr>
<tr>
<td>No</td>
<td>9 (13.64%)</td>
</tr>
<tr>
<td>Number pain medications</td>
<td>1.92 (1.22)</td>
</tr>
<tr>
<td>IEQ: total</td>
<td>31.71 (8.55)</td>
</tr>
<tr>
<td>IEQ: blame/unfairness subscale</td>
<td>14.35 (6.07)</td>
</tr>
<tr>
<td>IEQ: severity of loss subscale</td>
<td>17.36 (3.41)</td>
</tr>
<tr>
<td>WAI: client</td>
<td>64.77 (8.26)</td>
</tr>
<tr>
<td>WAI: clinician</td>
<td>64.63 (10.71)</td>
</tr>
<tr>
<td>MPQ-PRI</td>
<td>34.21 (14.16)</td>
</tr>
<tr>
<td>PDI</td>
<td>42.39 (12.50)</td>
</tr>
<tr>
<td>STAXI-state</td>
<td>23.20 (8.18)</td>
</tr>
<tr>
<td>STAXI-trait</td>
<td>24.79 (6.56)</td>
</tr>
<tr>
<td>STAXI-expression</td>
<td>15.91 (3.67)</td>
</tr>
<tr>
<td>STAXI-inhibition</td>
<td>18.35 (4.59)</td>
</tr>
<tr>
<td>PHQ-9</td>
<td>13.74 (5.85)</td>
</tr>
</tbody>
</table>

IEQ, Injustice Experiences Questionnaire; WAI, Working Alliance Inventory; MPQ-PRI, McGill Pain Questionnaire – Pain Rating Index; PDI, Pain Disability Index; STAXI, State Trait Anger Expression Inventory – II; PHQ-9, Patient Health Questionnaire-9.
inter-correlated. With the exception of a non-significant correlation between trait anger and disability, anger intensity and regulation variables were all significantly correlated with pain intensity, disability, and depressive symptoms. Clients’ duration of time in the rehabilitation programme was not significantly correlated with any study variable.

**Anger expression as a mediator of the relationship between perceived injustice and patient ratings of the working alliance**

To determine the suitability of using IEQ subscale scores for mediation analyses, a regression analysis was first computed to examine the unique contributions of the “severity/irreparability of loss” and “blame and unfairness” subscales to client ratings of the working alliance. The overall model was significant ($R^2 = 0.12, F = 4.28, p < 0.05$). However, neither subscale contributed significant unique variance to the prediction of the working alliance in the final regression equation. Therefore, it was decided to examine only the total scores for the mediation analyses.

Based on zero-order analyses, depressive symptoms were not significantly correlated with working alliance ratings; therefore, the requirements to conduct a mediation analysis were not met for depressive symptoms. Anger expression was the only anger variable that was significantly correlated with both perceived injustice and client ratings of the working alliance, and thus met the requirements to be a potential mediator of the injustice-working alliance association.

Table 3 displays the results of regression analyses examining the mediating role of anger expression in the relationship between perceived injustice and patient ratings of the working alliance. In the first regression analysis, perceived injustice accounted for a significant proportion of the variance (12%) in client ratings of the working alliance. In the second analysis, anger expression was entered in the first step of the regression and contributed significant variance (19%) to the prediction of client ratings of the working alliance. Perceived injustice was entered in the second step of the analysis but was no longer a significant predictor of the working alliance. Sobel’s test indicated that anger expression mediated the relationship between perceived injustice and working alliance ratings ($Sobel's \ test = -2.12, p < 0.05$). Examination of the beta weights in the final regression equation indicated that only anger expression contributed significant unique variance to the prediction of the working alliance, $\beta = -0.36, t (63) = -3.07, p < 0.01$.

**Discussion**

The purpose of the present study was to investigate the relationship between perceived injustice and the

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Weeks in treatment</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. WAI Client</td>
<td>0.12</td>
<td>0.31**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. WAI Clinician</td>
<td>0.10</td>
<td>0.04</td>
<td>-0.26*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Age</td>
<td>-0.05</td>
<td>0.20</td>
<td>-0.09</td>
<td>0.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Duration</td>
<td>0.18</td>
<td>0.05</td>
<td>-0.01</td>
<td>-0.02</td>
<td>0.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. MPQ-PRI</td>
<td>0.04</td>
<td>-0.20</td>
<td>-0.31**</td>
<td>0.30**</td>
<td>0.22</td>
<td>0.47**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. IEQ Total</td>
<td>0.07</td>
<td>-0.35**</td>
<td>-0.21</td>
<td>0.21</td>
<td>0.20</td>
<td>0.43**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. STAXI State</td>
<td>0.10</td>
<td>-0.33**</td>
<td>-0.22</td>
<td>0.21</td>
<td>0.21</td>
<td>0.42**</td>
<td>0.95**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. STAXI Expression</td>
<td>0.00</td>
<td>-0.27**</td>
<td>-0.13</td>
<td>0.15</td>
<td>0.26</td>
<td>0.13</td>
<td>0.33**</td>
<td>0.82**</td>
<td>0.60**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. STAXI Inhibition</td>
<td>0.15</td>
<td>-0.22</td>
<td>0.08</td>
<td>-0.19</td>
<td>-0.09</td>
<td>0.34**</td>
<td>0.31**</td>
<td>0.36**</td>
<td>0.35**</td>
<td>0.28*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. IEQ Loss</td>
<td>-0.06</td>
<td>-0.21</td>
<td>-0.05</td>
<td>-0.04</td>
<td>0.09</td>
<td>0.29**</td>
<td>0.22</td>
<td>0.34**</td>
<td>0.31**</td>
<td>0.29</td>
<td>0.74**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. STAXI Trait</td>
<td>0.07</td>
<td>-0.44**</td>
<td>-0.19</td>
<td>-0.08</td>
<td>0.17</td>
<td>0.36**</td>
<td>0.28*</td>
<td>0.34**</td>
<td>0.31**</td>
<td>0.30</td>
<td>0.58**</td>
<td>0.59**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. STAXI Inhibition</td>
<td>0.17</td>
<td>0.08</td>
<td>0.09</td>
<td>0.02</td>
<td>0.21</td>
<td>0.39**</td>
<td>0.33**</td>
<td>0.40**</td>
<td>0.35**</td>
<td>0.38**</td>
<td>0.44**</td>
<td>0.39**</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>14. PHQ-9</td>
<td>0.06</td>
<td>-0.23</td>
<td>0.03</td>
<td>-0.05</td>
<td>0.08</td>
<td>0.28**</td>
<td>0.48**</td>
<td>0.44**</td>
<td>0.39**</td>
<td>0.41**</td>
<td>0.66**</td>
<td>0.61**</td>
<td>0.45**</td>
<td>0.48**</td>
</tr>
</tbody>
</table>

WAI, Working Alliance Inventory; MPQ-PRI, McGill Pain Questionnaire – Pain Rating Index; PDI, Pain Disability Index; IEQ, Injustice Experiences Questionnaire; STAXI, State Trait Anger Expression Inventory – II; PHQ-9, Patient Health Questionnaire-9.

**p ≤ 0.01.
*p ≤ 0.05.
*p ≤ 0.10.

$R^2$ change $F$ change $p$ $\beta$

Regression 1: Dependent: client working alliance rating

| Step 1 | 0.12 | 8.66 | <0.01 | -0.35** |

Regression 2: Dependent: client working alliance rating

| Step 1 | 0.19 | 15.04 | <0.001 | -0.36** |

| Step 2 | 0.04 | 3.58 | 0.06 | -0.22 |

**$p < 0.01.$
*p = 0.06.
therapeutic working alliance among individuals with persistent musculoskeletal pain following injury completing a rehabilitation programme. Consistent with previous findings, perceptions of injustice were associated with disability, anger intensity and regulation style, and depressive symptoms.[2,21] This study extends previous research by showing a negative association between injury-related injustice perceptions and the working alliance. The “severity and irreparability of loss” and “blame and unfairness” subscales of the IEQ were highly correlated and both were significantly negatively correlated with the working alliance, although neither subscale uniquely predicted working alliance ratings. This further supports the use of IEQ total scores,[2] and suggests that clients’ appraisals of loss, unfairness, and blame together are related to their experience of the working alliance. The current data further extend previous work by providing support for the mediating role of anger expression in the association between perceived injustice and client ratings of the working alliance.

There are indications that people perceive injustice and express anger in relation to a number of sources following painful injury, including other drivers, employers, family members, and healthcare providers.[10,41,42] Previous research also suggests that injustice perceptions develop 3–6 months following injury.[43] On average, participants in this study were approximately 12 months post-injury and the majority completed study questionnaires within the first half of the treatment programme. Therefore, participants in this study likely experienced injustice and anger prior to and/or in the early stages of treatment. In turn, perceptions of injustice and anger expression, whether specifically toward the treating clinician or in relation to one of the injustice sources outlined above, might have negatively influenced client–clinician interactions during treatment in a number of ways.

Externalization of blame and anger for pain and suffering toward rehabilitation professionals, employers, and other drivers may preclude a shared sense of the nature of the problem and its solution between client and clinician, and may contribute to clients’ passive participation in the rehabilitation process.[44] Anger expression in general may serve to “alienate and push others away”. Anger expression might elicit criticism and irritation from others.[22] In the rehabilitation context, a client’s anger expression might contribute to clinicians’ own anger toward the client.[46] In the present study, there was a significant correlation between client and clinician ratings of the working alliance, suggesting that both parties are attuned to the strength and quality of the relationship. Taken together, a client’s anger expression, whether in response to the perceived unfair behavior of the treating clinician or a range of other sources of injustice, might prevent a mutually positive and collaborative relationship between clinician and client.

The strong correlation between perceived injustice and depressive symptoms in the present study adds to a growing body of cross-sectional and prospective research linking these variables.[6,8,24] However, the correlation between depressive symptoms and the working alliance was non-significant, which precluded a formal test of mediation of the injustice–alliance relationship by depressive symptoms. It is interesting to note that one study found that high levels of depressive symptoms and anger expression together have the most pernicious effects on the working alliance.[22] Thus, depressive symptoms in response to perceived injustice might negatively impact the working alliance, but only for clients who also have a propensity for anger expression. Future research with larger samples will be needed to test this moderated-mediation hypothesis.

A significant negative correlation was observed between client clinician ratings of the working alliance and clients’ self-report ratings of disability. This finding is consistent with an established body of research linking the working alliance to treatment outcomes for mental health problems.[14,15] This is also in line with a growing body of evidence linking the working alliance to rehabilitation outcomes in patients with chronic physical illness, including chronic pain.[17,47,48]

Clinicians’ ratings of the alliance were also significantly negatively correlated with client age. This is consistent with previous research suggesting that certain demographic and clinical features negatively influence others’ appraisals of people with pain.[49–51] It is plausible that clinician biases toward certain client characteristics contribute to unhelpful behaviors that fuel client perceptions of injustice, anger, and a poor working alliance. Future research examining the relationships between client characteristics, clinician behaviors, perceived injustice and the working alliance is needed.

In light of previous research linking the working alliance to rehabilitation outcomes, there have been calls for greater attention to the alliance among rehabilitation clinicians treating patients with chronic physical illness; however, how this might be achieved in clinical practice remains less certain. Hall et al. [47] suggest that rehabilitation clinicians provide positive feedback, answer clients’ questions, and provide clear instructions for home practice. Such clinician behaviors would appear to address the shared task and goal components of the alliance. However, the present findings might suggest the need for greater attention to the emotional
experience of the therapist–client relationship to strengthen the bond component of the alliance.

Perceptions of injustice entail a sense that others do not adequately recognize the extent of one’s suffering.[2] Previous work has linked such feelings of invalidation to social withdrawal.[52,53] In the rehabilitation context, to the extent that clinicians are perceived as behaving in an invalidating manner, such withdrawal might manifest as a reduced motivation for collaborative engagement with one’s treating clinician. Therefore, validation-focused techniques might be useful to address difficulties in the alliance with clients with elevated levels of perceived injustice and associated anger expression. Validation techniques entail empathic reflection of both the content and emotional tone of patients’ experiences without judgment or imposition of clinicians’ own agenda.[54,55] Thus, in addition to acknowledging patients’ pain intensity and functional disability, recognition and reflection of the emotional impact of pain and disability might be needed by rehabilitation clinicians. Rehabilitation professionals might also need to validate patients’ anger associated with experiences of injustice related to the negligent and unfair actions of other drivers, employers, and family members.[41]

When patients express anger during treatment, research suggests that defensiveness, avoidance, a focus on problem solving, and reciprocal anger might be likely responses from clinicians with limited training in dealing with anger.[46] Evidence from the psychotherapy literature suggests that directly attending to patients’ anger as it occurs in an open, non-judgmental, and non-defensive manner contributes to more effective repairs of breaches in the alliance.[56–58] Greater training of rehabilitation clinicians in these interpersonal, process-level techniques might improve the working alliance with patients experiencing high levels of perceived injustice and anger. In turn, greater focus on the quality of the relationship between clinician and client might engender a sense of fair treatment and respect among clients and reduce the likelihood that rehabilitation professionals are perceived as a source of injustice.

Caution must be warranted in the interpretation of the present results. First and foremost, the small sample size might have limited power to detect significant effects, and future research with larger samples is needed to determine the replicability of these results. Clients’ perceptions of injustice prior to starting the study might have influenced their willingness to participate and, therefore, the generalizability of the present results to clients who chose not to participate is unclear. This was a cross-sectional study and, therefore, statements about the causal relationships among perceived injustice, anger, and the working alliance cannot be made. However, accumulating experimental findings suggest an antecedent role of injustice perceptions and blame attributions in anger responses.[20,59] Recent experimental work likewise suggests a causal impact of perceived injustice on adverse pain outcomes.[59] Future research is needed to prospectively examine the relationships among perceived injustice, the working alliance, and recovery outcomes following treatment. Finally, the data were collected under a no-fault system. Therefore, the results may not generalize to tort systems, where injured individuals are able to take legal action against the party responsible for their accident.

In spite of these limitations, this study is the first to provide evidence of a negative association between perceived injustice and the therapeutic working alliance in individuals with persistent musculoskeletal pain attending a rehabilitation programme. Prospective studies are needed to examine whether poorer ratings of the working alliance mediate between perceived injustice and adverse recovery outcomes. Sensitivity to the working alliance during the rehabilitation process might be particularly important for clients with elevated levels of perceived injustice and anger expression.

Acknowledgements

The authors thank Véronique Boulais and Valérie Mallet for their assistance in data collection.

Declaration of interest

The authors declare no conflicts of interest associated with this research. This research was supported by funds from the Canadian Institutes for Health Research, les Fonds de la Recherche en Santé du Québec, and l’Institut de Recherche Robert-Sauvé en Santé et en Sécurité du Travail.

References


